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NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

MAY 02 1991
OHP
NATIONAL REGISTER

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Black Diamond Mines

other names/site number Black Diamond Mines Regional Preserve

2. Location

street & number Somersville Road ☐ not for publication

city, town Antioch ☒ vicinity

state California code CA county Contra Costa code 013 zip code 94509

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
		Contributing	Noncontributing
☐ private	☐ building(s)		15 buildings
☒ public-local	☒ district	3	sites
☐ public-State	☐ site		structures
☐ public-Federal	☐ structure		objects
	☐ object	3	15 Total

Name of related multiple property listing: N/A

Number of contributing resources previously listed in the National Register none

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

Kathryn Gualtieri — 8-13-91

Signature of certifying official — Date

California Office of Historic Preservation

State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

Signature of commenting or other official — Date

State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

☑ entered in the National Register. ☐ See continuation sheet.

☐ determined eligible for the National Register. ☐ See continuation sheet.

☐ determined not eligible for the National Register.

☐ removed from the National Register.

☐ other, (explain:) _____

Janet E. Lawsond — 10-2-91

Signature of the Keeper — Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
extraction/extractive facility	recreation and culture/outdoor recreation
funerary/cemetery	
domestic/village site	

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)
N/A	foundation na
	walls
	roof
	other

Describe present and historic physical appearance.

Introduction

The Black Diamond Mines [BDM] district is located in central Contra Costa County, California. The area was prospected for coal in the mid-1850s. Soon five towns grew up around the pitheads. The coal mining boom lasted until the first decade of the 20th century, when the last of the mines was closed and all of the towns deserted. Later, from about 1925 to 1951, high silica sand was mined in the area.

Two hundred and seventy-two individual features have been recorded in the 2078-acre district. Almost all are either mining-related or are part of one of the mining towns. In the descriptions that follow, the major clusters of features have been divided into three "sites." The focus of each site is the surface, mining-related phenomena associated with a single company or group of companies and the domestic features associated with a particular townsite, all within a defined geographic range. BDM Site 2 (Somersville Area), for example, includes the Somersville townsite and features associated with the Pittsburg, Union, Independent, and Hazel-Atlas mines, all at the head of Markley Canyon, and the Pittsburg Mine Railroad grade that extends from the pithead north through Markley Canyon and out of the BDM district. The sites are shown in relationship to each other on Map A. The features that contribute to each site are shown on Maps 1 to 5 and Sheets 1 to 6; these maps are keyed together on the page preceding each.

☒ See continuation sheet

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:
☐ nationally ☒ statewide ☐ locally

Applicable National Register Criteria ☒A ☐B ☒C ☒D

Criteria Considerations (Exceptions) ☐A ☐B ☐C ☐D ☐E ☐F ☐G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
Engineering	1859-1907	
Industry	ca. 1910-1941	
Ethnic Heritage, European		
Social History		

Cultural Affiliation: Welsh

Significant Person: N/A

Architect/Builder: N/A

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The Black Diamond Mines are significant under National Register criteria A, C and D. Historically they are associated with the state's most important coal mining operations. Under criterion C the site provides a most impressive array of coal mining features, and the only surviving example of room and pillar sand mining in the state. Under criterion D, the sites have the potential to provide information regarding the history and assimilation of Welsh people in California.

Justification for Periods of Significance: Two Periods of Significance are offered for the District: 1859-1907 and circa 1910-1941.

The era of coal mining lasted from 1859 to 1907. All coal mining features described in Section 7 date to this period. The beginning date represents the first commercial production of coal by independent companies. The three mining towns of Nortonville, Somersville, and Stewartville grew up and faded during this period. In 1907 the Black Diamond Company, the last of the district's coal mining companies, closed the last of its local pits, and dismantled and removed the Company's equipment.

Sand mining, which replaced coal extraction in the area, began commercially in about 1910. The extensive room-and-pillar features in the Nortonville and Somersville areas date between this time and the late 1940s. Open pit sand mining in the Stewartville area ceased in the early 1950s. Although the period of significance for sand mining extends until about 1951, it has been arbitrarily ended at 1941, 50 years ago.

9. Major Bibliographical References

Bibliography: General

Ballard, Margaret
1933 History of Coal Mining in the Mt. Diablo Region, 1859-1885. M.A. thesis. Department of History, University of California, Berkeley.

[X] See continuation sheet

Previous documentation on file (NPS):
- [ ] preliminary determination of individual listing (36 CFR 67) has been requested
- [ ] previously listed in the National Register
- [ ] previously determined eligible by the National Register
- [ ] designated a National Historic Landmark
- [ ] recorded by Historic American Buildings Survey # _____
- [ ] recorded by Historic American Engineering Record # _____

Primary location of additional data:
- [ ] State historic preservation office
- [ ] Other State agency
- [ ] Federal agency
- [X] Local government
- [ ] University
- [ ] Other

Specify repository:
East Bay Regional Parks District, P.O. Box 694, Antioch, CA 94509

10. Geographical Data

Acreage of property 2078 acres

UTM References

	Zone	Easting	Northing
A	10	596990	4200240
B	10	596980	4201060
C	10	597440	4201060
D	10	597660	4201720

[X] See continuation sheet

Verbal Boundary Description

The Black Diamond Mines district is entirely within the Black Diamond Mines Regional Preserve, a unit of the East Bay Regional Parks District. It consists of all or part of

[X] See continuation sheet

Boundary Justification

The southwest and west-central portions of the district are defined as all of the following properties that are within the lands owned by the East Bay Regional Park

[X] See continuation sheet

11. Form Prepared By

name/title Adrian Praetzellis, Ph.D./Senior Historical Archaeologist
organization Anthropological Studies Center date 20 May 1989 (rev. 19 April 1991)
street & number Sonoma State University telephone (707) 664-2381
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A relatively small portion of the BDM district was systematically surveyed for cultural remains for the purpose of NRHP documentation. The sheer number and complexity of phenomena in the district required employing a two-level method of recording: First, a list and set of location maps were assembled covering all known mine openings; they were eventually reordered into Tables 2, 3, 4, 6, 7, and 9, and Maps 1-5. These data, compiled by East Bay Regional Park District [EBRPD] personnel, identified a total of 105 features. Next, the history of mining in the area was reviewed so that the most significant mines could be identified; historic maps and other data were examined to aid in the location of domestic remains, both within and outside the major townsites. In this way, all known non-mining features and the most historically significant mining features that had surface manifestations were examined in the field and recorded; these were a total of 167 features (Tables 1, 5, and 8; Sheets 1-6).

The district was intensively mined for over 100 years. While this activity has left many remains on the landscape, most features are mining excavations of various types and, consequently, are underground. The lack of historical mine surveys, blocked access ways, and the presence of toxic gases or water make it likely that the extent of the site underground may never be known. However, it is estimated that a minimum of 200 miles of underground accessways (adits, gangways, etc.) leading onto at least 1260 acres of mined-out rooms were excavated in the district. It is important to remember that continuous maintenance is necessary to prevent a mine opening from collapsing. Thus, while most openings in the district have been reconstructed, this should not be taken as indicating a significant lack of physical integrity.

Site Descriptions

BDM Site 1 (Nortonville Area) (Sheets 1 and 2; Maps 1 and 2; Tables 1 to 4)

This site contains both domestic and mining-related remains including the Nortonville townsite and extensive mining features associated with the Black Diamond, Mount Hope companies, the Cumberland Mine, and an isolated domestic site. A non-contributing feature -- a sand mine, the Earache III -- is also located within the site boundaries.

The townsite, which was occupied from about 1860 to 1885, contains the remains of at least 53 residences and businesses. Most of these locations consist of either a building platform, cellar hole, or both. They are clustered in three locations: on the south and east facing slope near the Park entrance; adjacent to the main Nortonville-Kirker Pass road; on the north-facing slope of a finger ridge on the west side of the central flat; and flanking the lower portion of the now disused Nortonville-Somersville Road. Historic photographs suggest that the first of these locations may have contained business premises whereas the other two appear to have been residences.

Most building platforms in the Nortonville townsite consist of a small terrace, from 15 to 25 feet in diameter, cut six to 24 inches into the slope. Although some have a distinctly angular appearance, most are oval in plan. Nineteen locations are marked by cellar holes: bowl-shaped depressions, 10 to 25 feet in diameter by 6 to 36 inches deep. Like the building platforms, most cellar holes tend to be oval in shape, especially those which are situated on steeper slopes and would be subject to filling by alluvial soil. One platform contained the remains of a brick chimney base; while three others had at least one part of the terrace supported by a stone retaining wall. One of these, Feature 103, is a 30 by 40 foot, three-sided dugout, whose stone-

lined walls stand up to eight feet high. Feature 86 is a three-sided excavation cut into sandstone, adjacent to a building platform; it may have served as a cold cellar.

A light scatter of historic-period artifacts covers much of this portion of the site; at the time of the inventory a thick growth of ground cover obscured the surface of almost all building platforms making it impossible to see small artifacts that may have been present.

While the integrity of individual building platforms is generally good to excellent, three portions of the Nortonville townsite area may have contained features have been adversely affected by natural soil movement: The area to the northwest of tailings pile, Feature 27, shows numerous soil dislocations and the lumpy surface indicative of colluvial action. In the area northeast of Feature 27, on the north side of the trail, a 15-foot deep gully has exposed a buried layer of 19th-century artifacts, evidently buried by a mixture of eroding mine tailings and soil. In the area immediately northwest of Feature 103 on the northeast side of the townsite, numerous soil dislocations at the base of the hillside have almost certainly destroyed several building platforms.

The Nortonville townsite area is visually dominated by two extensive coal tailings piles. Feature 27, on the west side, was produced between 1860 and the early 1880s by material from the Black Diamond Shaft (Feature 30). These tailings cover an area of about three-and-one-half acres and stand up to 30 feet high. In addition to the shaley coal tailings, this pile contains an area of boiler waste -- a conglomerate of fired coal and pieces of shale fused together into mounds up to 15 feet high. This material was derived from "bone," a low grade of coal commonly found together with the higher quality coal, and often used to power mine equipment.

At the southwest corner of Feature 27 are the remains of the Black Diamond Shaft and hoisting works (Feature 30). The tailing pile is the product of this shaft which, together with the Mount Hope Slope (see Feature SC7, below) and the Clayton Tunnel (not located), was one of the principal openings into the Black Diamond and Clark veins from this area. The shaft itself was closed by a local rancher and its underground condition was not recorded; it is marked only by a shallow, bowl-shaped depression, approximately 20 feet in diameter. The hoisting works consist of two, parallel massive brick footings, each about 35 feet long, 7 feet wide, by 8 feet high. The east footing is cracked and part has settled into the Black Diamond Shaft. Its condition is fair. It is estimated that the Black Diamond Mine workings contain a minimum of 355 acres of mined-out rooms. A plan and section of the Black Diamond Mine workings are included as Figure 1.

To the east of the townsite a coal tailings pile, designated Feature 28, covers about 4 acres and stands up to 15 feet high. These tailings were probably the product of the Mount Hope Slope -- a contemporary of the Black Diamond Shaft -- which was situated at their southern end (Map 1:SC7). This mine opening was closed by EBRPD; it led to an adit that ran several hundred feet to the south, although its full extent was not determined. Just north of the Mount Hope opening is a 80-foot diameter cluster of red and fire brick, designated Feature 107. This feature is the remains of a chimney, part of the hoisting works that stood near the pithead of the Mount Hope Slope. North of the chimney remains, between the two tailings piles is a three-sided, dugout-like feature, about 20 feet deep by 40 wide (Feature 106). This excavation, two concrete pier bases, and some redwood timbers within it are the remains of a sand bunker. This sand-mining complex dates to the 1920s or 1930s.

The integrity of the tailings piles in this portion of the site is difficult to assess because of the lack of permanent landmarks by which to judge their past size and extent in comparison to historic photographs. However, the photographs suggest that the areal extent of the piles is reduced, but not substantially so. The height of the piles appears to have been

reduced by perhaps as much as 10 to 20 feet in parts. It is reported that this material was quarried for roadbed for many years.

To the south-southwest of the townsite, up a narrow canyon, are several mining features that relate to coal and sand mining, respectively. Coal mining is represented by the Black Diamond #1 Tunnel, the first major opening made by the Black Diamond Company into the Black Diamond Vein in 1860 (Feature 109). This adit has been sealed with reinforced concrete wall and steel grate. It runs south for about 420 feet where it meets the Black Diamond Upper Gangway; the total extent of the feature has not been determined.

It is estimated that approximately 355 acres of mined-out underground rooms were excavated by the Black Diamond Company and its predecessors in this area between about 1860 and the mid 1880s. An undermined area of these rooms survive. A typical room is the Black Diamond's upper working on the Clark Vein. This excavation is about 40 inches high and follows the vein at an angle of about 30 degrees. The sandstone roof is supported by columns of unmined coal and numerous props, of both milled lumber and sections of tree limbs. The extent of the room has not been mapped; however, a veritable forest of roof props can be seen extending far downslope and to the east.

Extending down the canyon to the northeast of Feature 109 is an area of coal tailings, designated Feature 21, that are the product of the Black Diamond #1 and other minor openings along the canyon (the other openings are shown on Maps 1 and 2). The tailings cover an area of about one-and-one-quarter acre and rise as much as 60 feet above the canyon floor. Near the bottom of Feature 21 is an unusual example of a tooled surface; it was designated Feature 26. Here, a sandstone outcropping has been smoothed out with hand tools, presumably to facilitate the passage of wheeled vehicles.

On the nearly sheer, east-facing cliff opposite these features are three sealed openings, Features 22, 23, and 25. These are daylight vents which open onto a 30 degree sand mine stope. Two of the vents have been closed with a concrete collar and steel grill; the third has been sealed with a concrete wall pierced with ceramic pipes for drainage. The underground extent of the stope for which these openings provide light and ventilation is not known; however, the sand miners of the Nortonville area excavated about 32 acres of these underground rooms during the 1920s, 1930s, and 1940s. Unlike the coal excavations, the sand stopes are self-supporting. Sweeping arches of sandstone, up to 60 feet high and 25 feet wide brace the sandstone roof.

Below the daylight vents is a low, cave-like excavation into the west side of the canyon; it is designated Feature 24. The feature, which may be a powder magazine, bears several drill holes testifying to its method of construction.

In summary, this portion of BMD Site 1 contains the Nortonville townsite, the principal openings to the major coal veins explored by the Black Diamond Company, several acres of coal mine tailings, and daylight vents to a major sandmine stope. Approximately 10% of the townsite is located on private land, outside the Black Diamond Mines district. Although natural soil movement, the closing of mine openings with concrete collars and steel grills, and quarrying of the mine tailings have all altered the area's historic appearance, the overall integrity of the site is good. The remaining tailing piles are visually dominating features of the historic landscape and give excellent focus to this location.

About one-half mile south of the Nortonville townsite, are three features: a stone-lined well, a retaining wall, and a building platform (Features 35, 36, and 37, respectively). They are included as part of the district because of their historical associations: the well is said to have been the earliest water source for Nortonville; portions of the much decayed remains of an iron pipe can be seen running down the canyon from the well in

the general direction of Nortonville. The well is 15 feet deep by 4 feet 6 inches in diameter. It is of dry-laid slabs of local sandstone. The portion of the well above ground has been reconstructed in the same style as the lower section and is sealed with an iron grill. Ceramic artifacts in the vicinity of the retaining wall--whose function is unknown--include a sherd of the 1860's "Wheat" pattern.

This small complex, which appears to be contemporary with Nortonville, has retained excellent integrity in both its individual features and its general setting.

One-half mile to the southwest of the Nortonville townsite; there are two loci of mining-related remains. The southern locus is made up of three features, all associated with the Cumberland Mine which was worked in the 1850s and 1860s.

The Cumberland Mine's main portal could not be located. However, extensive tailings (Feature 40) from this mine cover as much as two-and-one-half acres and range from a few inches to four feet in height. What appear to be railroad trestles were noted partly buried in the tailings. Feature 38 is an adit that has an unusual, triangular cross-section; this shape is indicative of a prospect excavation. Tool marks can be seen throughout its length. It is likely that the adit was excavated by Cumberland Mine personnel to investigate the Black Diamond Vein which surfaces on the ridgetop to the south. The excavation runs in at least 180 feet; at 20 feet it intersects with vent shaft C28 (Map 2). The cut that opens to the portal has been newly graded and the opening itself has been retimbered; a locked steel gate has been installed 51 feet from the opening. Feature 39 includes both a 35-foot long adit and an 18-foot deep shaft that ventilates and lights the former. The shaft has been closed with a steel grate set in a concrete collar. Tooling marks are visible throughout the two excavations.

The northern locus contains another unusual, hand-excavated feature, a small subterranean room, designated Feature 36, known

locally as "Jim's Place." The roof of this rectangular feature is pierced with two holes; a piece of stove pipe found in the room indicates the function of one of the holes. Pick marks are evident on the walls suggesting that this feature was created before the advent of mechanized mining in the late 19th century. To the west of "Jim's Place" is Feature 42, the altered remains of the "Earache III" a sand mine. This strip mine was operated in the 1970s in a window of previously unpatented mineral land. It is considered a non-contributing element.

In summary, the evidence of hand work and the shape of the excavated features indicate an early date of construction and give support to the idea that they are associated with the Cumberland Mine. This portion of the BDM Site 1 has very good feature integrity; however, the presence of a large, high tension power line to the west disturbs the setting of the Cumberland mining features. The Cumberland preceded the Black Diamond Company, which absorbed it; consequently, these are some of the oldest identified features in the entire district. It is estimated that approximately 39 acres of underground rooms were excavated by coal companies in this site.

BDM Site 2 (Somersville Area) (Sheets 3 and 4; Map 3; Tables 5, 6, 7)

This site contains the Somersville townsite, Rose Hill Cemetery, and mining remains associated with the Pittsburg, Union, Eureka, Manhattan, and Independent coal mines, and the Hazel-Atlas sand mine. Further north, at Sydney Flat, are located a complex of agricultural buildings and a non-contributing group of recently relocated buildings that are used as Park Headquarters.

Somersville was occupied from about 1861 to 1907. Most of the townsite remains are clustered in two loci on the west and east sides of Markley Canyon. Historically, the most intensively occupied of these locations was that on the east side of Somersville flat, north of the present trail that leads east to

Stewartville. This area, designated Feature 168, was the subject of archaeological test investigations by the University of California, Berkeley from 1979 to 1986 (Maps 4a-c). In the course of their investigations, UCB excavated or uncovered: a hotel building, its two water cisterns, and yard, five house lots, an additional water cistern, and two privy pits. A 400 by 20-foot trench was excavated across the site to sample back yard and road areas. In addition, a filled-in ravine to the north of the site was cross-trenched; it was found to have been filled with domestic refuse during the late 19th century. Approximately 10% of the domestic remains in this location -- as determined from historic photograph and map analysis -- were archaeologically investigated.

In addition to the area examined by UCB, 18 building locations were found. Of these, ten were building platforms and eight were cellar holes. Most building platforms ranged from 12 to 30 feet in diameter. However, Feature 145, said to be the site of the mine superintendent's house, is 40 by 15 feet; and Feature 150, which is 85 by 30 feet, is in the location of the Somersville School. Similarly, most cellar holes are in the eight to fifteen feet diameter by one to three feet in depth range; these are believed to be private residences. Feature 159, however, is 30 feet in diameter by 7 deep; historic photographs show that this was the site of a hotel with a well used basement level.

Like the Nortonville townsite, portions of Somersville have been subject to natural soil movement that have adversely affected its archaeological integrity. In particular, the area east of the cemetery (Feature 142) and north and east of the Union Mine tailings (Feature 11) has been seriously affected by soil dislocations that have created a wave-like surface over previously level ground. Although historic-period artifacts are present in this area, archaeological features have not survived. The domestic component of the Somerville townsite has retained good to very good physical integrity and excellent integrity of setting.

Rose Hill Cemetery, Feature 142, is located on about three acres of gently sloping land east and above the townsite itself. The cemetery contains at least 113 grave plots, marked by 65 headstones that indicate the graves of a minimum of 183 individuals. Although the grave markers date from 1865 to 1954, most are from the 1870s and 1880s; many of these memorialize children who died of small pox, typhoid, or diphtheria. Marble, granite, limestone, and "white bronze" are employed in the markers; some have retained their cast iron railings. Many of the headstones bear Welsh surnames and several have Welsh language inscriptions. Fraternal symbols (Sons of Temperance, Knights of Pythias, Odd Fellows, Masons) are common. Some headstones bear their makers' marks, including Aitken and Luce, Sacramento, and the Pioneer Steam Marble Works of San Francisco.

In addition to the grave markers, two monuments have been erected by the Native Daughters and Sons of the Golden West and E Clampus Vitus to memorialize the 19th-century miners and their families. A mature "bird of paradise" bush (*P. gilliesii*) and Italian cypress and pepper trees are present. The cemetery is surrounded by a low, chain link fence. Over half of the headstones are either completely missing or have been broken off at the base; these elements were destroyed or stolen before EBRPD ownership. Three raised brick grave surrounds have been reconstructed. The cemetery retains a fair to good level of physical integrity and a very good to excellent level of integrity of setting.

The Union Mine, one of five coal mines that operated on the Somersville flat from the mid and late 1850s through the end of the 19th century, is represented by the portal site, artifact scatter, and tailings pile, located southeast of Rose Hill Cemetery. The Union Mine portal, Feature 9, was reportedly bulldozed closed by a local rancher. Consequently, only the site remains and the condition of the underground workings are not known. Just downslope from the portal site, is an extensive scatter of historic-period artifacts including brick fragments, bottle and window glass, and white improved earthenware. The scatter is believed to represent materials from the Union Mine office or an associated residence. Tailings from the Union Mine,

Feature 11, cover about one acre and stand up to 20 feet high. It is estimated that the underground workings of the Union Mine include at least two miles of gangways and 48 acres of mined-out rooms. A plan and section of the Union Mine workings are included as Figure 2.

Little remains above ground of the Eureka Mine which operated from about 1866 to 1873. The main portal was situated just south of the Greathouse Mine portal, in a location presently occupied by a water tank (Feature 7). An incline, Feature 4, is also believed to be associated with the Eureka Mine; the opening of this feature is sealed with a concrete collar and steel grate. The incline is accessible up to 160 feet from the opening; it has been sealed with a baulkhead at this point. An additional incline and ventilator shaft have also been tentatively associated with this mine (Map 3:C9 and C10). Opening C9 has been sealed with a concrete collar and steel grate; an updraught of air from this opening shows that its access to the coal workings is still open, although it has not been explored or mapped. The portion of the Eureka Slope that is accessible from the Greathouse Tunnel has a near perfectly curved roof. This slope would have been originally blasted out with black powder. The roof was finished by hand; its surface is a mass of pickmarks.

Only one possible Manhattan Mine feature was recorded (Map 3:C12). This is an adit whose opening has been reconstructed and closed with steel casing and bars. It is estimated that the Manhattan Mine contained at least 78 acres of mined-out underground rooms.

In contrast to the poorly-represented Manhattan, the Independent Mine site is marked by several above-ground features. These are the bowl-shaped depression marking the Independent Shaft and the stone footings that once supported the boiler (Feature 162); a second, concrete, set of footings, to the north of the shaft (Feature 163); a third set of footings, these are of stone, to the east of the shaft (Feature 164); and a mysterious construction of large-dimension lumber (Feature 165), also to the

east of the shaft. The shaft was closed by means of a concrete raft, pierced by drain tiles. It is 710 feet deep -- the deepest in the Somersville area -- opening onto a horizontal tunnel at 686 feet. The underground workings are flooded and, consequently, have never been explored or mapped. These features have retained a very good level of integrity. However, their setting is somewhat compromised by the dirt-surface parking lot located immediately adjacent to the features.

The Pittsburg Mine was responsible for most of the visible coal mining features in the Somersville area. This mine operated from 1866 to 1907. Tailings piles from Pittsburg mining presently cover about seven acres. Historic photographs show that the piles are lower than in the past, although they do not seem to cover less area. This reduction is due to erosion, in the case of Feature 1, and quarrying in the case of Features 11, 15, and 16. It is said that the road from Somersville to Pittsburg is built on Pittsburg Mine tailings; there is no doubt that the Somersville to Pittsburg railway grade (Feature 161) was brought up to grade using this material. The grade runs from the townsite north, through Sydney Flat (Sheet 4). In spite of their reduced size, the tailings piles are very impressive features. Standing up to 20 feet high and largely devoid of vegetation, the tailings dominate the landscape.

For some years after the merger of the Pittsburg, Eureka, and Independent mining companies, the new company utilized existing openings. However, by 1891, the Rankin Shaft (Feature 18) was the main access into the coal veins. The Rankin Shaft is presently marked by a bowl-shaped depression, approximately 80 feet in diameter by 10 feet deep; the shaft itself, which has been capped by a concrete slab, is 600 feet deep and opens onto extensive workings on all three of the coal field's major veins. As the shaft and other workings are flooded, their extent and condition are unknown. To the south of the Rankin Shaft, is a set of concrete footings, Feature 19, that are believed to have supported the mine's boiler. Part of the footing was destroyed during the installation of a fence line. It is estimated that the Pittsburg Mine and its predecessors excavated at least 426 acres of underground rooms.

Sand mining is represented in this site by two portals and their underground workings, a scarp containing several closed mine entrances, and a powder magazine, as well as several openings of unknown character.

The Greathouse Portal (Feature 8) provides access to an extensive network of sand stopes on two levels, excavated between 1920 and 1949, which link with excavations from the Hazel-Atlas Portal (Feature 14). A portion of these underground workings, which cover at least 14 acres, are shown on Figure 3. Like the stopes of the Columbia/Roberts mine, the Hazel-Atlas/Greathouse sand stopes are large, cavernous excavations with curved, self-supporting roofs up to 60 feet high and 25 feet wide. Several hand-made, wooden and metal chutes, used the load the sand onto mine cars, survive in the Hazel-Atlas workings. Both the Greathouse and Hazel-Atlas portals have been reconstructed in the style of the 1930s.

To the south of these features is an area of extensive mining that contains several sand mine openings (Feature 13), all of which have been closed. The area is also marked by a sheer scarp, up to 80 feet high and a heavily disturbed flat at its base; the mine openings are excavated into the scarp. A 30-foot long, L-shaped cavern, has been excavated into the sandstone on the floor of the flat; this is a powder magazine (Feature 12). The entrance is at the end of a gentle slope that runs into the sandstone from the surface to a depth of about 12 feet; the top of the feature is about 6 feet below the ground surface. The entrance of this feature is scarred with graffiti.

In summary, the southern portion of BDM Site 2 contains the Somersville townsite, openings, underground workings, and extensive tailings piles from several coal mines including the Pittsburg and its predecessors, and sandmine openings and underground workings. Although the reconstruction of mine openings and natural soil movement have disturbed the original condition of individual features, the overall integrity of this portion of the site is very good. As with Nortonville, the extensive tailings piles give the Somersville townsite area a

strong visual focus on the theme of historic mining. It is estimated that approximately 504 acres of underground rooms were excavated by coal companies in this site as a whole; about 14 acres of underground rooms were excavated by sand mining companies.

Located in the east side of Sydney Flat, the six 19th-century cottages, designated Feature 166, were moved onto the site by EBRP to serve as an historically non-intrusive administration complex. According to Park staff, the buildings were from Somersville and Nortonville; the present administration office was moved from Stewartville. This portion of the flat is said to have been thoroughly dynamited in the 1940s by a local rancher who was looking for artifacts from a saloon/brothel that was on this spot. Feature 161, the Pittsburg Mine railroad grade, crosses Sydney Flat and extends out of the district to the north.

On the west side of the Flat is a ranch complex, designated Feature 167. According to ex-owner Jack Lougher, the dwelling and some other features were moved from a site one-half mile to the west in about 1912 by Mr. Lougher's father who wished to be closer to the Antioch road. The complex consists of a vernacular hipped roof cottage with multiple additions and several outbuildings of untreated, vertical redwood boards; the latter include a tankhouse, five barns and sheds, a windmill, and a network of corrals.

In summary, the relocated buildings of the park headquarters and the Lougher Ranch are considered non-contributing. The former lack integrity of location while the Lougher Ranch complex is not known to relate to the historic significance of the coal and sand mining operations. There may be additional research in the future that may determine some significance for the ranch complex.

BDM Site 3 (Stewartville Area) (Sheets 5 and 6; Maps 4 and 5; Tables 8 and 9)

The western portion of this site contains both domestic and mining-related remains in and adjacent to the Stewartville townsite. The eastern section of the site contains several sand and coal mine openings and tailings dumps.

The Stewartville townsite, which was occupied between about 1870 and the late 1890s, consists of the remains of at least 26 residences or other structures. They are grouped in two locations: on the north-facing slope, above the Stewartville valley, on either side of a disused trail; and spread out along the railroad grade from the Central Mine east to the opening of the next broad flat. Most of these locations contain a building platform, cellar hole, or both. The platforms range from 35 by 50 feet to only 15 feet in diameter. Most were partly excavated into the hillside, the excavated soil being used to level the outside of the platform. The large size or location of some of these features -- e.g., Features 139 and 140, and 124 and 126, respectively -- suggest that they may have had industrial or commercial functions. The integrity of individual features was generally excellent; the recorded features were situated in relatively geologically stable locations and there was no indication of vandalism. However, the portion of the valley floor west of the Central Mine and north of the creek is quite unstable. This area exhibits large-scale slippage, gullying, and many soil dislocations. Historic maps and photographs show that this area was not intensively occupied; however, any remains that may have been there have been destroyed by these natural processes. The townsite as a whole has very good to excellent integrity.

The Central Mine operated intermittently between about 1870 and the late 1890s. It was the sole raison d'etre of the town of Stewartville. The mine is marked by three openings and a tailings dump. One of the three openings -- Feature 24 -- was not formally recorded prior to being closed by a local rancher in the early 1950s. Feature 22, is an adit, possibly driven for

ventilation, which has been closed by a steel grate and covered with rock; it is not visible from the surface. When discovered, this opening ran approximately 150 feet north where it had caved. The third opening is the portal to the first tunnel driven to prospect this location (Feature 49); the portal was also closed without having been recorded. The complex of which the portal is a part also contains a possible vent shaft and tailings dump (Features 50 and 51). Other surface remains consist of a tailings and furnace conglomerate dump and the large timbers of a collapsed bunker, designated Feature 53. The tailings dump covers an area of about two acres and rises 100 feet above the valley floor. There are signs that some of the furnace waste has been quarried for roadbed; however, this has had little effect on the dump as a whole. Plans of the Central Mine workings are included as Figure 4.

The railroad that ran from Stewartville, through West Hartley, and north to Antioch, has survived in BDM Site 3 as a terraced grade up to 50 feet wide by 15 feet in height; dimensions of the grade vary considerably with the terrain. Overall, the grade is in excellent condition.

A sand mine complex, probably dating to the 1930s or early 1940s and consisting of a portal run into a sandstone face and a tailings dump of about one-eight of an acre, is located to the east of the Stewartville townsite (Features 54 and 55).

In summary, the western portion of this site contains the Stewartville townsite, the closed openings and dump of the Central Mine, and an unidentified sand mine, as well as part of the Stewartville-Antioch railroad grade. Integrity of the domestic remains is very good to excellent. Although there is no access to the underground workings of the Stewart Mine and their condition is not known, the excavations here are very extensive. It is estimated that the underground workings of the Central Mine include at least 284 acres of mined-out rooms. The mine openings and tailings of the Central Mine range from poor to excellent

integrity, respectively. This portion of the site has very good to excellent integrity. The extensive Central Mine tailings are the dominant surface feature of this area.

On the eastern side of BDM Site 3 coal mining is represented by the tailings and portal associated with the Star Mine which operated in the mid and late 19th century (Features 47 and 48). The opening may have been the principal access to the underground workings. At the time of its discovery, the adit was found to be open with minor roof fall; EBRP personnel detected a draft, indicating that the lower workings were open, but these were not investigated. It is likely that this adit connects with the West Hartley Mine, outside the district boundary to the east. The portal is closed with a concrete collar and steel grate. Two closed adits, also part of the Star Mine (Map 5:S17 and S18) are located south of the main portal. The tailings dump, Feature 47, is about one-half acre in extent; the northern portion of this feature was produced by EBRP personnel in the process of cleaning out the adit.

Feature 43 is also a coal mining feature; this excavation is a prospect adit that probably dates to the mid 19th century. This feature is driven into a sandstone face; its walls are straight but not parallel, bending in to a curved roof. The adit is 400 feet long, striking a coal seam at about 300 feet; the entire length is open. Lengths of strap railing resting on widely-spaced ties are still present in the adit. This light-weight system would have supported only exploratory mining. Part of the tailings pile, Feature 44, was deposited by EBRPD personnel in the course of cleaning out the adit.

The Marchio Sand Company developed two sand quarries in this area beginning in about 1941. Feature 46 is a large open pit quarry, excavated in two terraces and producing a sheer scarp, about 80 feet high. Feature 45 is an open pit quarry of similar proportions.

In summary, the western portion of BDM Site 3 contains the principal opening to the Star Mine, an excellent example of a prospect adit, the only examples of open pit sand quarrying in the district, and a portion of the Stewartville-Antioch railroad grade (Feature 130). The integrity of the features and their setting is excellent.

Table 1: B.D.M. Site 1 (Nortonville Area): Historic Features

F. No.	Sheet No.	Type	Association
94	1	Building Platform	Nortonville Townsite
95	1	Building Platform	Nortonville Townsite
101	1	Building Platform	Nortonville Townsite
102	1	Building Platform	Nortonville Townsite
104	1	Building Platform	Nortonville Townsite
58	1	Cellar Hole	Nortonville Townsite
59	1	Cellar Hole	Nortonville Townsite
65	1	Cellar Hole	Nortonville Townsite
88	1	Cellar Hole	Nortonville Townsite
89	1	Cellar Hole	Nortonville Townsite
91a	1	Cellar Hole	Nortonville Townsite
96	1	Cellar Hole	Nortonville Townsite
98	1	Cellar Hole	Nortonville Townsite
99	1	Cellar Hole+Refuse Scatter	Nortonville Townsite
103	1	Cellar Hole (stone-lined)	Nortonville Townsite
70	1	Orchard	Nortonville Townsite
97	1	Privy (?)	Nortonville Townsite
71	1	Retaining Wall	Nortonville Townsite
105	1	Retaining Wall	Nortonville Townsite
86	1	Stone Cellar	Nortonville Townsite
64	1	Trail	Nortonville Townsite
36	2	Blg Platform+Retaining Wall	
37	2	Building Platform	
24	2	Powder Magazine(?)	
22	2	Stope Vent	
23	2	Stope Vent	
25	2	Stope Vent	
21	2	Tailings	
26	2	Tooling	
35	2	Well	
109	2	Upper Black Diamond Tunnel	Black Diamond Co.
38	2	Adit	
41	2	Room	
39	2	Adit+Vent Shaft	Cumberland Mine(?)
40	2	Tailings	Cumberland Mine
42	2	Strip Mine	Earache III Mine

Table 1: B.D.M. Site 1 (Nortonville Area): Historic Features

F. No.	Sheet No.	Type	Association
106	1	Coal Bunker	Black Diamond Co.
107	1	Pithead Chimney (site)	Black Diamond Co.
30	1	Shaft+Hoisting Works	Black Diamond Co.
27	1	Tailings	Black Diamond Co.
28	1	Tailings	Black Diamond Co.
108	1	Trestle Remains	Black Diamond Co.
57	1	Blg Platform+Cellar	Nortonville Townsite
67	1	Blg Platform+Cellar	Nortonville Townsite
72	1	Blg Platform+Cellar	Nortonville Townsite
73	1	Blg Platform+Cellar	Nortonville Townsite
74	1	Blg Platform+Cellar	Nortonville Townsite
75	1	Blg Platform+Cellar	Nortonville Townsite
76	1	Blg Platform+Cellar	Nortonville Townsite
92	1	Blg Platform+Cellar	Nortonville Townsite
100	1	Blg Platform+Chimney Base	Nortonville Townsite
56	1	Building Platform	Nortonville Townsite
60	1	Building Platform	Nortonville Townsite
61	1	Building Platform	Nortonville Townsite
62	1	Building Platform	Nortonville Townsite
63	1	Building Platform	Nortonville Townsite
66	1	Building Platform	Nortonville Townsite
68	1	Building Platform	Nortonville Townsite
69	1	Building Platform	Nortonville Townsite
77	1	Building Platform	Nortonville Townsite
78	1	Building Platform	Nortonville Townsite
79	1	Building Platform	Nortonville Townsite
80	1	Building Platform	Nortonville Townsite
81	1	Building Platform	Nortonville Townsite
82	1	Building Platform	Nortonville Townsite
83	1	Building Platform	Nortonville Townsite
84	1	Building Platform	Nortonville Townsite
85	1	Building Platform	Nortonville Townsite
87	1	Building Platform	Nortonville Townsite
90	1	Building Platform	Nortonville Townsite
91	1	Building Platform	Nortonville Townsite
93	1	Building Platform	Nortonville Townsite
90a	1	Building Platform	Nortonville Townsite
92a	1	Building Platform	Nortonville Townsite
93a	1	Building Platform	Nortonville Townsite

Table 2
B.D.M. Site 1 (Nortonville Area):
Southport Co Sand Mine Openings

Ref #	Map#	Type of Opening
SS1	1	Adit
SS2	1	Shaft
SS3	1	Ventilator Shaft
SS4	1	Ventilator to Stope
SS5	1	Ventilator to Stope
SS6	1	Ventilator to Stope
SS7	1	Horizontal Ventilator
SS8	1	Ventilator to Stope
SS9	1	Ventilator to Stope
SS10	1	Ventilator to Stope
SS11	1	Ventilator to Stope
SS12	1	Ventilator to Stope
SS13	1	Ventilator to Stope
SS14	1	Ventilator to Stope
SS15	1	Ventilator to Stope
SS16	1	Ventilator to Stope
SS17	1	Adit
SS18	1	Separation in Rock Face
SS19	1	Separation in Rock Face
SS20	1	Adit
SS21	1	Adit
SS22	1	Unknown
SS23	1	Adit

Table 3
B.D.M. Site 1 (Nortonville Area):
Southport Co Coal Mine Openings

Ref #	Map #	Type of Opening
SC1	1	Ventilation Shaft
SC2	1	Ventilation Shaft
SC3	1	Ventilation Shaft
SC4	1	Ventilation Shaft
SC5	1	Adit
SC6	1	Adit
SC7	1	Adit
SC8	1	Ventilator Shaft

Table 4
B.D.M. Site 1 (Nortonville Area):
Coal Mine Openings

Ref #	Map#	Type of Opening	Association
C26	2	Incline	unknown
C27	2	Adit	Cumberland Mine
C28	2	Ventilator Shaft	Cumberland Mine
C29	2	Ventilator Shaft	unknown
C30	2	Adit	Cumberland Mine
C31	2	Ventilator Shaft	Cumberland Mine
C32	2	Adit	unknown
C33	2	Adit	unknown
C34	2	Adit	unknown
C35	2	Ventilator Shaft	Black Diamond Mine
C36	2	Small Room	unknown
C37	2	Ventilator Shaft	Black Diamond Mine
C38	2	Ventilator Shaft	Black Diamond Mine
C39	2	Ventilator Shaft	Black Diamond Mine
C40	2	Ventilator Shaft	Black Diamond Mine
C41	2	Ventilator Shaft	Black Diamond Mine
C42	2	Ventilator Shaft	Black Diamond Mine
C43	2	Adit	Black Diamond Mine
C44	2	Adit	Black Diamond Mine
C45	2	Ventilator Shaft	Black Diamond Mine
C46	2	Adit	Black Diamond Mine
C47	2	Ventilator Shaft	Black Diamond Mine

Table 5: B.D.M. Site 2 (Somersville Area): Historic Features

F. No.	Sheet No.	Type	Association
33	3	Building Platform	
158	3	Building Platform	
31	3	Incline	
49	3	Incline(?)	
3	3	Powder Magazine(?)	
15	3	Tailings	
6	3	Vent Shaft	
34	3	Vent Shaft(?)	
7	3	Portal	Eureka Mine (?)
2	3	Vent Shaft	Eureka Mine (?)
8	3	Portal	Greathouse Sand Mine
14	3	Portal	Hazel Atlas Mine
13	3	Sand Mine	Hazel Atlas Mine
12	3	Powder Magazine	Hazel Atlas Sand Mine
163	3	Concrete Footing	Independent Mine
165	3	Mystery Feature	Independent Mine (?)
162	3	Shaft+Boiler Footing	Independent Mine
164	3	Stone Footings	Independent Mine
19	3	Mine Boiler Footings	Pittsburg Mine
161	3	Railroad Grade	Pittsburg Mine
20	3	Retaining Wall	Pittsburg Mine
1	3	Tailings	Pittsburg Mine
5	3	Tailings	Pittsburg Mine
16	3	Tailings	Pittsburg Mine
17	3	Tailings	Pittsburg Mine
32	3	Tailings	Pittsburg Mine
18	3	Mine Shaft	Pittsburg Mine/Rankin Shaft
4	3	Incline	Pittsburg or Eureka mine
157	3	Blg Platform+Footing	Somersville Townsite
143	3	Building Platform	Somersville Townsite
144	3	Building Platform	Somersville Townsite
145	3	Building Platform	Somersville Townsite
146	3	Building Platform	Somersville Townsite
150	3	Building Platform	Somersville Townsite
151	3	Building Platform	Somersville Townsite
152	3	Building Platform	Somersville Townsite
156	3	Building Platform	Somersville Townsite
158	3	Building Platform	Somersville Townsite
147	3	Cellar Hole (?)	Somersville Townsite

Table 5: B.D.M. Site 2 (Somersville Area): Historic Features

F. No.	Sheet No.	Type	Association
148	3	Cellar Hole (?)	Somersville Townsite
149	3	Cellar Hole	Somersville Townsite
153	3	Cellar Hole	Somersville Townsite
154	3	Cellar Hole	Somersville Townsite
159	3	Cellar Hole	Somersville Townsite
160	3	Cellar Hole	Somersville Townsite
155	3	Cellar Hole (?)	Somersville Townsite
142	3	Rose Hill Cemetery	Somersville Townsite
10	3	Artifact Scatter	Union Mine
9	3	Portal (site)	Union Mine
11	3	Tailings	Union Mine
167	4	Lougher Ranch	Non-contributing
161	4	Railroad Grade	Pittsburg Mine
166	4	Vernacular Blgs	Relocated (non-contributing)

Table 6
B.D.M. Site 2 (Somersville Area):
Sand Mine Openings

Ref #	Map#	Type of Opening
S1	3	Adit
S2	3	Adit
S3	3	Ventilator Shaft
S4	3	Ventilator Shaft
S5	3	Adit
S6	3	unknown
S7	3	unknown
S8	3	unknown
S9	3	unknown
S10	3	unknown
S11	3	unknown
S12	3	unknown
S13	3	unknown
S14	3	unknown
S15	3	unknown
S16	3	unknown
S17	3	Ventilator Shaft
S18	3	unknown
S19	3	unknown
S20	3	unknown
S21	3	unknown
S22	3	unknown
S23	3	unknown
S24	3	unknown
S25	3	unknown
S26	3	unknown
S27	3	unknown

Table 7
B.D.M. Site 2 (Somersville Area):
Coal Mine Openings

Ref #	Map#	Type of Opening	Association
C1	3	Independent Shaft	Independent Co.
C2	3	Pittsburg (Rankin) Shaft	Pittsburg Co.
C3	3	Adit	Pittsburg Co.
C4	3	Adit	Pittsburg Co.
C5	3	Adit	Pittsburg Co.
C7	3	Ventilator Shaft	Pittsburg Co.
C8	3	Ventilator Shaft	Pittsburg Co.
C9	3	Ventilator Shaft	Eureka Mine
C10	3	Incline	Eureka Mine
C11	3	Unrecorded	unknown
C12	3	Adit	Manhattan Mine
C13	3	Adit	Manhattan Mine
C14	3	Unrecorded	unknown
C15	3	Unrecorded	unknown
C16	3	Unrecorded	unknown

Table 8: B.D.M. Site 3 (Stewartville Area): Historic Features

F. No.	Sheet No.	Type	Association
49	5	Incline(?)	
54	5	Sand Mine Portal	
51	5	Tailings	
55	5	Tailings	
52	5	Trail	
50	5	Vent Shaft(?)	
53	5	Tailings	Central/Stewart Mine
123	5	Blg Platform+Cellar	Stewartville Townsite
111	5	Building Platform	Stewartville Townsite
111	5	Building Platform	Stewartville Townsite
114	5	Building Platform	Stewartville Townsite
115	5	Building Platform	Stewartville Townsite
117	5	Building Platform	Stewartville Townsite
131	5	Building Platform	Stewartville Townsite
132	5	Building Platform	Stewartville Townsite
133	5	Building Platform	Stewartville Townsite
134	5	Building Platform	Stewartville Townsite
137	5	Building Platform	Stewartville Townsite
139	5	Building Platform	Stewartville Townsite
140	5	Building Platform	Stewartville Townsite
141	5	Building Platform	Stewartville Townsite
112	5	Cellar Hole	Stewartville Townsite
113	5	Cellar Hole	Stewartville Townsite
116	5	Cellar Hole	Stewartville Townsite
118	5	Cellar Hole	Stewartville Townsite
120	5	Cellar Holc	Stewartville Townsite
121	5	Cellar Hole	Stewartville Townsite
122	5	Cellar Hole	Stewartville Townsite
125	5	Cellar Hole	Stewartville Townsite
126	5	Cellar Hole	Stewartville Townsite
127	5	Cellar Hole	Stewartville Townsite
135	5	Cellar Hole (?)	Stewartville Townsite
136	5	Cellar Hole	Stewartville Townsite
138	5	Cellar Hole	Stewartville Townsite
119	5	Privy (?)	Stewartville Townsite
124	5	Privy (?)	Stewartville Townsite
43	6	Prospect Tunnel	
44	6	Tailings	
130	6	Railroad Grade	Central Mine

Table 8: B.D.M. Site 3 (Stewartville Area): Historic Features

F. No.	Sheet No.	Type	Association
46	6	Sand Mine	Marchio Mine I
45	6	Sand Mine	Marchio Mine II
48	6	Portal	Star Mine
47	6	Tailings	Star Mine

Table 9
B.D.M. Site 3 (Stewartville Area):
Coal Mine Openings

Ref #	Map#	Type of Opening	Association
C17	5	Adit	Star Mine
C18	5	Adit	Star Mine
C19	5	Incline	Star Mine
C20	5	Unrecorded	unknown
C21	5	Unrecorded	unknown
C22	4	Incline	Central/Stewart Mine
C23	4	Unrecorded	Central/Stewart Mine
C24	4	Unrecorded	Central/Stewart Mine
C25	4	Unrecorded	unknown

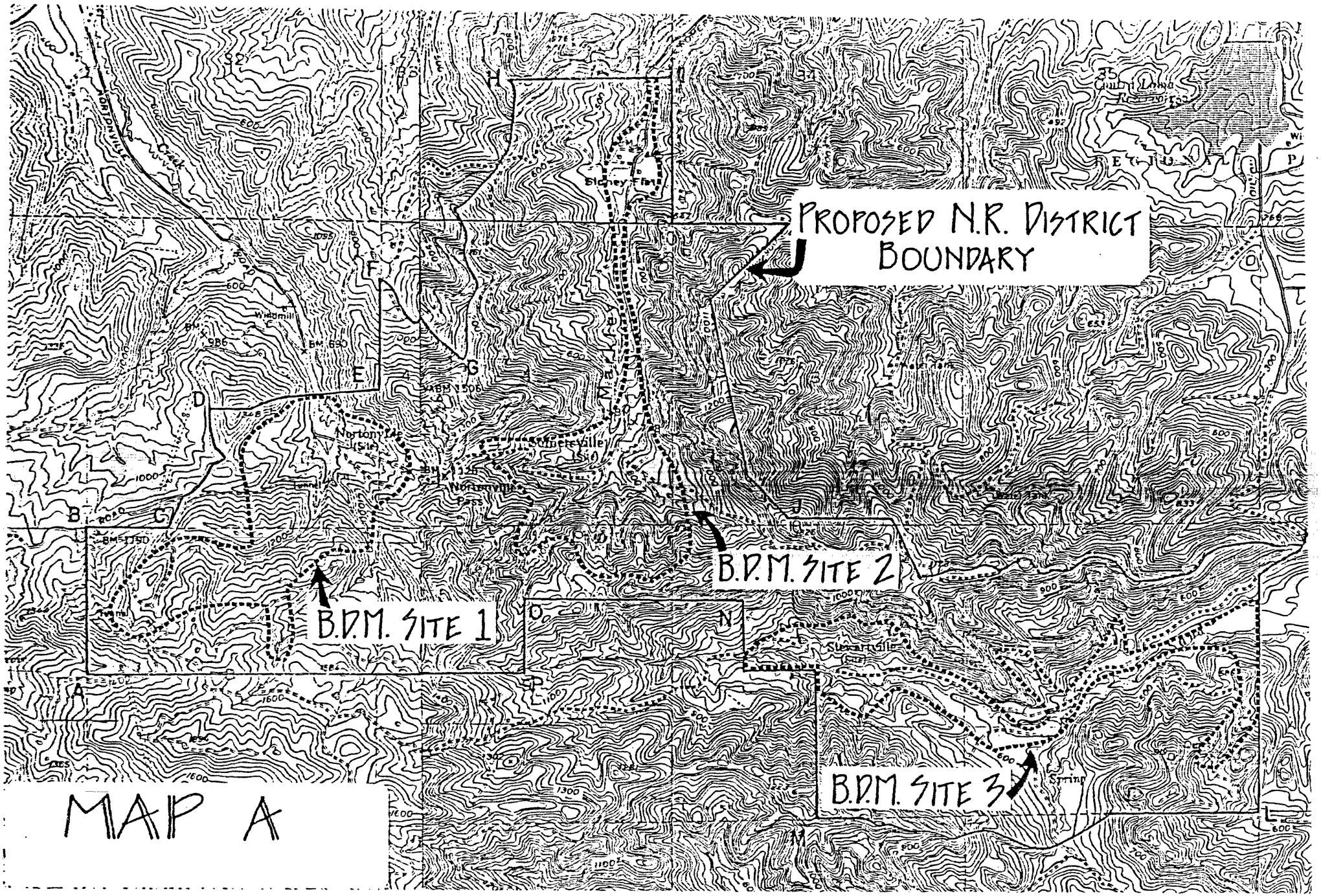
TABLE 10 ANNUAL LIGNITE PRODUCTION OF THE MOUNT DIABLO MINES, 1861 - 1876.

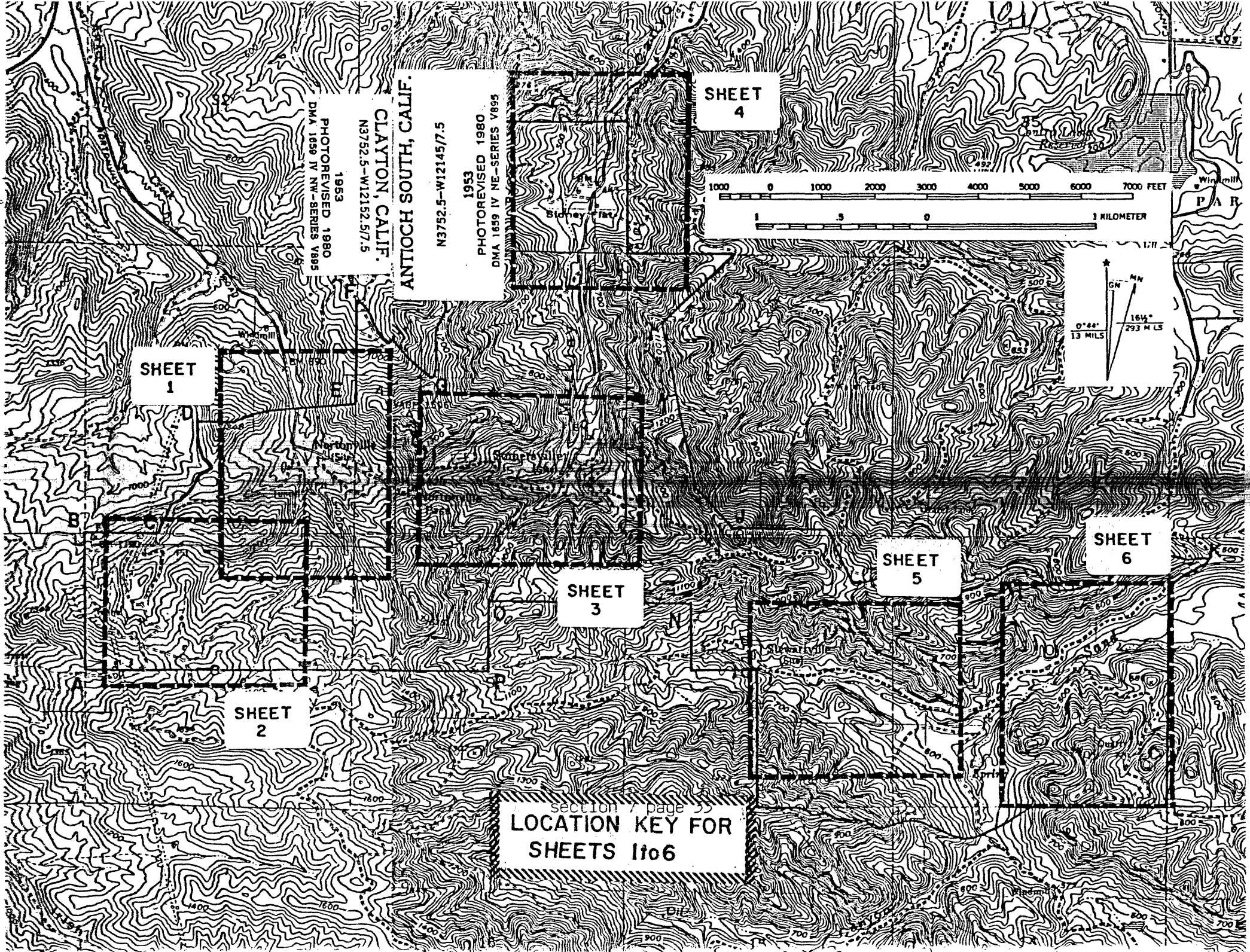
Year	Black Diamond	Union	Pittsburg	Eureka	Independent	Manhattan	Central approx. only	Estimated additional production	Total Production
1861	1,370							5,250	6,620
1862	10,672							12,728	23,400
1863	14,232							28,968	43,200
1864	13,421							38,279	50,700
1865	14,491	11,1[illegible]						34,852	60,530
1866	16,009	14,224	9,599	7,391	15,678	65		21,054	84,020
1867	38,368	24,167	21,909	10,908	14,368		3,000	12,000	124,690
1868	70,100	21,641	22,920	15,8[illegible]			3,000	10,200	143,676
1869	79548	17,274	27,938	16,954			4,729	10,800	157,234
1870	70,668	20,563	23,858	10,246			5,055	11,400	141,890
1871	75,536	17,209	22,339	18,194			7,215	12,000	152,493
1872	103,008	21,491	26,714	16,831			9,612	13,200	190,859
1873	104,596	22,600	32,263	4,075			8,578	14,400	186,611
1874	117,804	30,002	43,546				9,000	15,000	215,352
1875	83,645	26,365	33,628				8,000	15,000	166,638
1876	63,048	24,000	21,801				3,000	16,200	128,049
Total	875,516	250,726	286,714	100,405	30,016	65	61,189	271,331	1,875,962

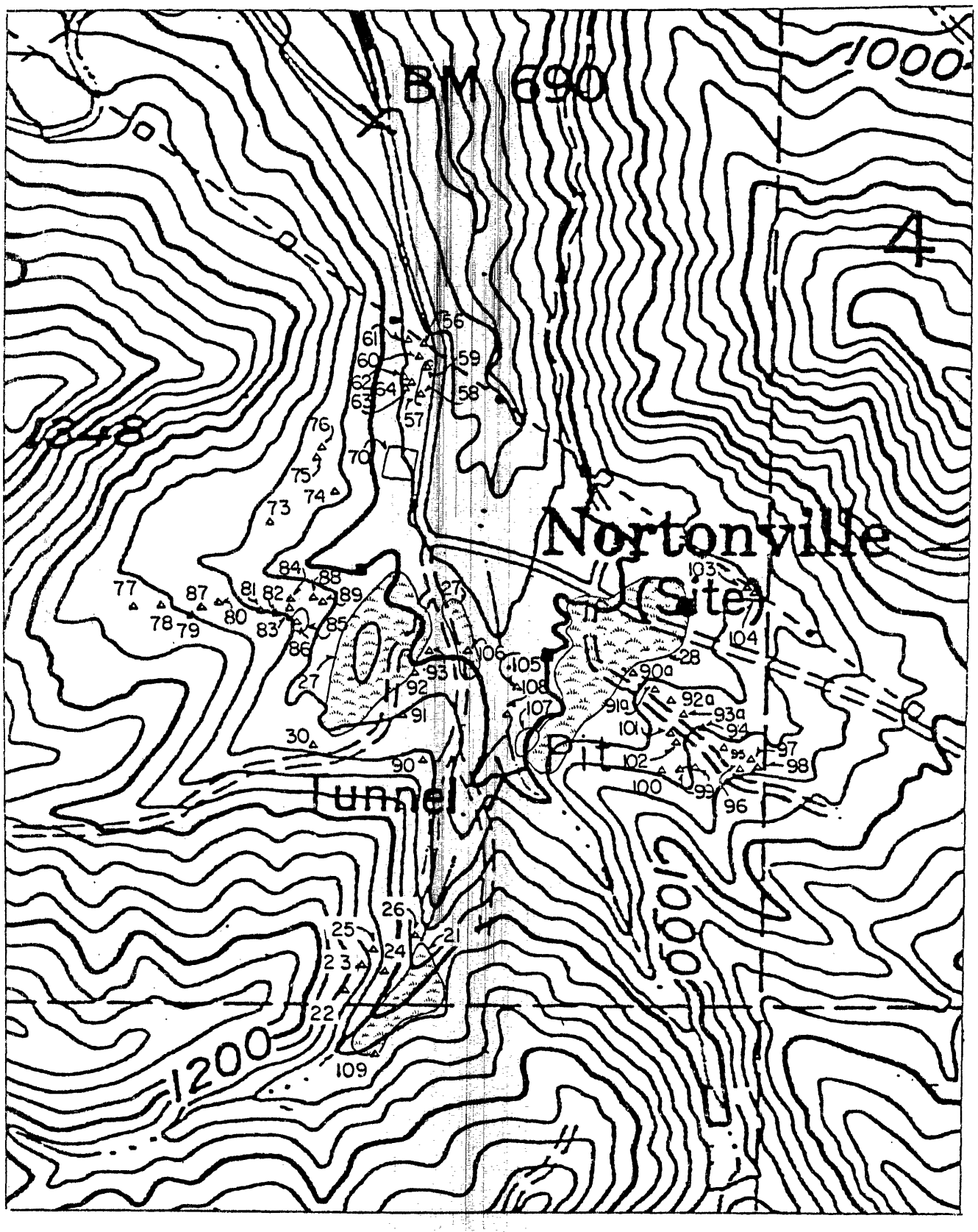
Data Source: Watson A. Goodyear, The Coal Mines of the Western U.S. (San Francisco, 1877), p. 136.

PLATES

1. Coal tailings at Nortonville
2. Typical building platform excavated into hillside, Nortonville
3. Portion of Nortonville townsite.
4. Typical graffiti-scarred mine opening
5. Carbide lamp graffiti in mined out room
6. Mined out room in Clark Vein
7. Mined out room showing coal pillars supporting roof
8. Typical hand-excavated prospect tunnel
9. Entrance to underground room, "Jim's Place"
10. Eastern portion of the Somersville townsite
11. Rose Hill Cemetery
12. Typical ventilation shaft closure
13. Trees growing from probable ventilation shaft
14. Pittsburg Mine tailings
15. Reconstructed portal, Hazel-Atlas Sand Mine
16. Sand chute, Hazel-Atlas Sand Mine
17. Detail of sand chute, Hazel Atlas Sand Mine.
18. Sand stope, Hazel-Atlas Sand Mine
19. Sand stope, Greathouse Sand Mine
20. Typical hand-dressed adit wall, Eureka Mine
21. Relocated 19th-century dwellings, Sydney Flat
22. Somersville to Antioch railroad grade
23. Typical cellar hole; Central Mine tailings in background
24. Central Mine tailings
25. Typical coal mine adit and tailings
26. Marchio #2 Sand Mine
27. Laugher Ranch (1 of 2)
28. Laugher Ranch (2 of 2)

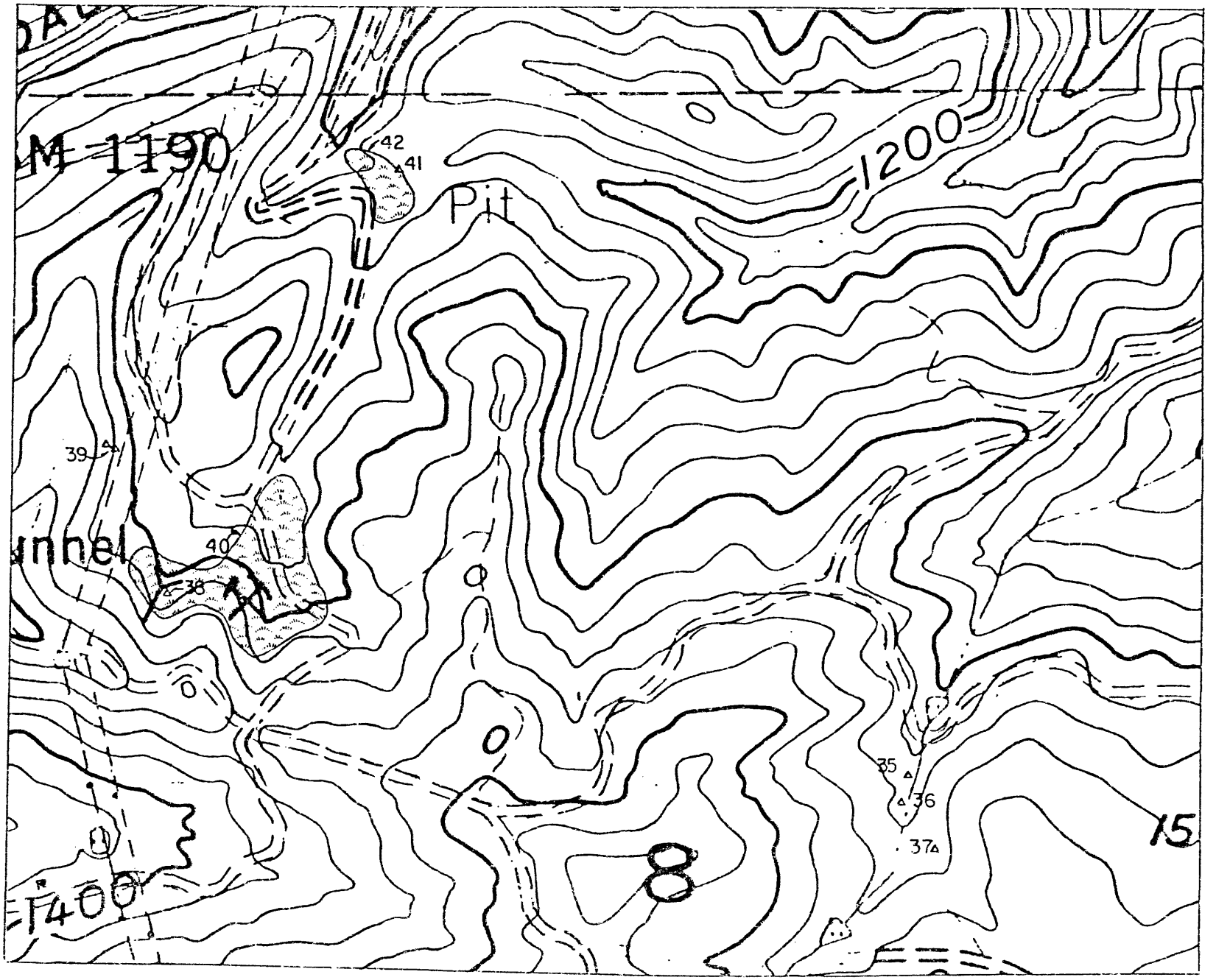

PROPOSED N.R. DISTRICT BOUNDARY
B.D.M. SITE 1
B.D.M. SITE 2
B.D.M. SITE 3
MAP A


ANTIOCH SOUTH, CALIF.
N3752.5—W12145/7.5
1953
PHOTOREVISED 1980
DMA 1659 IV NE—SERIES V895
CLAYTON, CALIF.
N3752.5—W12152.5/7.5
1953
PHOTOREVISED 1980
DMA 1659 IV NW—SERIES V895
SHEET 1
SHEET 2
SHEET 3
SHEET 4
SHEET 5
SHEET 6
LOCATION KEY FOR SHEETS 1 to 6
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER
GN MN
0°44'
13 MILS
16½°
293 MILS
Nortonville
Somersville
Stewartville
Sidney Flat
Windmill
Section 7 page 55



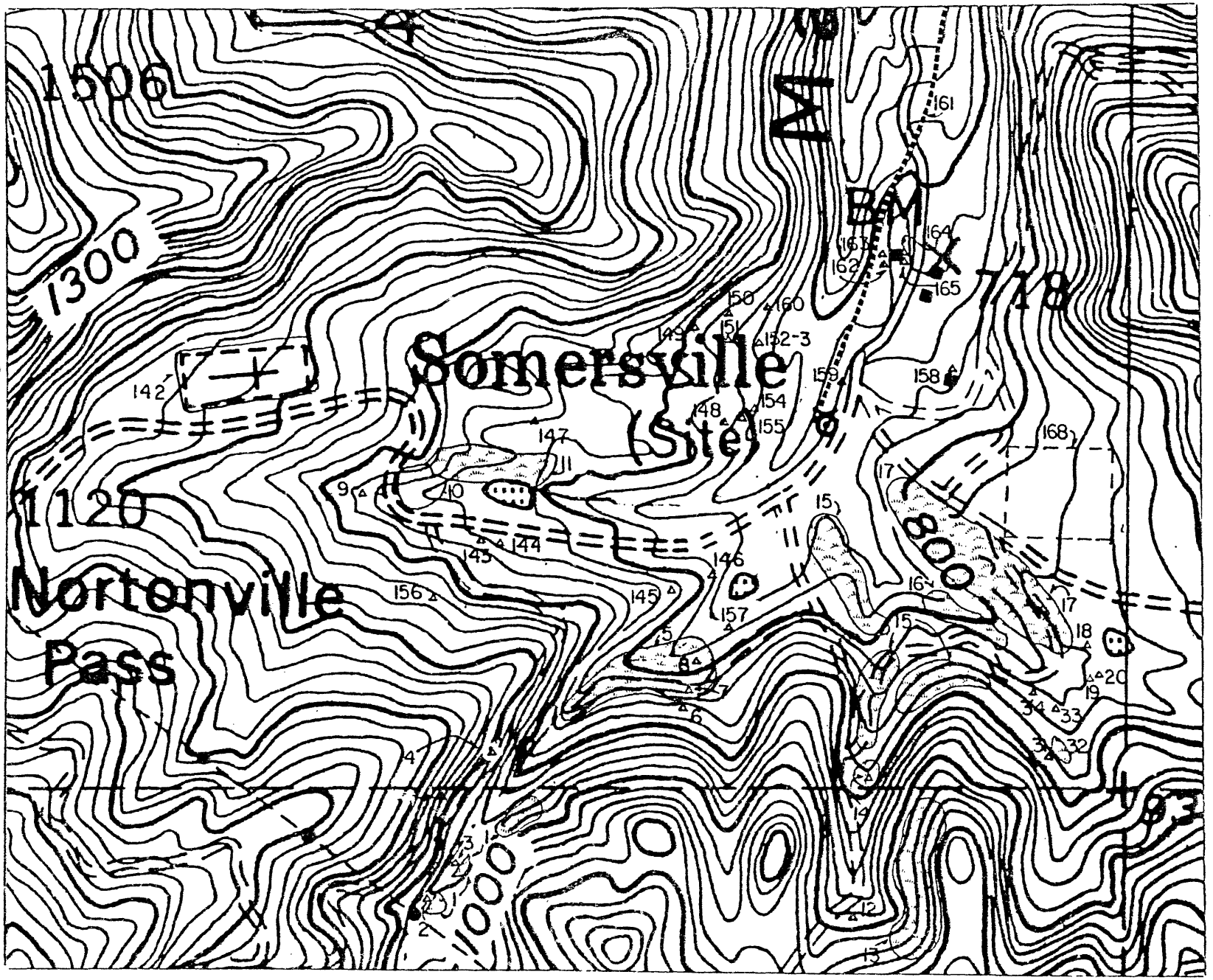
BLACK DIAMOND MINES: *HISTORIC FEATURES* (SITE 1)

SHEET 1 (See attached USGS quadrangles for key to sheet location)



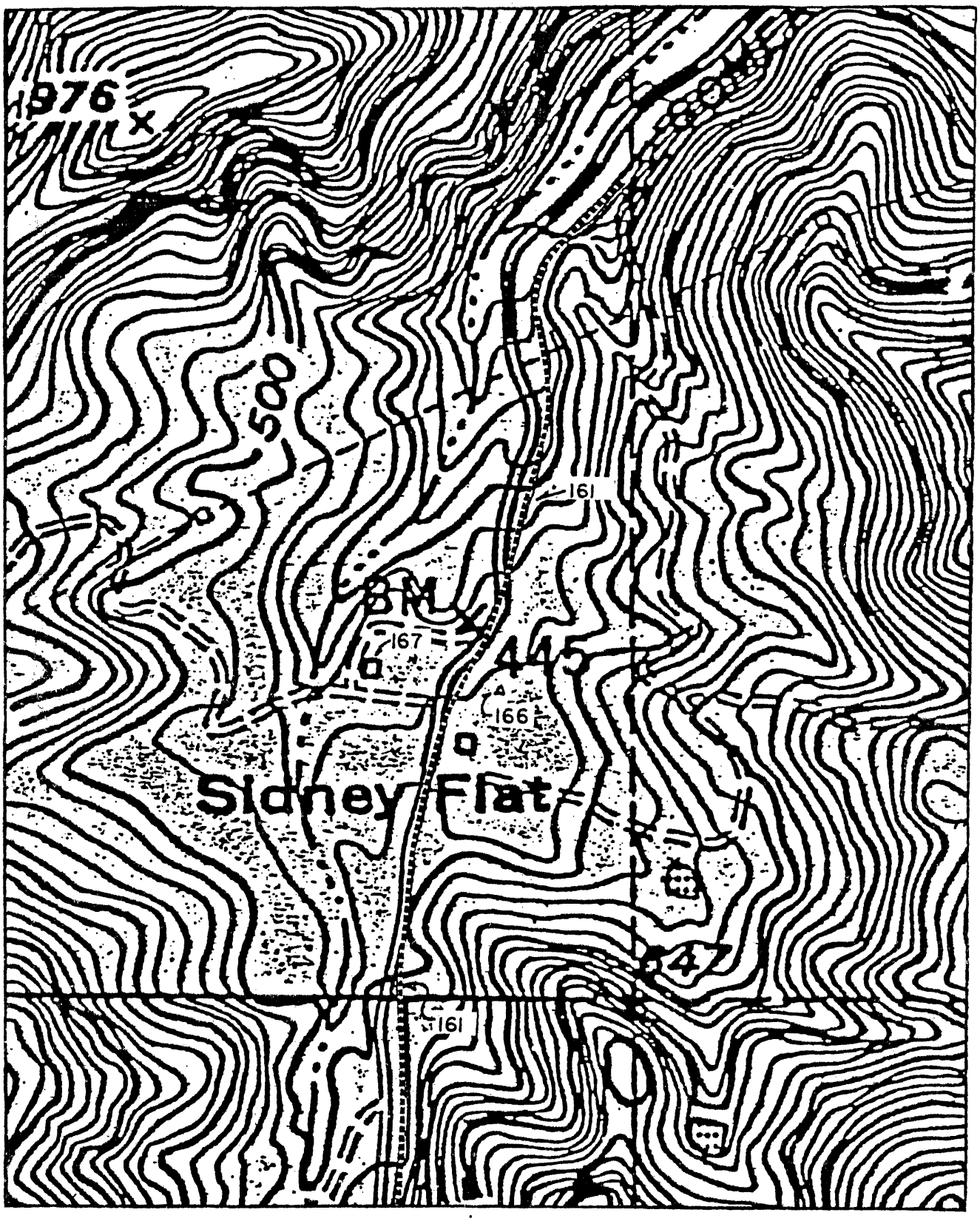
BLACK DIAMOND MINES: *HISTORIC FEATURES* (SITE 1)

SHEET 2 (See attached USGS quadrangles for key to sheet location)



BLACK DIAMOND MINES: *HISTORIC FEATURES* (SITE 2)

SHEET 3 (See attached USGS quadrangles for key to sheet location)

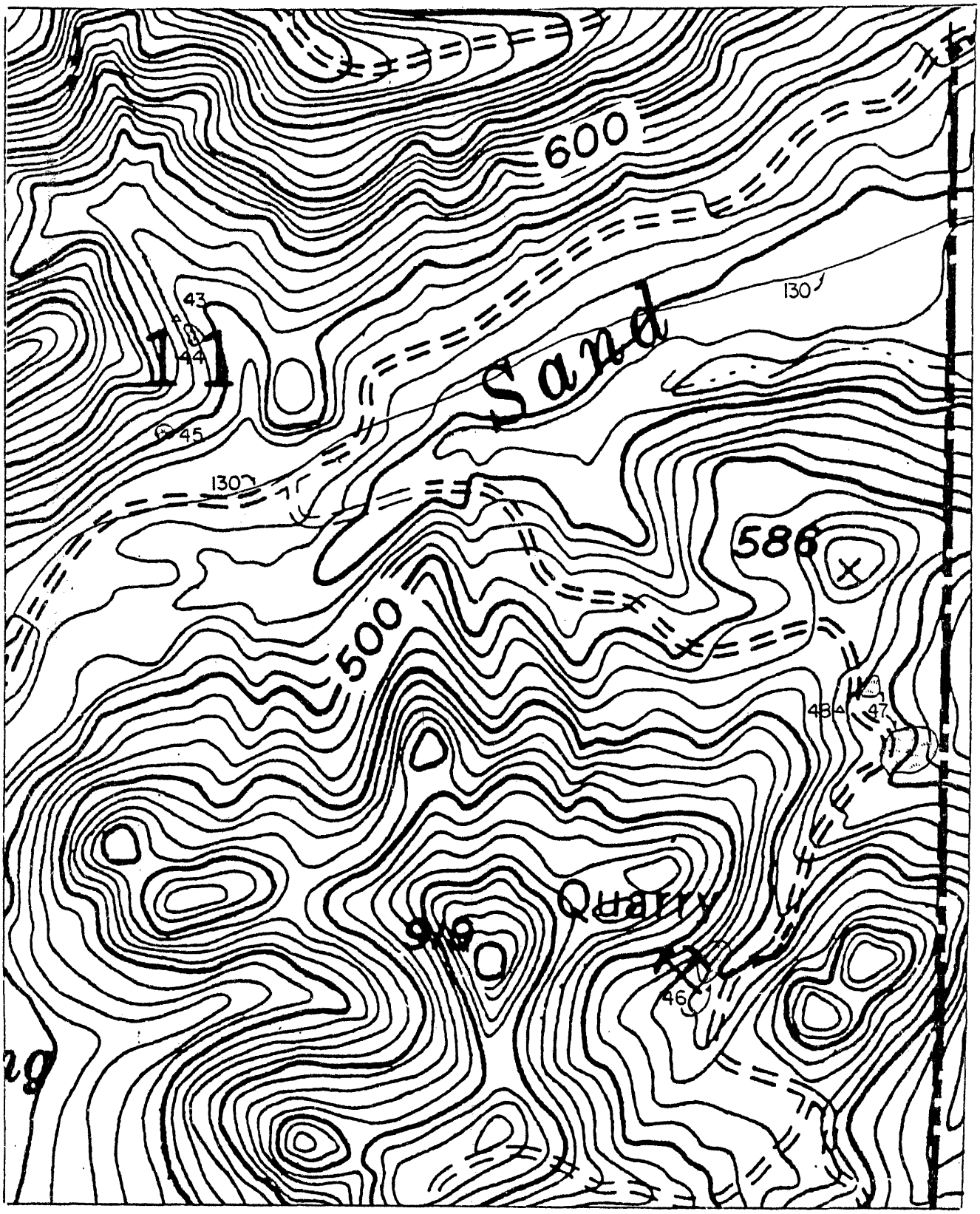


BLACK DIAMOND MINES: *HISTORIC FEATURES* (SITE 2)

SHEET 4 (See attached USGS quadrangles for key to sheet location)

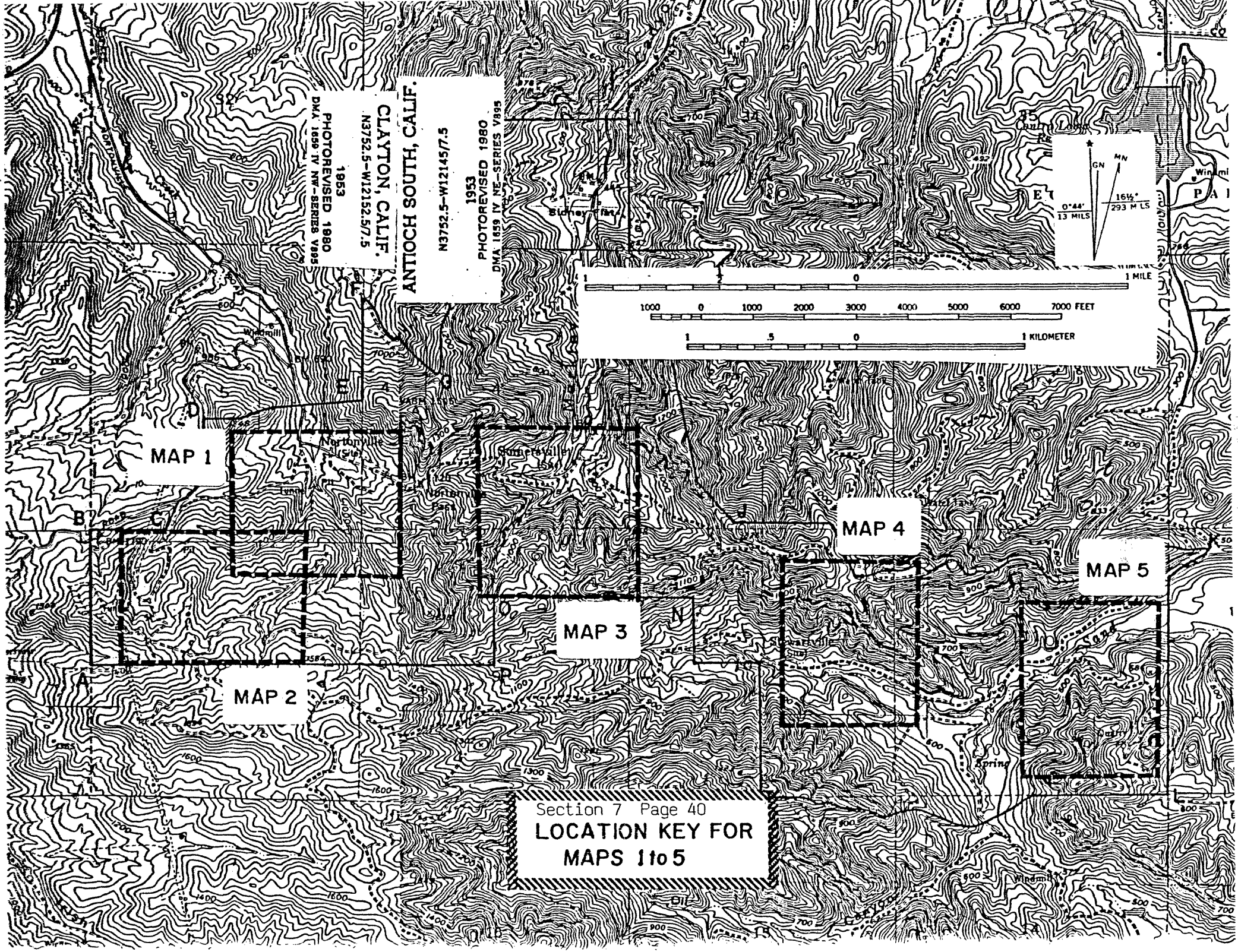
BLACK DIAMOND MINES: *HISTORIC FEATURES* (SITE 3)

SHEET 5 (See attached USGS quadrangles for key to sheet location)

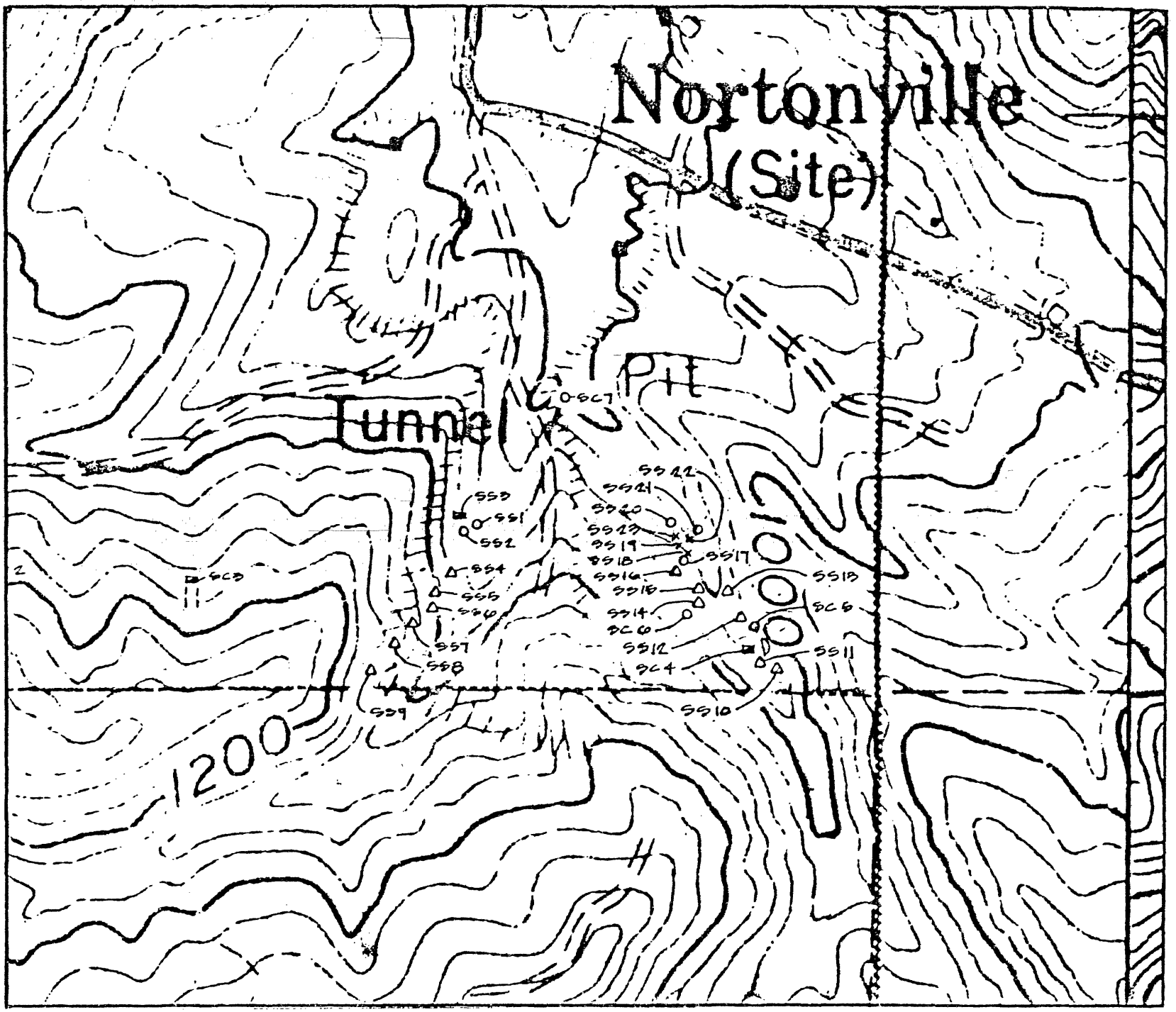


BLACK DIAMOND MINES: *HISTORIC FEATURES* (SITE 3)

SHEET 6 (See attached USGS quadrangles for key to sheet location)

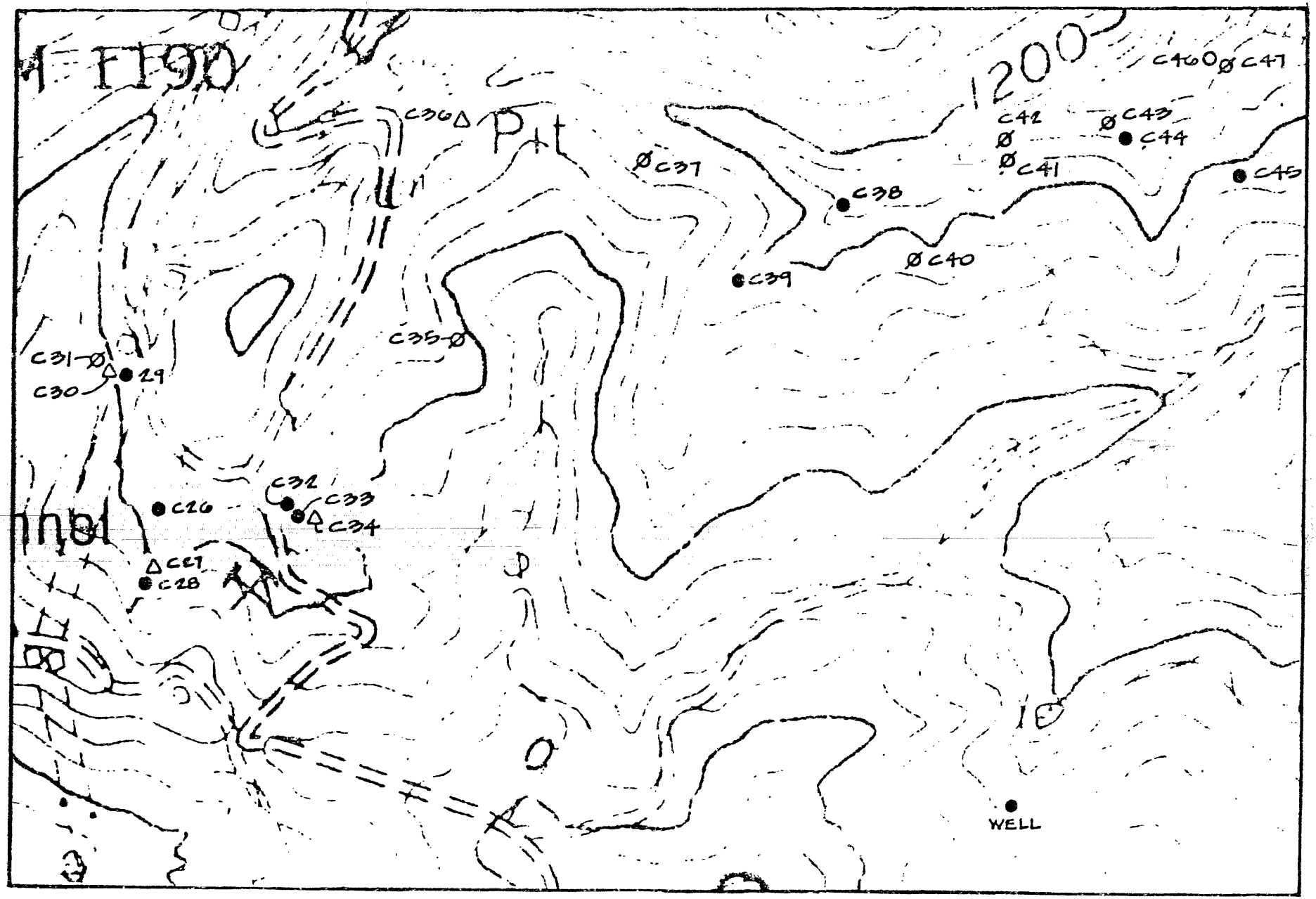


LOCATION KEY FOR MAPS 1 to 5



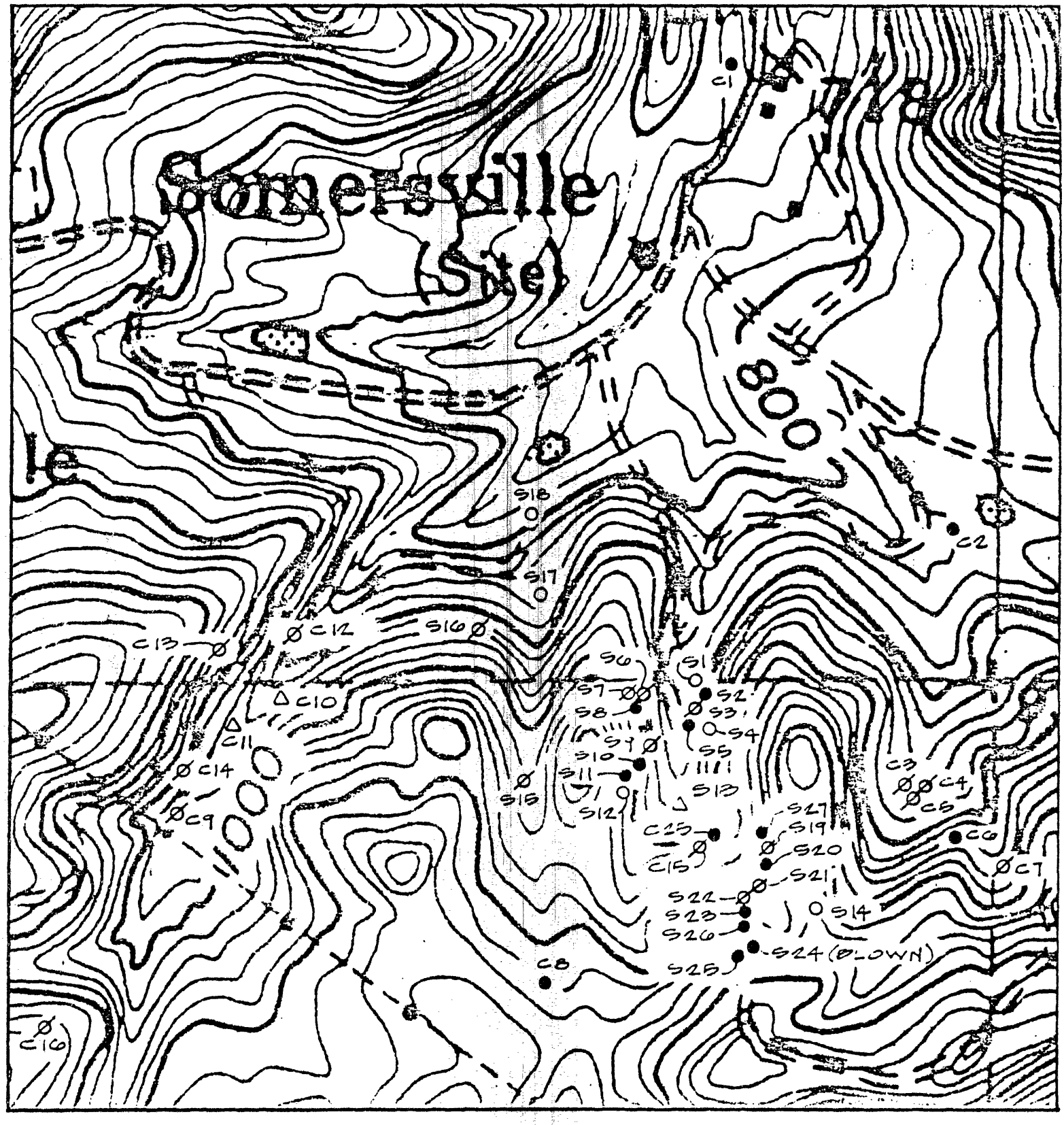
BLACK DIAMOND MINES: *MINE OPENINGS* (SITE 1)

MAP 1 (See attached USGS quadrangles for location)



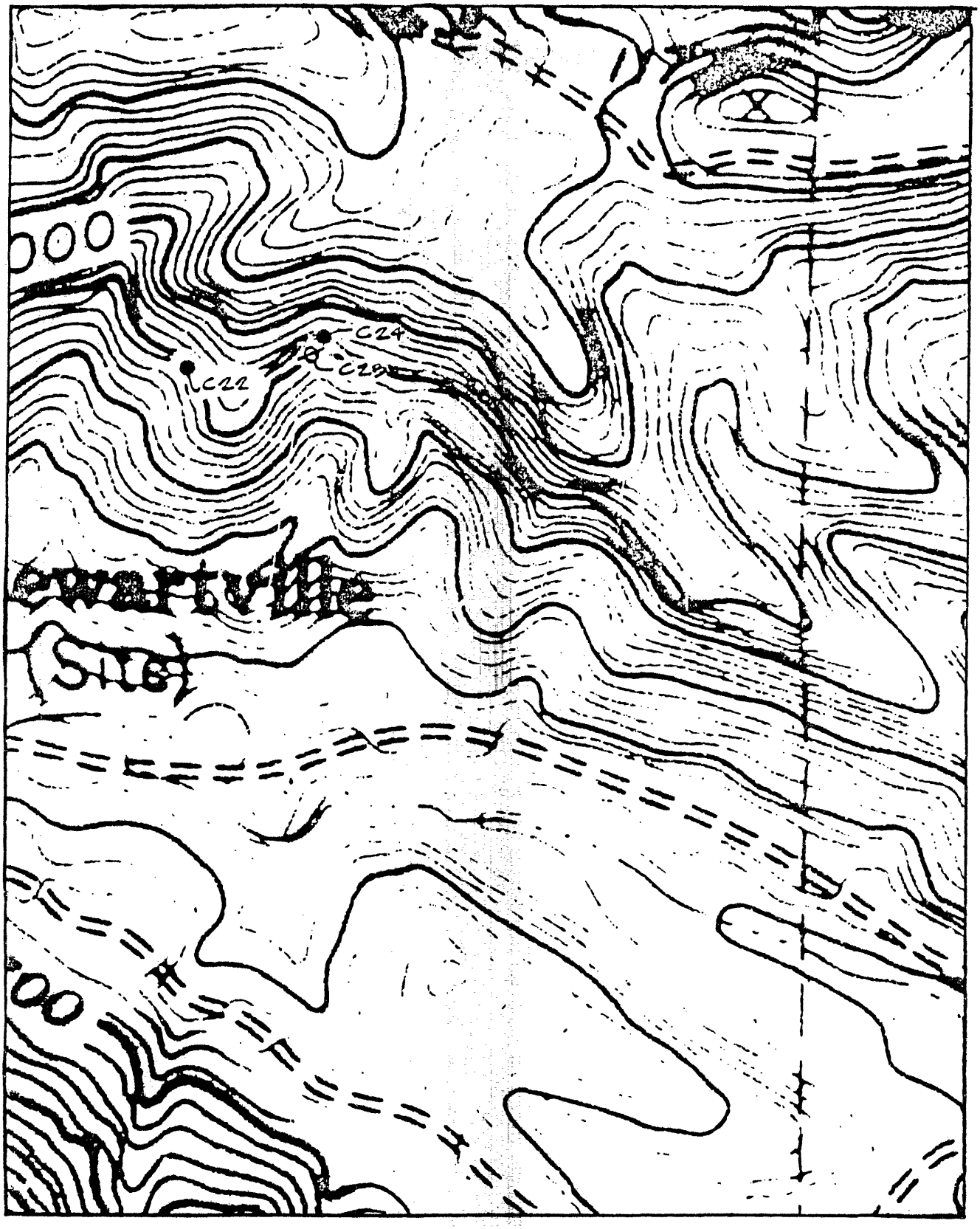
BLACK DIAMOND MINES: *MINE OPENINGS* (SITE 1)

MAP 2 (See attached USGS quadrangles for location)



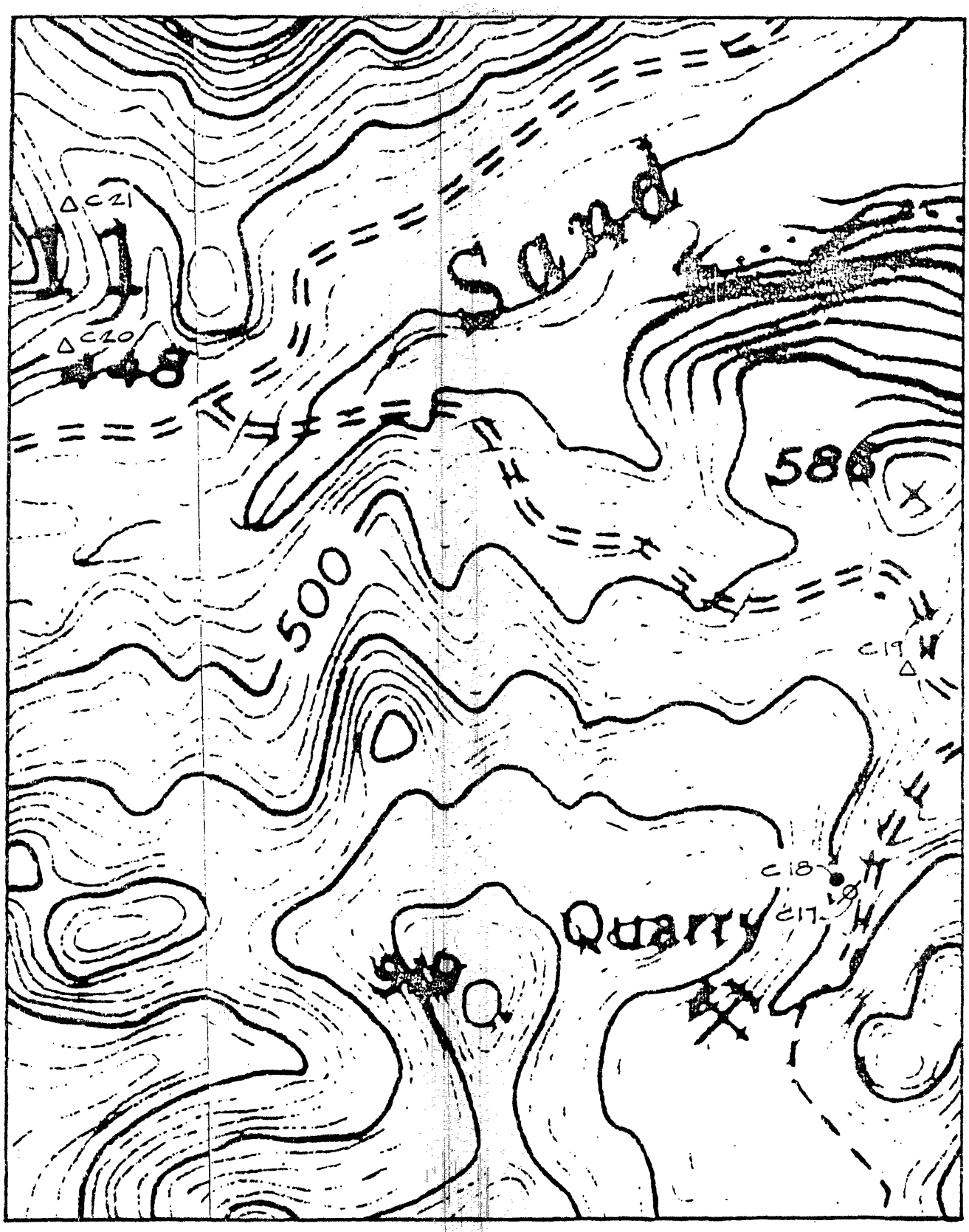
BLACK DIAMOND MINES: *MINE OPENINGS* (SITE 2)

MAP 3 **(See attached USGS quadrangles for location)**



BLACK DIAMOND MINES: *MINE OPENINGS* (SITE 3)

MAP 4 (See attached USGS quadrangles for location)



BLACK DIAMOND MINES: *MINE OPENINGS* (SITE 3)

MAP 5 (See attached USGS quadrangles for location)

Justification for Criterion "A": (Coal Mines, Sand Mines, and Nortonville, Somersville & Stewartville Townsites): The Black Diamond Mines district contains four-fifths of the largest coal mining area in California. Within its boundaries are the mines that produced four-fifths of the lignite ever mined in California. At their height, in the 1870s, the mines produced over 40% of the coal on the San Francisco market. In this stream power-dependent era, the contribution of the Black Diamond Mines to the development of industry and bulk transportation in the San Francisco Bay area can hardly be overstated. As San Francisco was the state's hub of population and industry at this time, the mines can be said to have had a significant effect on the development of California industry and commerce as a whole by providing a reliable and inexpensive fuel.

The historic importance of the sand mines in the Black Diamond district is in their contribution to the San Francisco Bay area's heavy steel and, to a lesser extent, container glass industries. These mines were the most important source of high silica sand used in California's steel foundries during the formative period of this industry, during the 1920s to the 1940s. The availability of high silica sand contributed toward the development of heavy industry--including wartime shipbuilding--in the eastern part of the San Francisco Bay area.

The Black Diamond Mines district contains three of the five settlements that grew up around the coal mines: Nortonville, Somersville, and Stewartville. The remains themselves consist of many house platforms, cellar holes, trails, exotic vegetation, and other landscape features. The townsites are an integral element of this coal mining complex that had such a major effect on California's incipient industry and commerce. Furthermore, Nortonville and Somersville were predominantly Welsh communities and represent an intensity of ethnic Welsh population and culture probably unmatched outside the coal mining areas of Pennsylvania and certainly unique in the West. The re-establishment of folk institutions, the continuity of economic practices that did not challenge traditional family roles, and the isolation of the site allowed a virtual re-creation of Welsh society.

These features are significant on both local and state levels.

Justification for Criterion "C"; (Coal and Sand Mines): Both the above- and below-ground coal mining features of the Black Diamond Mines district are by far the most extensive in California. The mines contain numerous examples of Welsh-derived, hard-mining technology and engineering including at least 1260 acres of mined-out rooms connected by over 200 miles of gangways and other passages. Both prospecting and production mining are represented in features that show the evolution of coal mining from the earliest prospect adits, driven using simple technology by the members of low-capitalized partnerships, to the remains of the Black Diamond Company's technologically sophisticated shaft and steam hoisting works, part owned by the well-known California capitalist D.O. Mills.

The underground room-and-pillar method of sand mining, represented in the approximately 42 acres of underground workings, is the only surviving example of this method in a California sand mine of any period. The open quarries are two of a very few locations in California where silica sand was extracted from Eocene deposits using this method. Together, the two forms represent both types of silica sand mining that leave distinctive landscape remains.

These features are significant on both local and statewide levels.

Justification for Criterion "D"; (Townsites): The archaeological remains of the townsites contain information available from no other source that can be used to address important issues in American ethnic history as well as the operation of general, cultural processes (see discussion under Historical Context: Archaeology). Their geographical isolation, tight temporal range, and well-defined cultural/ethnic/economic composition make the sites particularly suitable for archaeological research and analysis. The strongly ethnic composition of two of the three settlements could provide a wealth of information about the material expression of this transplanted culture and the role of goods in sustaining a Welsh cultural pattern. The process of ethnic boundary maintenance should be evident in the archaeological remains from cultural diverse communities.

Although both of these issues have been studied elsewhere by historians using the documentary record, the written sources focus on the role of formal institutions at the community level in the maintenance and inter-generational transmission of cultural mores. Through archaeology and highly focused historical research, however, we can witness some of the mundane decisions by which individual households structured their material world to reinforce traditional values.

These sites are significant on both local and statewide levels.

When mining ceased in the Black Diamond Mines district, all useable equipment was removed. Consequently, only mining excavations and mine waste remain to testify to the numerous pieces of technology and specialized buildings that were once here. As noted in the preceding Section, the tailings piles in the Somersville and Nortonville areas have been reduced by erosion and quarrying. In spite of this, the remaining piles are impressive features and dominate the landscape to convey the importance of mining in the history of these places.

The integrity of the underground workings is only partly known. Much of the mine workings are inaccessible without the use of special equipment, due to the presence of gas or water. The underground rooms whose roofs are of sandstone -- believed to be the largest proportion -- are likely to be standing. However, it is probable that much collapse has occurred where the mine props supported roofs of shale. Adits, gangways, and other accessways were engineered differently from the mined rooms; a high proportion of these are likely to be standing. As they were excavated into solid sandstone, the underground sand stopes have fared even better than the coal mining excavations, although their complete extent and condition have not been determined. Over six acres of the Greathouse/Hazel-Atlas mine are considered stable enough to allow regular visits by the public. Much of the remainder could be opened, given regular maintenance.

Portions of both the sand quarries and the Nortonville and Somersville sand mines were operated into the 1940s and, in the case of the Marchio #2 mine, as late as 1951. The significance

of these sites is unrelated to age, as the features are unique in California (see discussion under Historical Context: Sand Mines). Even if these sites were individually ineligible to the National Register, they are integral parts of the proposed N.R. district whose central theme is mining. The sites represent the final period of mining in the area and make a valid contribution to its overall associative values by providing a bridge of continuity between the industrial development of the second half of the 19th and the first half of the 20th centuries.

The integrity of the townsites is generally good to very good. The only large-scale damage to the sites has been through natural processes of mass wastage, erosion, and alluviation. Of the three sites Stewartville has fared the best, since most domestic occupation appears to have been in the hills to the south of the valley floor. As much as 10-15% of domestic features in the Somersville site and 20% of those in the Nortonville site have been disturbed by earth movement or covered by alluvium. However, the integrity and focus of the many features that remain are very high and still impart the area's history to those who can read these elements of the landscape.

HISTORICAL CONTEXT

Coal Mines

During the mid-19th century, the chief sources of power available to California industry were from water, animals, and steam. Until the rise of oil as a significant fuel in the mid-1880s, coal was the most cost-efficient energy source available to power low-pressure steam engines, for lignite coal has twice the thermal capacity of oak. In 1902 it was estimated that coal was used in the San Francisco Bay area for the following purposes: 20% of the coal was used by the railroads; 35% in manufacturing; 20% by Bay and river steamers; and 25% in the mining process itself (Smith 1903:504).

To sustain this demand, enormous quantities of coal were required. Between 1860 and 1893, more than 23 million tons of coal were shipped to San Francisco which, at the time, was the hub of California's population and industry (Gerlach 1969:4). The coal came from mines in the states of Washington and

Pennsylvania, Canada's Vancouver Island, Chile, Australia, and from Britain, as well as from the Mt. Diablo mining district. The local mines had two advantages by reason of their location: The closeness of the mines to coal brokers in San Francisco allowed the mine owners to rapidly adjust their supply in response to price fluctuations; and the Bay provided for inexpensive shipping costs which consistently kept Mt. Diablo lignite $2-3 per ton below the price of imported coal (Gerlach 1969:9).

In the peak production years of 1867 to 1882, the local coalfield supplied over 25% of all coal received at San Francisco and, for several years, captured in excess of 40% of the market share (Gerlach 1969:42). Of the several mines in the Mt. Diablo District, the Black Diamond was by far the most prolific, producing over one-third of the total output of the entire coalfield (Table 10; Sullivan and Waters 1980:51).

Although coal has been found in 47 of California's 58 counties, few locations have been commercially exploited: In the late 1890s, the settlement of Carbon grew up around coal mines operating on the Middle Fork of the Eel River, near Covelo, in Mendocino County. The coal-mining town of Harrisburg, in Alameda County, had a population of about 100 in the mid-1870s; this mine produced 8500 tons of coal. Also in Alameda County, the Tesla Mine, in Cow (or "Corral") Hollow, southeast of Livermore, yielded 300,000 tons after its founding in 1890; the settlement of Tesla had a population of 150 people. The Stone Canyon Mine, in Monterey County produced 250,000 tons of coal between 1870 and 1937. Finally, the Carbondale Mine, near Ione in Amador County, produced coal from 1860 to after 1900 and supported a settlement of the same name; this is only coal mine still in commercial production in California (Mosier 1979:4-7). The present condition and level of integrity of these coal workings are unknown.

Even taken in combination, the production of these mines is quite small in comparison to that of the Mt. Diablo coalfield, which is responsible for four-fifths of all coal mined in California up to 1966 and an even greater proportion taken during the pre-oil fuel era (Sullivan and Waters 1980:51).

The methods used to mine coal are determined by local geology. The Mt. Diablo district is located in an area of highly faulted and deeply dipping sandstones and shales of late Mesozoic and early Cenozoic (Tertiary) ages. The coal beds are located within the mostly sandstone Domengine Formation and form a narrow belt 10 miles long just to the north of Mt. Diablo. All but about 2-1/2 miles of the coalfield is within the proposed Black Diamond Mines National Register District. The coal, which is a low quality lignite, is found in seams that dip an average of 30 degrees. The most important of the deposits are the Clark and Black Diamond veins, which average three and five feet in thickness, respectively, of commercially valuable coal. The Clark vein is stratigraphically superior, and is separated from the Black Diamond vein by about 375 feet of sandstone, shale, and coal layers.

Three types of excavations provided access to the coal: The adit, a level tunnel dug into a hillside to the coal face; the slope, an inclined excavation that could be driven from a valley bottom to the coal vein; and the shaft, a vertical excavation employed when mining reaches considerable depths. In addition, ventilation shafts are driven to provide fresh air to the miners and to vent the workings of dangerous gasses. Below ground, gangways were driven along the seams to allow miners and coal to be moved and from the working face; the longest gangway, driven by the Black Diamond Company, was 1-1/2 miles long. In the Mt. Diablo district, coal was extracted using the room and pillar method. First, three-foot-square openings were made into the seam along a gangway; coal was then mined out leaving a series of coal pillars to support the roof of the resulting "rooms." Coal was removed from the workings either by steam-powered hoist--where access to the breast was by means of a slope or shaft--or by mule-drawn cars, where an adit was used. The boiler plants that provided steam to run the hoists and water pumps used large quantities of low-grade "bone" coal (Goodyear 1877). A typical cross-section through sand and coal mines is presented as Figure 5.

Although numerous mining companies produced coal in the Black Diamond Mines district from the mid-1850s, by the 1880s they had combined into three companies: the Black Diamond Mining Company, of Nortonville, which had taken over the claims of the

former Black Diamond, Mount Hope, Manhattan, and Cumberland mines; the Pittsburg Mining Company, formed from the Independent, Eureka, and Pittsburg mines in the Somersville area; and the Empire Mining Company, which owned the Central and Star mines as well as the Empire Mine, just to the east of the Black Diamond Mines district. Production figures from these mines for 1861 to 1876 are included as Table 10.

Owing to the extensiveness of the workings, the incompleteness of the historical record, and for safety reasons complete plans of the extent of the surviving underground coal workings in the Black Diamond Mines district have never been made. In fact, EBRP personnel report that previously unknown mine openings appear quite often, particularly in the wake of soil slumps. Nevertheless, the historical data that do exist have been assembled and are presented on Figures 1, 2, and 4, which show part of the workings of the Black Diamond, Union, and Central mines, respectively. Based on these data and conservative estimates for the other mines based on their production and years of operation, it is estimated that at least 200 miles of underground accessways (adits, gangways, etc.) open onto over 1269 acres of mined-out rooms that were excavated for coal within the Black Diamond district (John Waters, EBRPD, Personal Communication).

Owing to similar geology and the employment of Welsh mine supervisors, the methods and technology used to mine coal in the Black Diamond Mines district were almost identical to those used in the coalfields of South Wales during the mid- and late-19th century (Harries 1956:105). In Wales, as here, miners reached veins by driving slopes, adits, or shafts, then cutting rooms into the coal deposits. It was said of Morgan Morgans, the Welsh-born Superintendent of the Black Diamond Company mines, that he ran the mine exactly as a Welsh colliery (San Francisco Morning Call 7/7/1873).

In summary, the Black Diamond Mines district contains four-fifths of the surface of the Mt. Diablo coalfield and about the same proportion of the underground features. The coal mining remains here represent by far the largest, most economically significant, and most productive coal mines in California. It is possible that small, isolated examples of similar, Welsh-

influenced mine engineering and coal extraction technology exist elsewhere in California. However, as none of these, except perhaps at the still operating Carbondale Mine, are known to have been regularly maintained, it is unlikely that the underground workings are accessible, and they have probably caved.

Sand Mines

Sand has been mined in California for three main purposes: with gravel, as a contributor to road aggregate; for glass making; and for use in the iron and steel industry. The high silica content of the Mt. Diablo area sands make them particularly suitable for casting iron, steel, and other metals.

The early history of sand mining in California is poorly documented. Although it is likely that local sand was taken in the mid- and late-19th century for use in the San Francisco Glass Works, commercial mining was not noted by the California State Mineralogist until the annual report of 1927. Commercial sand mining in California is associated with the rise of heavy industry in the state and region. During the late 19th century, the California economy evolved from one dependent on gold mining to a basis in agriculture. By the early 20th century a mixed economy was establishing itself with the rise of the oil and gas industry in southern California, and manufacturing and light industrial production in many parts of the state.

Although California was still primarily an agricultural state, by the early 1900s the demand for cast steel for use in the construction, shipbuilding, and other industries was strong enough to encourage the serious exploration of sand deposits throughout the state. The industrial development of the Contra Costa and Alameda county shores--where manufacturers had established themselves in the late 19th century to take advantage of readily available coal from the Mt. Diablo mines--was added to by newly-built glass and steel plants. At this time, the use of local silica sand was encouraged by an element of the Tariff Act of 1930, which placed a $2.00 per ton duty on imported, high silica sand (California State Mineralogist 1935:227). As a result, domestic sand replaced imported, Belgium sand for several years. The establishment of shipyards in several locations on San Francisco Bay in 1943 created even more demand for foundry

sand to aid the war effort. In summary, high silica sand from the Black Diamond Mines district was both a raw material for the local container glass industry and an essential component of the steel-making process that supplied California's construction, manufacturing, and shipbuilding industries in the early- and mid-20th centuries.

Foundry quality sand occurs in three forms in California: unconsolidated, feldspathic sand, known as "dune sand"; quartzitic sand from a single, solid mineral source in southern California; and high silica sand from the Eocene sediments in the Mt. Diablo District. The first two of these types were extracted exclusively from surface deposits. Dune sand was simply picked up by a front-loader and dumped onto trucks that would take it to the processor. The unique Quartz Hill mine, near Montrose in Los Angeles County, mined a massive piece of quartzite by using explosives to dislodge the mineral chunks that were then loaded onto trucks (Wright 1948:38-39).

The sand deposits of the Mt. Diablo District are located in a belt of Eocene sandstones and shales north and east of Mt. Diablo. These deposits, which are up to 70 feet thick, overlay the district's most productive coal seam, the Clark Vein. Sand was taken from the deposits by both surface and underground methods. Although sand extracted by the Hazel-Atlas Company mine in Somersville was used for making glass, most sand from the Mt. Diablo District was mined for foundry use (California State Mineralogist 1927, 1934, 1935, 1936, 1947; Wright 1948; Waters 1978).

Production began on the Marchio #1 and #2 mines in the early 1940s and 1951, respectively. In both cases, the sandstone was blasted out and loaded onto truck with heavy equipment.

On the basis of the literature reviewed, it appears that the Marchio #1 and #2 mines are two of only a handful of commercial mines in California where foundry grade sand was extracted from Eocene deposits using the open quarry method.

Sand mining in the Somerville area began in the early 20th century by an independent miner, Marvin Greathouse (John Waters, EBRPD, Personal Communication). The Hazel-Atlas Mine took over

from Greathouse in 1922 and operated the mine until the late 1940s. Here, 20 workers extracted over 188,000 tons of sand, mining a 60- to 70-foot thick sandstone layer overlaying the Clark Vein. All the sand was used in the production of container glass by the Hazel-Atlas Glass Company works in Oakland. The sand was blasted out using the room-and-pillar method resulting in the creation of large, cavernous excavations whose 60-foot high roofs are supported by curving arches that extend from one supporting column to the next. A plan of a portion of the Hazel-Atlas lower mine is presented as Figure 3. Owing to the extensiveness of the workings and for safety reasons both here and on the adjacent sand mining ground at Nortonville, no complete plans exist. Approximately 14 acres of underground rooms were excavated by the Greathouse and Hazel-Atlas companies.

In the Nortonville area, sand mining was carried on from 1925 to 1949 first by the Columbia Steel Company, which supplied the Columbia Steel works in Pittsburg, and later by the Roberts Sand Company. This mine was long "California's principal source of high-silica foundry sand" (Wright 1948:42). Over 367,000 tons of sand was extracted by the room-and-pillar method using both blasting and auger drills and creating the same kind of underground features as are present in the Hazel-Atlas/ Greathouse mine. At first, the sand was hand-loaded onto mule-drawn cars that took the material to bunkers near the mine portal; later, electric-powered cars were used. Underground mining methods are discussed in greater detail under "Coal Mines." About 28 acres of underground rooms were excavated by the Colombia/Roberts mine.

Aside from the Hazel-Atlas and Columbia/Roberts mines, the only other sand mine in California to use the underground stope and room method were two locations on the Silica Company's Longwell/Stone House Ranch Mine, near Brentwood, in east Contra Costa County. Here, from 1921 to 1942, sand was removed using adits driven from the surface to rooms and stopes that were carried almost to the surface. These mines caved within ten years of their abandonment (Wright 1948).

In summary, it can be stated with confidence that the Hazel-Atlas and Columbia/Roberts mines are the only surviving examples of the room-and-pillar method of sand mining in California. They

are unique representations of the application of this technology for the extraction of minerals essential for the development of two California industries: foundry steel and container glass production.

Townsites:

Nortonville, Somersville, Stewartville

During the Mt. Diablo district's coal mining boom, from about 1860 to 1902, five settlements sprang up around the pitheads of the largest mines: from west to east, these were Nortonville, Somersville, Stewartville, West Hartley, and Judsonville. Of these, only Nortonville and Somersville can be described accurately as "towns" in that they had an historically definable character based on a stable population. The other communities appear to have fluctuated dramatically in size with the vicissitudes of coal mining. Three of these five settlements --Nortonville, Somersville, and Stewartville--are within the Black Diamond Mines district; the others are on private property and could not be examined.

Nortonville is the best documented of the settlements in the Black Diamond Mines district. Development of the town began with the opening of the Black Diamond Mine in 1860. The first house was built there in 1861 by Noah Norton, after whom the town was named. Over the next three years a store, hotel, school, and church were added. By the mid-1870s, the peak years of mine production, the population reportedly approached 1000 persons (Ballard 1931). At its height, this thriving community was divided by its residents into several neighborhoods, each of which was said to have its own "personality:" Smokey Hill, Schoolhouse Hill, Church Hill, and Carbondale (Stevens 1941 cited in Dial 1980:35). Organized social groups, including the Good Templars, Odd Fellows, Knights of Pythias, and the Cambrian Aid Society, flourished as did cultural and religious societies and a choir.

The U.S. Population Census for 1880 as analyzed by Dial (1980:40-44) gives a picture of the demographic structure of Nortonville. Of a total population of 711, 482 were either born in Wales or were of Welsh descent; 168 were born in the British

Isles, but not in Wales; and 61 were Italian. The sex ratio of persons over 18 years was approximately 2:3 in favor of men, the same as the statewide figure. Of the 266 adult males, 192 are described as either miners or laborers; only nine of the latter were Welsh.

The census year of 1880 was the last good year for the Nortonville mines. Increased competition from the Washington Territory coalfield and rising production costs lead to the closing of the Nortonville mines in the spring of 1885. The Black Diamond Company moved its equipment and many of its employees to a new location at Black Diamond, in King County, Washington Territory (Ballard 1931).

The Somersville townsite was first occupied in 1861 when a boarding house was constructed to house miners working on the Independent Mine. A store was added in 1863, and a church and school established in 1865. By 1870 the town had four general stores, a drug store, two large boarding houses and several minor ones, and four saloons. Somersville's population reached a peak of 438 in 1880. Of the 199 (45%) of these people who were foreign born, 53% were born in the British Isles (except Wales), 27% were born in Wales, and the rest were from Australia, Canada, and Germany. In 1900, the population had grown to 456. However, the foreign born population had declined to 34%; Italians now constituted 17% of this group, the same proportion as the Welsh. The town had become more homogeneous in both occupation and age. Miners now constituted 51% of the population, compared to 30% in 1880; whereas students declined from 42% in 1880 to 20% in 1900 (Emerson n.d.)

The same economic forces that closed the Nortonville mines caused the Pittsburg Company to slowly shut down its workings between 1902 and 1907 (Sullivan and Waters 1980:58-59). The population quickly dispersed and many houses were moved from the townsite to Pittsburg, Antioch, and other local towns.

Little is known of the history or population of Stewartville. The settlement grew up around the Central Mine in the 1870s, but could not be identified on either the 1870 or 1880 U.S. Population Census schedules. The mine suffered frequent closures in the 1870s and 1880s, and closed permanently in the

late 1890s (Goodyear 1877; Waters 1985:II-1). Based on the number of archaeological house platforms and cellar holes in the area, it is unlikely that Stewartville's population ever exceeded 100 individuals and probably fluctuated dramatically with the fortunes of the Central Mine.

The Welsh in California

Unemployment in the coal mining districts of Wales caused more than 20,000 Welsh men and women to emigrate annually between 1860 and 1870. Many went to the mining towns of Pennsylvania; few traveled to the West to work in the gold and coal mines. After the initial influx of Welsh natives into California in the 1850s, the stream slowed to a trickle; the U.S. Population Census for 1860 as analyzed by Harries (1956:125a) shows 1262 Welsh-born residents of California; in 1890, the number had grown to only 1860. Harries (1956:59) notes three centers of Welsh population and culture in mid-19th-century California: one in the Sierran gold mining region from San Juan to Port Wine; another in the Oakland/San Francisco area; and the most intensive cluster in Nortonville/Somersville.

Welsh culture in California manifested itself in three institutions: the Welsh Congregational Church, eisteddfodau, and competitive choirs (Harries 1956:126). Both Nortonville and Somersville had Congregational chapels from their earliest days. At its height, the Nortonville chapel Sunday School had an enrollment of 180 children. Eisteddfodau--traditional festivals of singing, literature, and poetry--were held biennially in Nortonville from the early 1860s until about 1880. The Welsh choirs of both Somersville and Nortonville also competed at the annual San Francisco eisteddfod (Harries 1956:76-77).

In summary, the towns of Nortonville and Somersville contained the most vigorous transplantation of Welsh population and culture in California. Although other Welsh population hubs existed in the state, they had neither the focus nor have they left the intensity of remains--both archaeological and mining-related--as in the Black Diamond Mines district.

Archaeology and the Townsites

The influx of foreign capital to the far West after the Comstock discovery, made large scale, capital-intensive mining possible. Unlike many earlier mining communities, that the were the homes of independent miners and small partnerships, the settlements that grew up around the large mines were true "company towns." Here, management shaped the towns' character by their employment practices which were, in turn, determined by technology, labor requirements, and the desired level of production. The gold mining town of Brandy City, Sierra County, for example, was transformed in less than ten years from a vigorous, demographically diverse community of several hundred to little more than a bunkhouse for the exclusively Chinese miners of the Brandy City Company.

Perhaps because of the uncertainties of gold mining, most company mining towns do not appear to have achieved anything like a normal age and sex ratio, and exhibit high transience rates. In contrast, the coal and mercury mines of the North Coast Ranges appear to have a more standard population characteristics. For example, in 1880 both the Nortonville/Somersville coal towns and the mercury-mining settlement of Knoxville, in Lake County, have male:female ratios of 3:2, the statewide norm at the time.

In the North Coast Ranges, mercury and coal mining companies created towns of newly-immigrated members of various ethnic and national groups for employment according to their skill and perceived status. In the New Almaden mercury mine, for example, Cornishmen dominated the high-status positions, whereas Chinese worked as mine laborers; in Welsh-dominated Nortonville, contemporary accounts testify that the better jobs invariably went to Welshmen.

In summary, California's North Coast Range contains relatively few 19th-century, company mining towns in comparison to the Sierra Nevada. The settlements here were oriented toward mercury and coal mining, and were more stable and demographically "normal" than those of the Sierras. The Nortonville/Somersville area is unique in the West for its preponderance of Welsh natives. It is also unusual as a near ethnically-exclusive mining community. Although Chinese-dominated camps were

commonplace from the 1850s to the 1880s, these had none of the age, sex, and occupational diversity of the coal mining settlements.

Given the preceding, it is clear that archaeological investigation of the Black Diamond Mines district townsites has the potential to answer questions within a variety of themes. These include consumer behavior and social/economic status, household adaptation, the evolution of neighborhoods, and the maintenance of ethnic subcultures. However, the last issue is the most important in the present context because of the domination--both numerically and by status--by people of Welsh birth and extraction.

The testing-level excavations conducted by the University of California at Berkeley, demonstrated that individual features associated with historically documented households at definable points in time can be found in abundance in the Black Diamond Mines district. Collections of tightly associated materials available from discrete deposits are the basic archaeological units of meaning. With assemblages that have reliable historical associations, researchers can address important questions that are unavailable through historical investigations alone. For example, the importance of institutions such as the Congregational church and eisteddfodau is well documented in the maintenance of Welsh ethnicity. However, nothing is directly known of the role of artifacts as material symbols in defining and maintaining boundaries between the ethnic Welsh and other cultural groups in the area; or the effect of stresses, such as economic competition, on the social distance between the Welsh and other groups.

The townsites are uniquely suitable for these kinds of studies, which could make major contributions to our knowledge of pluralism and cultural change in the immigrant communities of 19th-century America in general, as well as documenting an otherwise inaccessible aspect of a little-studied immigrant group.

California State Mineralogist
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UTM References

E	Zone	10	Easting	598600	Northing 4201830
F		10		598600	4202440
G		10		599060	4202000
H		10		599310	4203520
I		10		600180	4203540
J		10		600820	4201140
K		10		603660	4201000
L		10		603440	4199540
M		10		601010	4199510
N		10		600590	4200680
O		10		599420	4200680
P		10		599420	4200270

(boundary description)
the following Assessor's Parcels: 075-080-05, -07; 075-090-09; 075-110-09; 075-140-01, -02; 075-140-04, -05; 075-190-01, -03, -05. The northwest boundary is the top of the ridge line on the west side of Markley Canyon. The northeast boundary is the top of the ridge line to the north of the Stewartville valley. The southeast boundary is the top of a minor ridge on the south side of the Stewartville valley. All other boundaries are the parcel lines that define the Black Diamond Mines Regional Preserve.

(boundary justification)
District: the area mined by the Black Diamond and Pittsburg companies, respectively, and the locations of the Nortonville and Somersville townsites. Mined-out rooms and stopes underlay this entire section on several planes, and almost certainly extend off of EBRPD land to the south and west. The northwestern boundary in this area is defined by the ridgetop on the west side of Markley Canyon. The ridge line is a visual barrier separating non-contributing land to the west from Markley Canyon, the site of the Antioch-Somersville railway grade.

The eastern portion of the district is defined as all of the following that is within the lands owned by the EBRPD: the Stewartville townsite location and the area mined by the Central, Marchio, and Star mines. Mined-out rooms and stopes underlay much of this section, and extent off of EBRPD land to the east. Part of the northern boundary is defined by the extent of known mining and part by the ridge top that forms a visual barrier, separating non-contributing land to the north from the Stewartville valley. The southern boundary is defined by a ridge line, the first major topographical feature to the south of the Stewartville townsite.

The boundaries are drawn to encompass the mining related resources that lie within the preserve which has been set aside for historic and archeological interpretation. Although some resources lie outside the park boundaries on private property, no survey has been possible to determine the exact extent of the features. However, it is known that the great majority of the resource does lie within the proposed boundaries.

Black Diamond Mines
Antioch, Contra Costa Co
Calif.

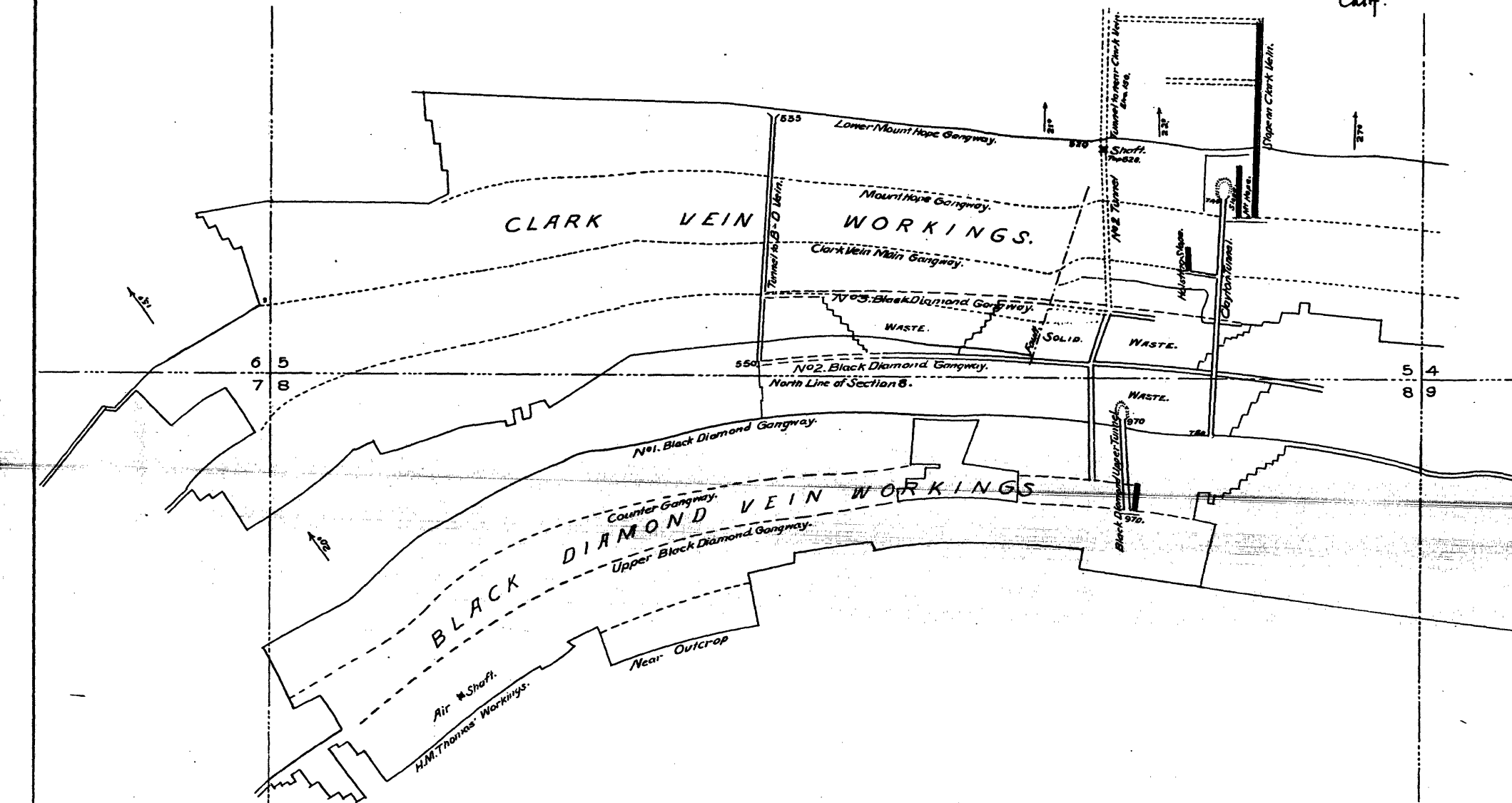


FIGURE 1 Black Diamond Company workings

Black Diamond Mines
Antioch, Contra Costa Co.
Calif.

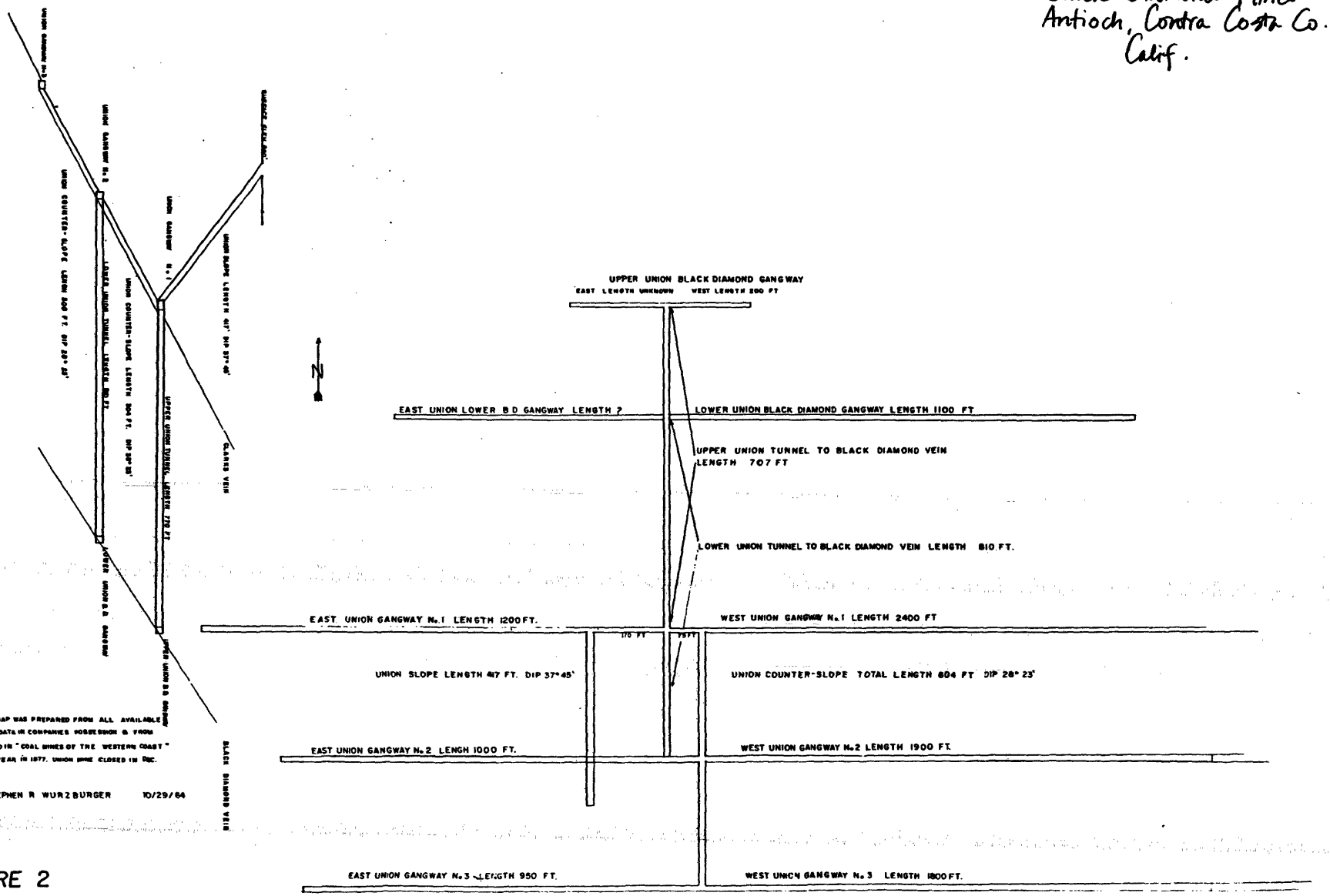
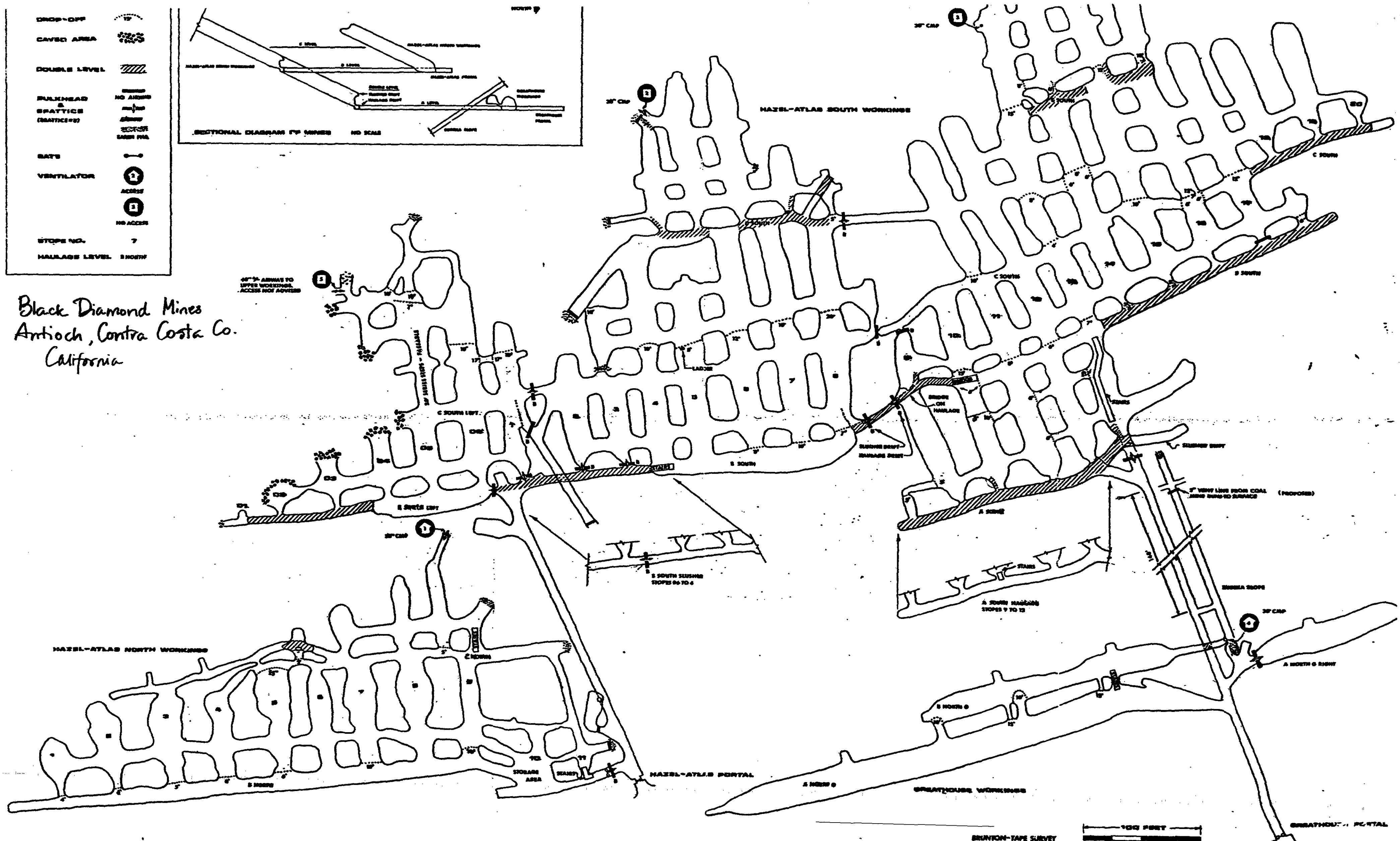


FIGURE 2
Union Mine workings

Black Diamond Mines
Antioch, Contra Costa Co.
California



REVISIONS 2-15-78 / 8-4-78 / 10-17-78 / 2-1-79 / 8-9-79 / 8-11-81 / 9-12-81

EAST BAY REGIONAL PARK DISTRICT
11500 SKYLINE BOULEVARD, OAKLAND, CALIF. 94619 415/531-9300

approved
planning and design:
operations:

scale: AS SHOWN
drawn: J. WATERS
checked:

FIGURE 3
MAP OF: HAZEL-ATLAS NORTH AND SOUTH WORKINGS
AND GREATHOUSE WORKINGS
SOMERSVILLE SAND MINES

Black Diamond Mines
Antioch, Contra Costa C
Calif.

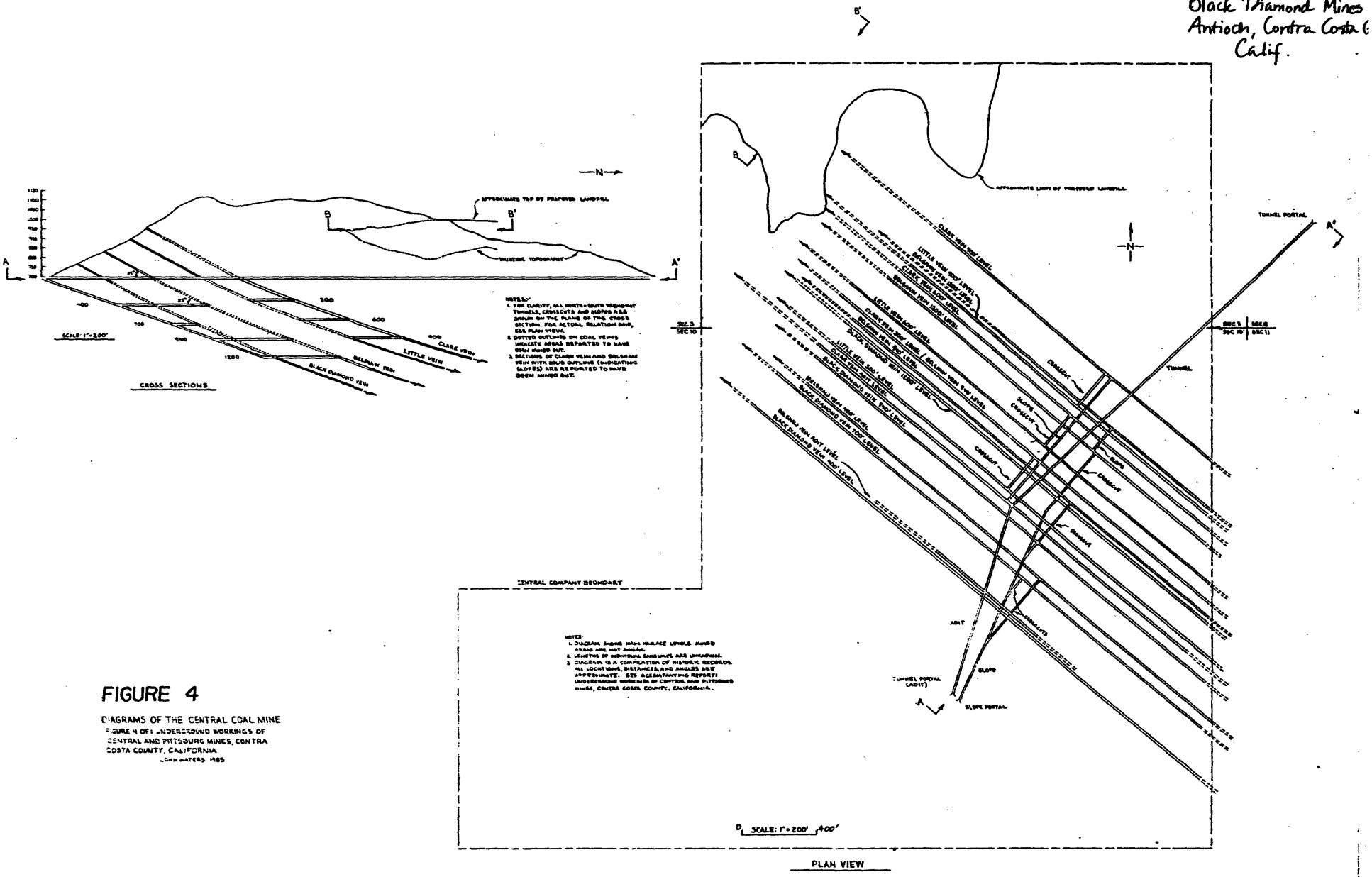
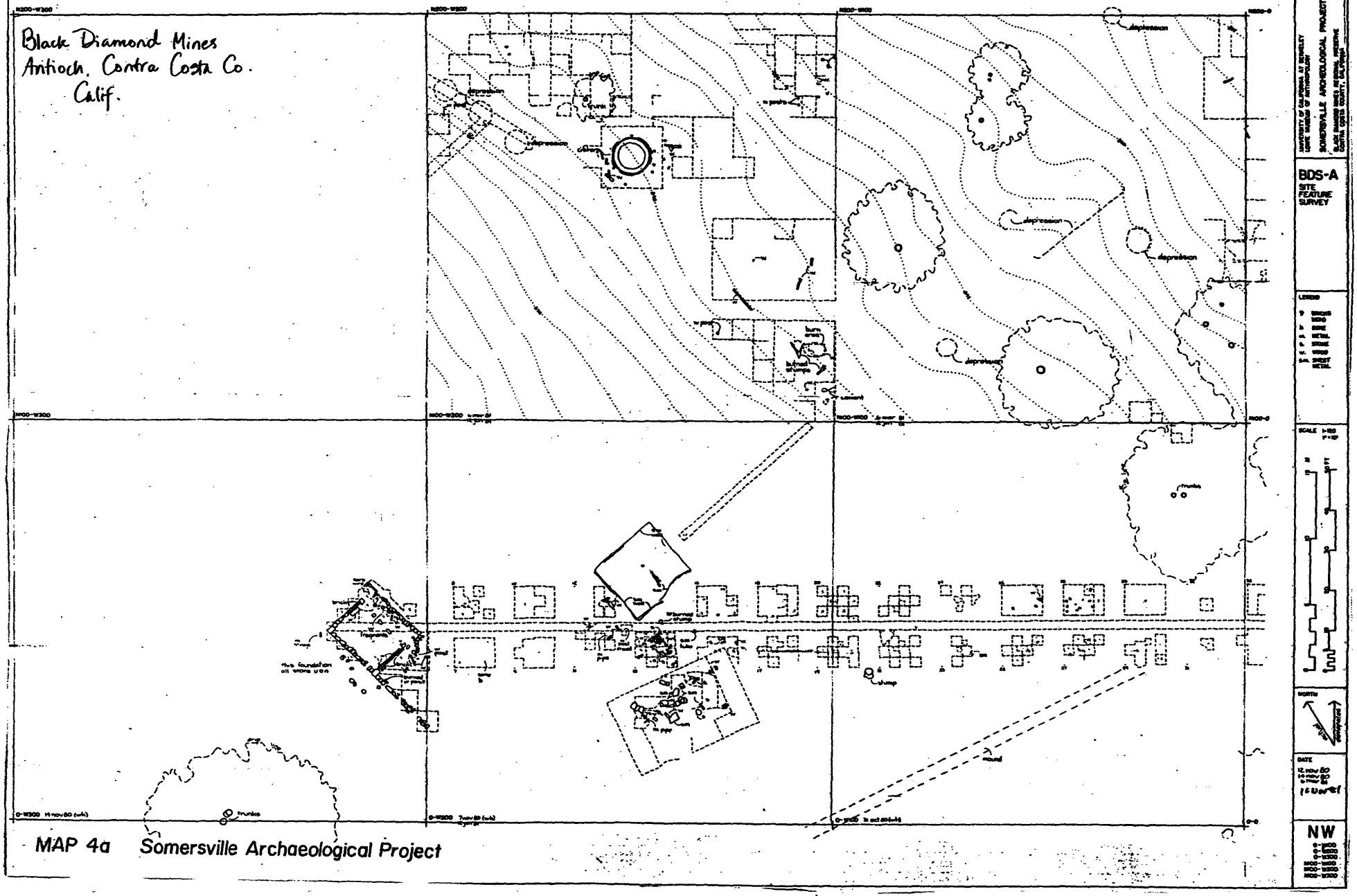


FIGURE 4

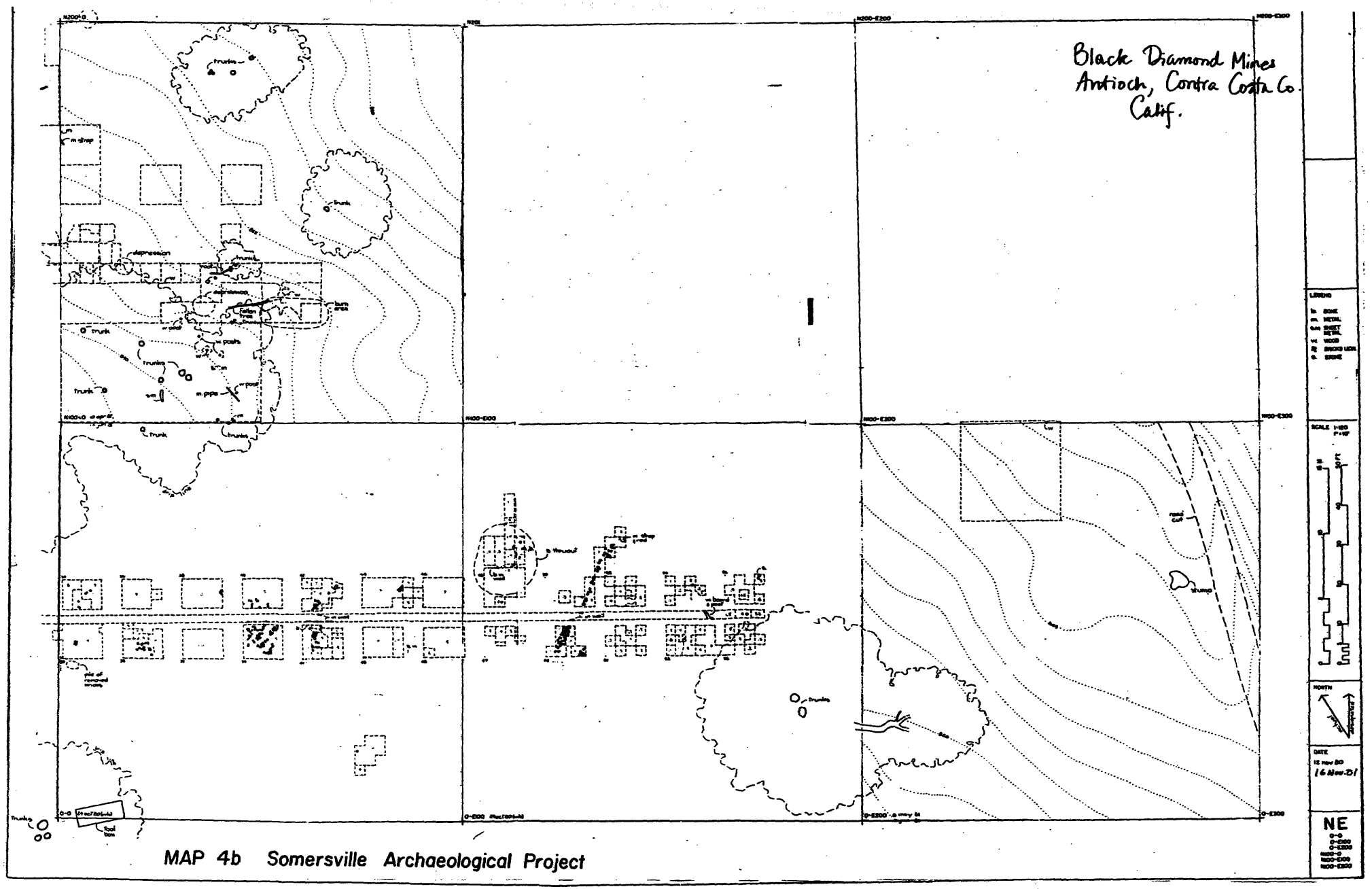
DIAGRAMS OF THE CENTRAL COAL MINE

FIGURE 4 OF: UNDERGROUND WORKINGS OF CENTRAL AND PITTSBURG MINES, CONTRA COSTA COUNTY, CALIFORNIA
JOHN WATERS 1985

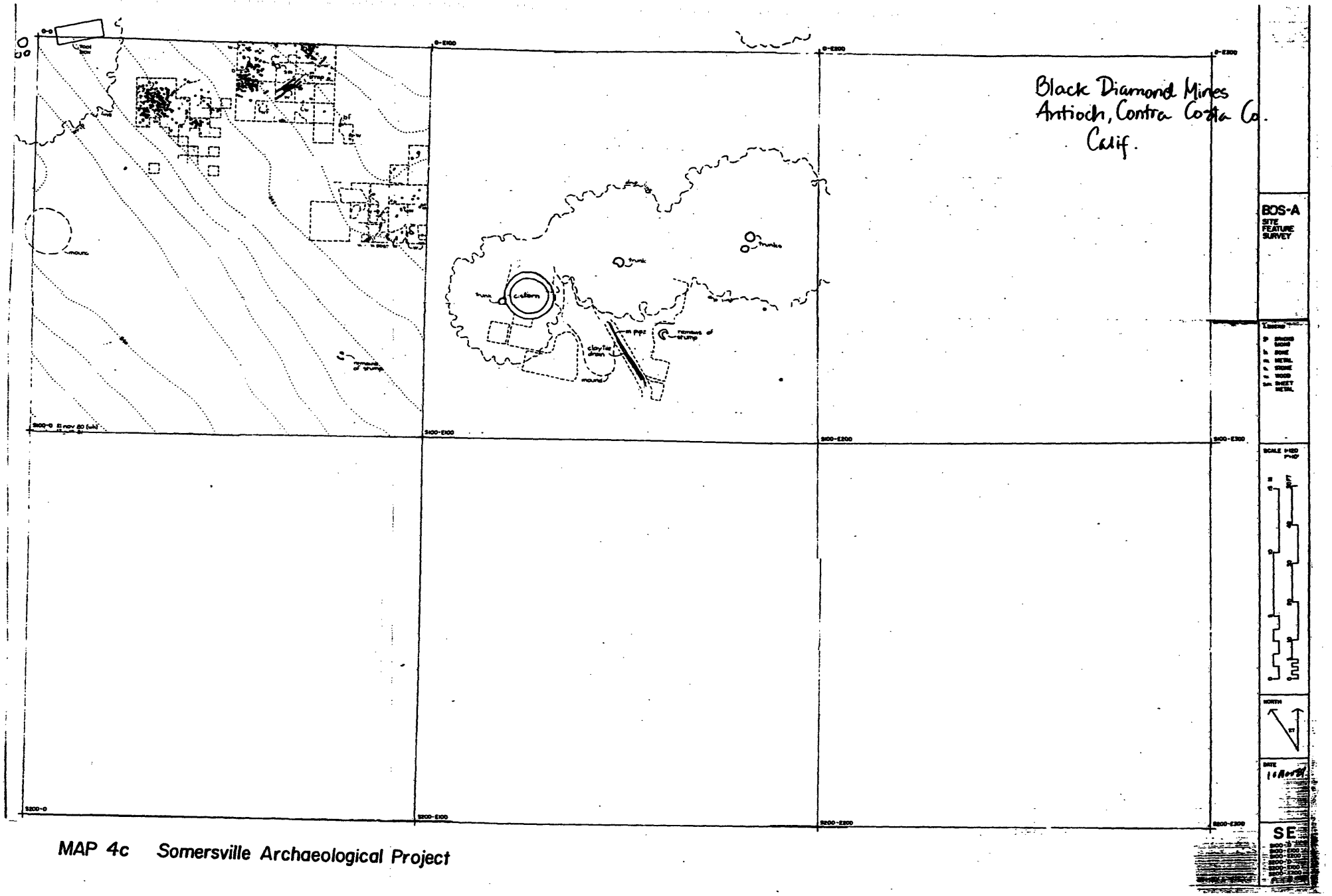
Black Diamond Mines
Antioch, Contra Costa Co.
Calif.



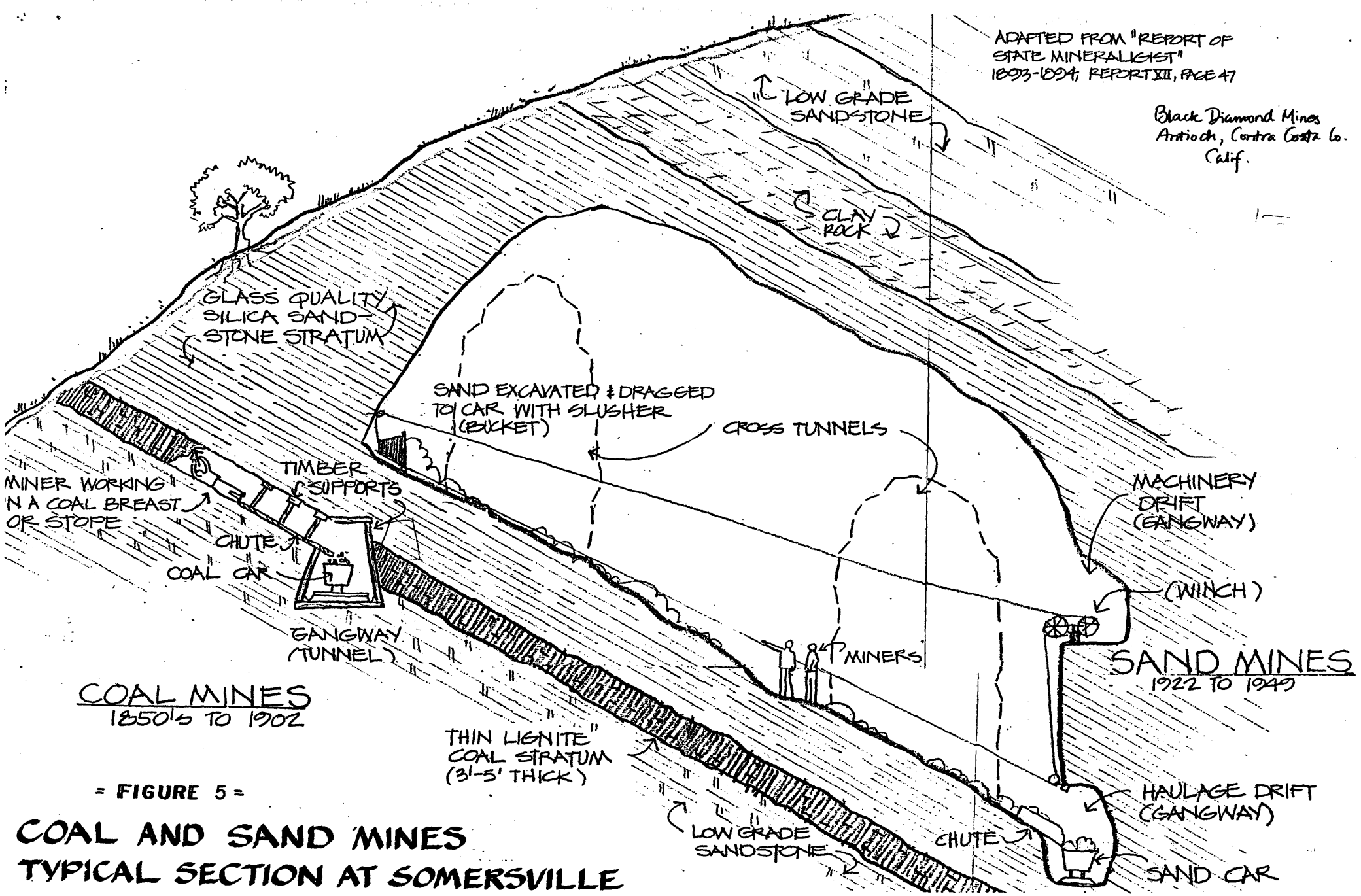
MAP 4a Somersville Archaeological Project



MAP 4b Somersville Archaeological Project



MAP 4c Somersville Archaeological Project



= FIGURE 5 =

COAL AND SAND MINES
TYPICAL SECTION AT SOMERSVILLE

United States Department of the Interior

NATIONAL PARK SERVICE
P.O. BOX 37127
WASHINGTON, D.C. 20013-7127

IN REPLY REFER TO:

TAKE PRIDE IN AMERICA

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 91001425	**Date Listed:** 10-2-91
Property Name	**County** / **State**
Black Diamond Mines	Contra Costa / CA

Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Janet E. Lawrence — **Signature of the Keeper**

10-2-91 — **Date of Action**

==========

Amended Items in Nomination:

Although the Areas of Significance information category "Archeology: Historic-Non-Aboriginal" is discussed and well-documented in the text, the category is not listed on the form under Areas of Significance.

The nomination is amended to list "Archeology: Historic-Non-Aboriginal" as an Area of Significance. Ms. Lurtie of the CA-SHPO was contacted regarding this amendment.

DISTRIBUTION:
National Register property file
Nominating Authority (without nomination attachment)