

**ILLINOIS DEPARTMENT OF NATURAL RESOURCES
CULTURAL RESOURCE MANAGEMENT PROGRAM
ABANDONED MINED LANDS RECLAMATION
CULTURAL RESOURCES EVALUATION:**

**YOUNG SHAFT SITE (11MS2183)
RURAL MADISON COUNTY, ILLINOIS**



by
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and
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prepared by
Fever River Research, Inc.
Springfield, Illinois

for
Illinois Department of Natural Resources
Springfield, Illinois

October 2005

Locational Information and Survey Conditions

County: Madison County

Quadrangle: Edwardsville, Illinois (1991)

Project Type/Title: Phase II National Register evaluation of the Young Shaft Site (11MS2183).

Responsible Federal/State Agencies: IDNR (Abandoned Mined Lands Reclamation Division)

Legal Location:

SE1/4, SW1/4, NW1/4 Section 29
Township 4 North, Range 7 West of 3rd P.M. (Pin Oak Township)
Madison County
Illinois

UTM: North 4,294,736m
East 247,303m

Project Description: The project consisted of a Phase II National Register evaluation of the Young Shaft Site (11MS2183), an abandoned coal mining property located in rural Madison County, near Edwardsville. Documentary sources indicate that the mine was opened in 1938 or 1943, but activity was limited to sinking the shaft; no coal production was reported. It reopened briefly in 1958, but again saw no production. The purpose of the project was to evaluate the standing structures and above-grade foundation remains associated with the historic mine site prior to the commencement of reclamation work on the property.

Topography: The mine site is located along the upper reaches of Wendell Branch of Silver Creek near its headwaters on the loess-covered till plain about three miles southeast of Edwardsville. The drainage at this point along its course is deeply entrenched. The terrain in the immediate vicinity of the mine slopes gradually upwards to the northwest and drops off rapidly into the creek bottom to the east and south. Until recently, the eastern end of the site was used as a cattle pasture.

Soils: Menfro silt loam predominates in the project area. The soil association is Fayette—Rozetta—Stronghurst.

Drainage: Wendell Branch of Silver Creek, Silver Creek, Kaskaskia River, Mississippi River

Land Use/Ground Cover: The majority of the site is characterized by grass-covered lawn with scattered trees and brush. Forest, with second-growth timber and brush, predominates around the tipple structure and adjacent hoist engine house.

Survey Limitations: All of the mine-related buildings and structures except for the tipple headframe have been razed or removed from the premises since the mine closed in 1958. The remaining foundations are obscured by detritus, dense overgrowth, and piles of debris; some foundations around the edges of the mine site have been partially buried by

grading, making it difficult to see their full extent. Much of the site is covered with dense poison ivy.

Archaeological and Historical Information

Historical Plats/Atlases/Source:

The Young Shaft (Mine Index No. 2771) (Illinois State Geological Survey 2003:4) is located in Madison County southeast of Edwardsville, Illinois. This mine was opened by Black Diamond Coal Company to tap the Herrin coal seam, which, according to the inspector's ledger for the mine, averaged between 5.6 and 6.0 feet in thickness at a depth of 210 feet (Chenoweth and Barrett 2004a:16). The data relating to the history of the Young Shaft mine is somewhat contradictory and confusing. A Black Diamond Coal Company did operate in the Edwardsville area in 1931, but the precise location of the mine is unknown (Illinois State Geological Survey 2003:26). The 1931 *Annual Coal Report* provides an Edwardsville postal address for the mine, which makes it possible for the facility to have been located anywhere within that community, or its rural environs. This report—the only one in which the Black Diamond Coal Company is listed—also indicates that the mine operated for eighty-five days, employed nine men, and produced a modest 1,000 tons of coal, all sold to the local trade or consumed as fuel at the mine (Illinois Department of Mines and Minerals [IDMM] 1931:176-177). Chenoweth and Barrett (2004a:1), for reasons unstated, do not think this mine corresponds to the one located at the Young Shaft Site. This assessment would seem to be corroborated by 1932 Edwardsville USGS 15-minute topographic quadrangle map, which fails to indicate the presence of a mine at the Young Shaft Site (see Figure 2). This map, however, was based on survey work conducted in 1927 and hence would not show any improvements made there by the Black Diamond Coal Company in 1931—assuming this actually is the location of their mine. The 1932 topographic map does illustrate a building (possibly a dwelling) at the site, access to which is provided by an east/west driveway extending off the public road to the west (United States Geological Survey [USGS] 1932). It is very curious (and perhaps not coincidental) that the yet-to-be-located 1931 Black Diamond Coal Company Mine and the Young Shaft were operated by the same company and are strikingly similar to one another in respect to longevity and level of production, as will be seen below.

According to a mine inspector's ledger, the Black Diamond Coal Company began sinking the Young Shaft in 1938. The mine was located on an 80-acre parcel owned by Louisa Young, from whence the name of the shaft was derived (see Figure 5). Before the mine closed in 1939, the shaft had reached a depth of 150 feet (cf. Chenoweth and Barrett 2004a:16 and above), but no production was reported. The fact that the mine is not listed in the 1938 *Annual Coal Report*, or subsequent reports, also is suggestive of the mine having no, or at least very limited, production (IDMM 1938-1943).

A 1941 aerial photograph of the mine area shows the tipple complex and hoist engine house as well as a number of other buildings a short distance to the north (see Figures 3 and 4). Some of these structures are undoubtedly mine-related, but others appear to be

associated with the farmstead and orchards located to the northwest of the tipple. While evidence of vehicular traffic is visible around the tipple, a well-traveled route to and from the tipple complex (which one might expect if significant production were underway) is not present. The existing residence at the site also appears in the aerial photograph (United States Department of Agriculture 1941). Oral tradition holds that this house served as an office during the period the mine was in operation (John Brockmann, pers. comm., 12 August 2005).

Chenoweth and Barrett (2004a:16) state that the Young Shaft was sunk in 1943, but do not specifically give the source of their information. Clearly, based on the 1941 aerial photograph, the mine was already in place by this date. The one point of agreement between the mine inspector's ledger and Chenoweth and Barrett (2001a) is that the Young Shaft mine never had any reported production. Thus, reference to the mine as "Young Shaft" is apt and would seem to suggest that underground workings did not extend far beyond the shaft base.

The 1950 Edwardsville USGS 7.5-minute topographic quadrangle map has the mine symbol at the location of the Young Shaft labeled as Black Diamond Coal Mine (see Figure 6). One would assume that this appellation was based on fairly current and/or accurate information at the time the data for this map was compiled (USGS, Edwardsville Quadrangle 1950). Another topographic map, published in 1954, also designates a mine shaft at the site, though no name is assigned to it (see Figure 6). In addition, this map illustrates the hoist engine house located west of the shaft (USGS, Edwardsville Quadrangle 1954).

By 1958, the mine was under the ownership of Forsythe-Carterville Coal Company. The inspector's ledger indicates that in November of that year the mine was reopened. Seven hours were required to pump the water out of the shaft. Once the shaft was emptied, an eastbound entry was started to obtain a four-to-five ton sample of coal for a pilot scale coke test by the Illinois State Geological Survey. The entry extended about eight feet from the shaft. Channel samples were taken in two locations along the entry. Once again, the mine is absent from the *Annual Coal Reports* compiled during this period (IDMM 1958, 1959, 1960). The 1958 sampling of the Young Shaft mine was the last coal mining activity reported in the Edwardsville area and was one of the most recent activities for all of Madison County (Chenoweth and Barrett 2004a:1, 2004b:1; Chenoweth and Borino 2004:1; Chenoweth, Elrick, and Borino 2005:1). A 1968 USGS topographic map shows conditions at the Young Shaft Site essentially unchanged from 1954 (USGS, Edwardsville Quadrangle 1968) (see Figure 7).

The Forsythe-Carterville Coal Company retained ownership of the 1.5-acre parcel immediately surrounding the Young Shaft (embracing the shaft proper, tipple complex, and hoist-engine house) until August 2004, when the land was sold for non-payment of taxes. The property was purchased by John Brockmann, who already owned an adjoining 12-acre tract to the north (John Brockmann, pers. comm., 14 August 2005). The limits of the Young Shaft Site, as defined in this report, are located entirely within the Brockmann property.

A detailed context for coal mining in Illinois is provided in “*Pick, Shovel, Wedge, and Sledge*”: *A Historical Context for Evaluating Coal Mining Resources in Illinois* (Mansberger and Stratton 2005). That source and the quadrangle-specific summaries in the *Directory of Coal Mines in Illinois* [Edwardsville Quadrangle (Chenoweth and Barrett 2004a); Alton Quadrangle (Chenoweth and Barrett 2004b); Worden Quadrangle (Chenoweth and Borino 2004); Collinsville Quadrangle (Chenoweth, Elrick, and Barrett 2005)] together provide a brief summary overview of the coal industry in Madison County. The majority of the information in those reports relating to nineteenth-century coal mining comes from *History of Madison County, Illinois* (Brink 1882). *Edwardsville: An Illustrated History* (Nore and Norrish 1996) also contains some useful information on local coal mining, but does not mention the Young Shaft.

Previously Reported Sites: None.

Previous Surveys: No previous archaeological surveys have been conducted in the immediate project area.

Regional Archaeologist Contacted: No regional archaeologists were contacted.

Investigation Techniques: A pedestrian survey was conducted over the entire 1.5-acre project area (containing a standing structure and above-grade foundation remains) as well as an equal-size area surrounding the project area (containing less visible remains of coal mining-related structures). A scaled plan map of the site, an elevation drawing of the headframe portion of the tipple complex, and a longitudinal cross-section through the tipple complex and hoist engine house were completed. The aboveground structural remains also were recorded through a series of digital photographs and notes. A mechanical lift was used to take detailed measurements and photographs of the headframe. The field investigation component of the investigation was conducted over several visits to the site.

Site-specific documentary research for the project was conducted at the Illinois State Library, the Lovejoy Library at Southern Illinois University (Edwardsville), the Edwardsville Public Library, and from electronically archived materials at Fever River Research, Inc. The documentary research was designed to locate historic maps and photographs that might illustrate the surface complex at the mine and to obtain specific operational and production data that would aid in producing a history of the Young Shaft mine operation. In addition, John Brockmann, the current landowner of the Young Shaft Site, was interviewed regarding the history of the mine and the location of any potential mine-related features he was aware of on the property. An attempt also was made to contact Julius Henke, an older local resident who is familiar with the history of the mine. Although Mr. Henke did not make himself available for a formal interview, he had previously discussed what he knew about the mine with Mr. Brockmann, who relayed what he remembered of the discussion to Fever River Research personnel.

The National Register of Historic Places assessment of the mine site was based on “*Pick, Shovel, Wedge, and Sledge*”: *A Historical Context for Evaluating Coal Mining Resources in Illinois* (Mansberger and Stratton 2005). This document provides a detailed discussion of mine types—including tipples/headframes, such as that found at the Young Shaft Site—and provides guidelines for determining National Register eligibility for abandoned coal mine sites in Illinois.

Time Expended: 45 man-hours (in field)

Sites/Features Found: The survey resulted in the documentation of a tipple complex (including intact headframe), the ruins of a hoist engine house, and several other features potentially associated with the Young Shaft coal mine. Digital images of these features are attached below; figure captions contain additional commentary to supplement the following feature descriptions. See Figure 9 for feature locations.

Feature 1 is the tipple complex of the Young Shaft mine. The tipple is aligned on an east/west axis and is comprised of three distinct sections, including 1) a hoisting shaft, a 2) steel-frame headframe located over the shaft, and 3) a series of concrete footings that formerly a superstructure in which coal was screened and sorted. See Figures 10 through 28 for plans and photographs of the tipple. The hoisting shaft is concrete lined and measures approximately 12’ square. It is filled with water to within less than 10’ of the ground surface. After the mine was abandoned, the shaft was rudely covered with tree limbs and steel sheeting. The headframe is of steel construction and has battered (or canted) sides for stability. It measures 21’-0”x14’-10” at the base and tapers up to a platform measuring 11’-6” square. The structure stands approximately 43’ tall at the height of the sheave platform and 50’ to its peak. The structure appears to have been designed to allow a dual hoisting system, in which one cage was lowered into the mine as the other was raised. Such a system usually utilized two sheaves (one per cage), but only one has been documented at the site; this now lies at the base of the tipple. The sheaves sat on a wood deck framed with 1-½ “x11” joists and 12-½”-square beams. They protected from the elements by a gable roof, of which only the steel frame remains. Each of the cages could be accessed through steel gates located at grade along the west side of the tipple.

A variety of steel stock was used in the construction of the headframe, including 6” diameter piping for the main uprights and 3-½” piping and 2-½” angle iron for horizontal and diagonal bracing. The upper ends of the uprights are tied together with 9”x12” I-beams. Salvaged car frames were used for the cross-beams on which the cage guide-rail was mounted. One these car frame sections had a serial number plate attached to it, whose placement indicates that it belonged to a Buick manufactured between 1926 and 1937.¹ The uprights rest on concrete footings. A raised concrete foundation wall (standing about 2’-6” tall) runs around the base of the headframe, providing a barrier from the shaft.

¹ The plate is stamped “Buick / 1515572.”

Four large concrete footings radiate out to the east of the headframe. The footings have battered sides and stand about 7' tall. These are suspected to have supported an elevated superstructure in which the coal was dumped (after being hoisted up through the headframe) and then screened and sorted according to size. The layout of the footings suggests that there may have been three or four driveways (or bays) through which trucks could pass under the superstructure and be filled with coal. The footings were constructed very expeditiously, having brick, stone, steel kegs, steel cable, and even tree branches mixed in with the concrete. A similar mix of materials was used in the concrete wall around the hoisting shaft.

Mansberger and Stratton (2005:217-268) provide a detailed discussion of coal mine tipples in Illinois, providing a historical perspective emphasizing change through time.

Feature 2 is the remains of a hoist engine house located 48' due west of the tipple (see Figure 29 and 30). USGS topographic maps document that this building was still standing as late as 1954, but it has since been demolished (or decayed) down to its foundations. Portions of the feature are covered with debris, and the whole is extremely overgrown with dense vegetation. The building measures 25'-2"x53'-0". The perimeter foundations are of poured concrete and vary in width between 5" and 7"—a narrow dimension suggesting that the walls were of frame (rather than masonry) construction. Most of the interior floor space is paved with concrete. Several internal features are still visible and partially intact, including remnants of the hoist engine at the east end of the building. Although the arrangement of the hoist engine within the building is similar to that documented at previously documented mine sites, the power source used here is very distinct. Hoist engines commonly were powered by steam and, later on, by electricity. At the Young Shaft, however, a gasoline tractor engine provided the motive power for the drum on which the hoisting cables wound. The tractor appears to have been literally parked in the building, and then had concrete footings poured around its axles; once the concrete had set, the tires were removed. At some point after the mine was abandoned, the hoisting drum was salvaged out, along with the upper half of the engine body. The lower half of the engine remains in place, along with a small section of the hoist drum frame. The footings on which the drum rested also remain. Two gasoline tanks, an air cleaner,² and shroud likely associated with the engine lie in the southeast corner of the building. Lying in this same area are fragments of what appears to be a wood bench. Several other internal features are located to the west of the hoist engine. One of these is a small concrete footing on which a 4"x6" wood post once sat. Another is a concrete-lined base, or box, measuring 2'-10"x3'-10". The function of this base is not known. The west end of the building appears to have been largely open, and it is possible that this space may have served as a workshop or similar activity area.

A number of ancillary features were documented around the periphery of the hoist engine house. One of these is a 2'-8"x3'-0" concrete footing located along the east side of the

² The air cleaner was manufactured by the Vortex Manufacturing Company of Pomona, California. The name plate on the cleaner notes it as Model 118, No. 15805, being based on a patent approved July 18, 1922 and a pending patent dated August 15, 1922. The Vortex Manufacturing Company remains in business to this day.

structure. Positioned to the north of this pad is a 7-1/2" steel pipe in which an angle iron is set in concrete. The landowner also pointed out the location of a large eye-bolt set in concrete to the southeast of the hoist engine house, which he cut off below grade several years ago. All three of these features are roughly on-line with one another, and they have served as tie-down points for bracing (cables?) extending off the tippie

Mansberger and Stratton (2005:269-271, 290-292) provide a general discussion of hoist engine houses at coal mines in Illinois.

Feature 3 is a portion of a concrete foundation located directly west of the hoist engine house and visible in the mowed-strip surrounding the adjacent agricultural field. The foundation is 1'-4" wide and runs on a north-south axis for an undetermined distance. Approximately 8' is visible above grade. The southern end of the foundation has been broken off. Considering Feature 3's location and substantial width, we suspect that it was associated with the coal mine and presumably supported an unidentified building or structure. The 1941 aerial photograph, however, shows no obvious structures at this location, which suggests that Feature 3 may post-date this.

Feature 4 is a two-story, frame, gable-roofed dwelling located in the northwest corner of the site (see Figures 31 and 32). Oral tradition holds that the residence served as the office for the mine during the period that it was in operation.³ The mine operator or superintendent may also have lived here during this period. The house is depicted on the 1941 aerial photograph, which shows a distinctly different roof profile and orientation than that seen today. The photograph suggests that the house faced west and had a large dormer on the front (or west) slope of the roof. The residence has seen many modifications since that time, including the construction of a large rear addition, the raising of the roof line to create a full two stories, and a reorientation of the "front" of the house to the south elevation.

Feature 5 is remnants of building foundations located on the terrace directly north of the mine shaft (see Figure 33). A building is documented at this location on the 1942 aerial photograph, and apparently stood as late as 1954—based on USGS topographic maps. The structure had concrete foundations, brick walls, and a concrete floor on the interior. Sections of the brick walls were still standing when John Brockmann, the present landowner, purchased the property nine years ago. Brockmann later graded the area around the feature, reducing the walls to, or below, grade. It cannot be stated with certainty whether Feature 5 was associated with the mine or was an agricultural-related, outbuilding, such as a barn.

Feature 6 is a brick-lined shaft located directly north of, and upslope from, the hoist engine house. This feature is no longer visible above grade, but its location was pointed out by the landowner, who filled it in several years ago. The shaft measured approximately 3' in diameter and 25' in depth. Several of clay drain (halved longitudinally) passed through the sides of the feature, near the top. After the feature was

³ The source of information regarding the house's use as the office is Julius Henke, a long-time resident of the Edwardsville area—via John Brockmann.

abandoned, heavy timbers were tossed into it and sheet metal laid over its opening (John Brockmann, pers. comm., 14 August 2005).

The dimensions and general character of Feature 6 are very suggestive of a well. However, the drain tile entering the feature does raise some questions on this point, since such tile is not common to wells (though are typical in cisterns). Regardless, Feature 6 appears to have been utilized for water storage. It is not clear whether the feature associated with the coal mine, farmstead, or perhaps served both.

Additional Features and Buildings: There is a cluster of concrete foundations scattered around an active well, a short distance west of Feature 5 (see Figures 34 through 36). It is not clear whether these are mine or agricultural related. A storage shed lies directly south of the well in question. This building, which serves as a machine shed, has concrete foundations, steel siding, and a shed roof. It dates to the middle twentieth century, and does appear to be mine related. A modern pole barn also is present on the property, lying due south of the residence.

Cultural Material: Outside of structural remains, limited mine-related material was observed on the surface. Notable exceptions include the headframe sheave, and the gas tanks and air cleaner found in the hoist engine house, previously noted.

Collection Technique: The field investigation was aimed at the documentation of structural remains rather than the collection of artifacts.

Curated at: Notes and drawings are curated at Fever River Research, Inc., Springfield.

Area Surveyed (acres and square meters): Approximately 3.0 acres (12,141 square meters).

RESULTS OF INVESTIGATIONS AND RECOMMENDATIONS

- Phase I archaeological reconnaissance has located no archaeological material [in this portion of the site]; project clearance is recommended.
- Phase I archaeological reconnaissance has located archaeological materials; site(s) does(do) not meet requirements for National Register eligibility; project clearance is recommended.
- Phase I archaeological reconnaissance has located archaeological materials; site(s) may meet requirements for National Register eligibility; further testing is recommended.
- Phase II archaeological investigation has indicated that site(s) does(do) not meet requirements for National Register eligibility; project clearance is recommended.
- Phase II archaeological investigation has indicated that site(s) meet requirements for National Register eligibility; formal report is pending and a determination of eligibility is recommended.

[Although considered eligible to the National Register under Criteria A, C, and D, we recommend clearance on the proposed abandoned mined lands reclamation project. The contributing resources have been documented through digital photographs, field notes, and scaled line drawings. Additional fieldwork and archival investigation are not required. We recommend clearance for the proposed undertaking.]

Comments: As with all historical properties assessed within the context of cultural resources management, the value of the Young Shaft mine site and its individual structural components ultimately is determined by their eligibility for listing on the National Register of Historic Places. Eligibility to the National Register is based on four broad criteria that are defined by the National Park Service and used to guide the evaluation process. These criteria state that

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

A) that are associated with events that have made a significant contribution to the broad patterns of our history; or

B) that are associated with the lives of persons significant to our past; or

C) that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose component may lack individual distinction; or

D) that have yielded, or may be likely to yield, information important in prehistory or history (36CFR60.4 Criteria for Evaluation).

A property may qualify under one or more the above criteria, provided: 1) that it is historically significant, through its association with an important historic context; 2) it retains the historic integrity of those features necessary to convey its significance; and, in the case of archaeological sites, 3) it offers information that can answer relevant research questions and fill in gaps in the historical record. Abandoned coal mine sites represent an atypical category of cultural resource. In order to better assess the significance of these properties, the Illinois Department of Natural Resources has sponsored "*Pick, Shovel, Wedge, and Sledge*": A *Historical Context for Evaluating Coal Mining Resources in Illinois* (Mansberger and Stratton 2005). This report provides the basis by which the National Register criteria can be applied to coal mine sites in Illinois.

Madison County, where the Young Shaft is located, was an important center for coal production in Illinois from the 1870s into the early twentieth century. Blessed with large coal reserves, the county enjoyed the added advantage of having an extensive rail

network, which created an immediate demand for coal (i.e. for locomotives) and allowed the easy shipment of the fuel to distant point—most notably the nearby cities of East St. Louis and St. Louis, Missouri. As elsewhere in Illinois, local coal production began to drop in the 1920s and went into further decline in the 1930s, following the onset of the Great Depression. The Young Shaft thus represents the tail end of this industrial tradition. As discussed above, mine inspector's report indicate that the shaft was sunk in 1938 and then operated on a limited, very intermittent basis thereafter (Evidence for the property being the 1931 Black Diamond Mine is very tantalizing but merely circumstantial at this point). Since the mine was never listed in the *Annual Coal Reports*, we have limited knowledge on the character of production there. However, it appears to have been a variation of what Mansberger and Stratton (2005:205) have characterized as a Steam-Powered, Hand-Operated mine, the principal difference being that a gasoline engine (rather than steam) provided the hoisting power at the mine. The limited mining carried on there likely was done by hand, as opposed to mechanically. Due to its small size and short-term operation, the mine probably had a limited impact on the local economy. Whatever coal was produced there was transported by truck and sold locally, making it a Local Mine.

Since its abandonment, the surface complex of the Young Shaft has been demolished and/or deteriorated to the point where only a single structure, the head-frame of the tippie complex, remains standing. Foundations and piers at or just above grade are all that remain of most of the buildings and structures that were once present on the mine property. Mechanical equipment and interior fixtures apparently were removed from at least the hoist engine house prior to its razing. From an archaeological perspective, however, the site has relatively good integrity. The site plan remains visible and portions of most of the buildings and structures associated with the surface complex are still visible above grade.

Table 1 below provides a guideline for evaluating the National Register eligibility for abandoned coal mines under Criterion D (archaeology). The Young Shaft Site's placement within this subject has been indicated, along with other abandoned coal mines evaluated to date by Fever River Research. The chart is predicated upon the assertion that archaeological integrity alone does not make a mine site eligible to the National Register under Criterion D. In addition to having integrity, a property must also provide important information not otherwise obtained by other sources. National Register eligibility increases in proportion to integrity and ability to fill relevant data gaps.

Unquestionably, the features identified at Young Shaft provide considerable construction-related data relating to structure dimensions, building materials, as well as to the layout and organization of the mine site—data sets that Mansberger and Stratton (2005:340) emphasize as important in addressing relevant research questions about coal mining Illinois. This information is not available in documentary records such as historic maps and photographs. The mine is partially documented through the 1941 aerial photographs and USGS topographic maps, but these sources provide limited information, and do not equate to the close-up photographs and keyed mine maps available for other mine sites.

Indeed, our understanding of the aerial photograph largely is based on the field investigation.

Table 1
National Register Assessment Chart for Mines
Evaluated under Criterion D

	SURFACE COMPLEX LARGELY INTACT	SOME BUILDINGS INTACT, GOOD ARCHAEOLOGICAL INTEGRITY	NO STANDING BUILDINGS, GOOD ARCHAEOLOGICAL INTEGRITY	PORTIONS OF SITE DESTROYED, BUT GOOD INTEGRITY FOR SOME RESOURCES	POOR ARCHAEOLOGICAL INTEGRITY
ASSOCIATED WITH SIGNIFICANT EVENT, PERSON, OR TECHNOLOGICAL ADVANCE (i.e. CRITERION A, B, C)	BELL & ZOLLER NO. 2 MINE			CHERRY MINE KATHLEEN MINE	
POORLY DOCUMENTED (NO PHOTOGRAPHS OR MAPS)	POTENTIALLY NATIONAL REGISTER ELIGIBLE YOUNG SHAFT				SHILOH MINE LINCOLN CC MINE
PARTIALLY DOCUMENTED (PORTIONS OF SITE OR BUILDINGS ILLUSTRATED THROUGH MAPS OR PHOTOGRAPHS)		TAYLOR NO. 5 MINE	WORDEN MINE	MOHNS MINE CRESCENT NO. 2 MINE	
WELL DOCUMENTED (MAPS AND PHOTOGRAPHS ILLUSTRATE ENTIRE SITE THROUGH TIME)	ROYALTON MINE JEFFERSON NO. 20		GALATIA MINE HOOSIER MINE BUNSEVILLE MINE		NOT ELIGIBLE

The Young Shaft mine site is considered eligible to the National Register under Criteria A, C, and D. Although the mine represented a short-term operation with limited economic impact, it nonetheless illustrates an important, but relatively poorly documented, trend in the Illinois coal industry during the Great Depression, in which small-scale coal operators sought to carve out their own niche of opportunity in the wake of extensive mine closures by large corporate producers. Many of these local mines were established by experienced coal miners who had previously worked in shipping mines.⁴ Although we do not know the individual(s) responsible for the design of the mine complex, they do not appear to have been professionally trained engineers. Evidence of this can be seen in the variety of materials used in the construction of the headframe (including salvaged car frames) and the expedient character of the foundation construction. The use of a tractor engine as the power source for the hoist engine also bespeaks of a vernacular designer. Yet, none of these aspects detract from the essential function of the mine. The builders understood the requirements for hoisting and screening coal, and yet were not bound by the professional restraints an engineer would have faced. They followed a standard, time-tested design for the headframe (see Figure 38) but used a wider variety of steel stock than an engineer likely would have. Similarly, they threw in a whole assortment of materials in pouring the foundations. While it may seem that these men were poor designers, they seem to have innate sense of what was

⁴ A contemporary example illustrative of this trend in Madison County is the Worden Coal Company's Mine 1, documented by Fever River Research in December 2002 (Stratton 2003).

required to get the job done, as well as the conditions of the local coal market. The mine was developed during the Great Depression, when the coal market was depressed and money was short. Why spend the money on premium materials, when cheaper construction would get the job done just as easily? The site bespeaks of the extent to which coal mine design in Illinois still had a vernacular interpretation, even at this late date.

The Young Shaft Site's eligibility under Criteria A (social history) relates to the themes of engineering and industry, in regard to the small-scale, vernacular efforts at coal mining during the Great Depression in Madison County. The property also meets the requirements of Criterion C (architecture), in embodying the distinctive characteristics of a type, period, or method of construction—specifically in regard to the headframe. The headframe is one of only two historic examples known to still be standing in Illinois (and the only vernacular interpretation).⁵ The mine site's eligibility under Criterion D relates to the information content provided by contributing resources, which include the tipple complex (Feature 1) and hoist engine house (Feature 2). The other features identified during the survey do not have sufficient integrity or provide important information to be considered contributing resources

Although the Young Shaft mine site is considered eligible for the National Register under Criteria A, C, and D, we are recommending clearance for this proposed abandoned mined lands reclamation project. The contributing resources—Features 1 and 2—have been documented through digital images, field notes, and scaled line drawings. Moreover, the contributing resources can be placed within their proper context utilizing relevant sections of Stratton and Mansberger (2003:217-268, 269-271, 290-292) and Mansberger, Stratton, and Stanley (2003). No further fieldwork is considered necessary. We recommend clearance of the proposed undertaking.

Surveyors: J. Yingst, F. Mansberger, C. Stratton, and Ruth Jorgensen

Survey Date: August 4 and 12, 2005 and September 20 and 22, 2005

Report Completed By: J. Yingst and F. Mansberger
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⁵ The other known historic headframe/tipple that still survives in Illinois is located at the O'Gara or Sahara Coal Company mine outside Harrisburg, Saline County. Another headframe, located at Kathleen Mine in Dowell, Jackson County was documented in an Illinois Historic American Buildings Survey documentation package prepared by Fever River Research in 2003 (Mansberger, Stratton, and Stanley 2003).

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1882 *History of Madison County, Illinois*. W. R. Brink and Company, Edwardsville.

Chenoworth, Cheri, and Melony E. Barrett

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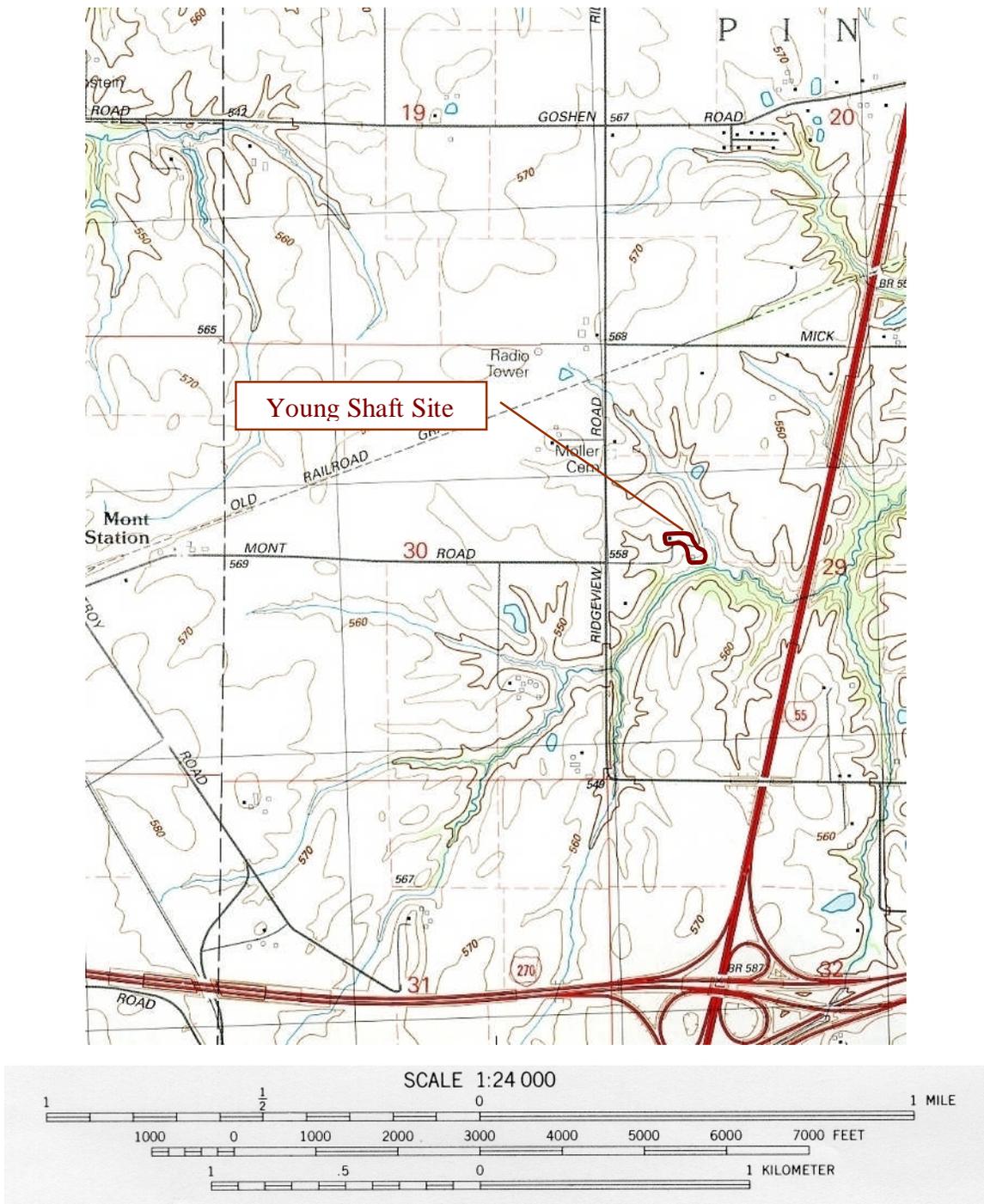


Figure 1. United States Geological Survey (USGS) topographic map showing the location of the Young Shaft Site in Section 29 of Pin Oak Township (Township 4 North, Range 7 West), in rural Madison County, Illinois (USGS, Edwardsville Quadrangle 1991).

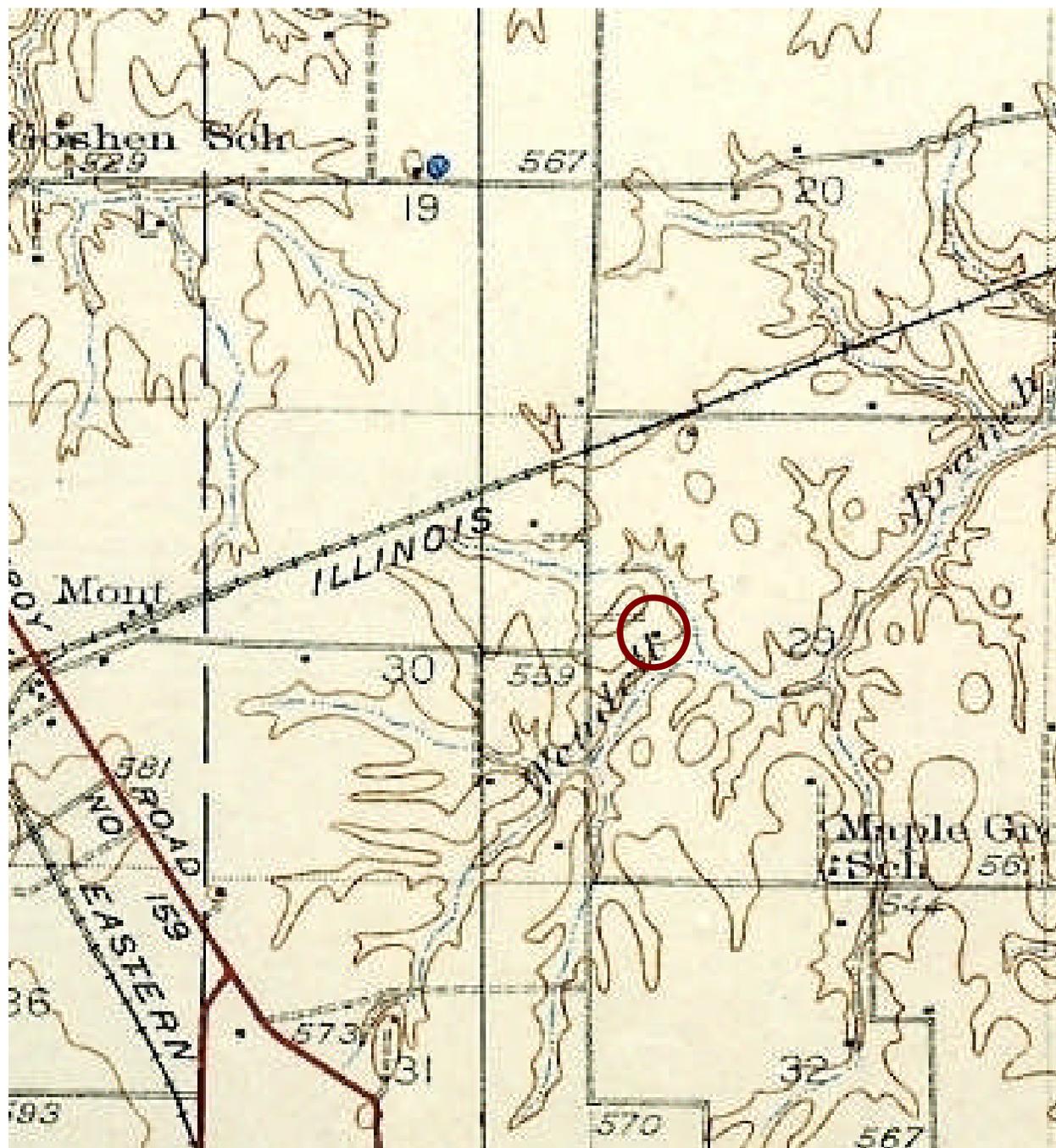


Figure 2. Location of the Young Shaft Site (circled in red), as illustrated on a 15-minute USGS topographic map published in 1932. This map was based on a survey conducted in 1927. It indicates no mine shaft at the site. However, a structure is shown just north of where the mine shaft eventually would be sunk (USGS, Edwardsville Quadrangle 1932).



Figure 3. A 1941 aerial photograph showing the location of the Young Shaft and immediate environs (United States Department of Agriculture 1941).



Figure 4. Detail of a 1941 aerial photograph showing the Young Shaft Site. A number of key features identified during the survey have been labeled. Features 3 and 6, which are not clearly illustrated here, are not labeled (United States Department of Agriculture 1941).

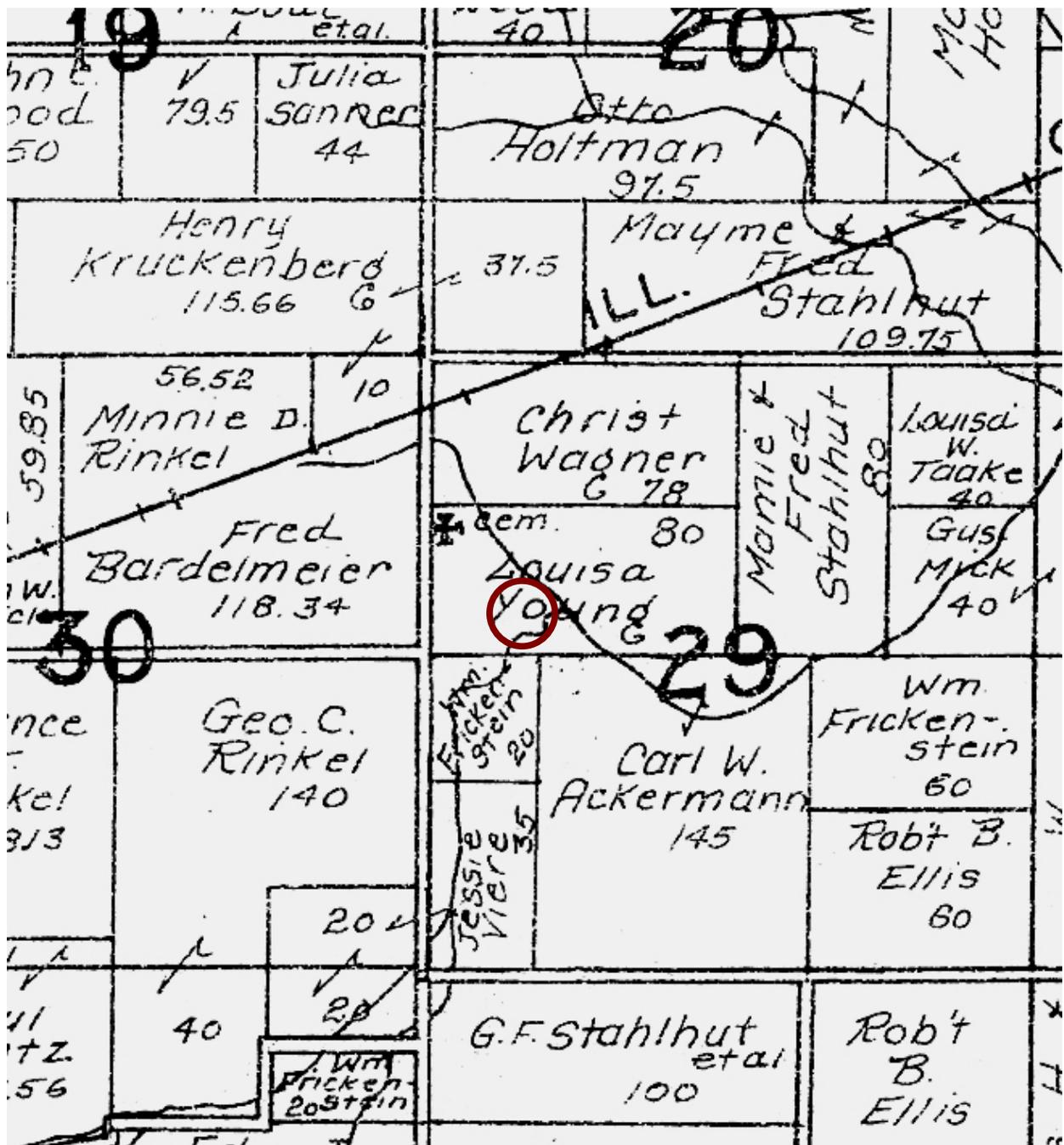


Figure 5. Detail of a 1942 plat of Pin Oak Township, Madison County, showing the location of the Young Shaft Site (circled in red) and associated tract of land owned by Louisa Young (

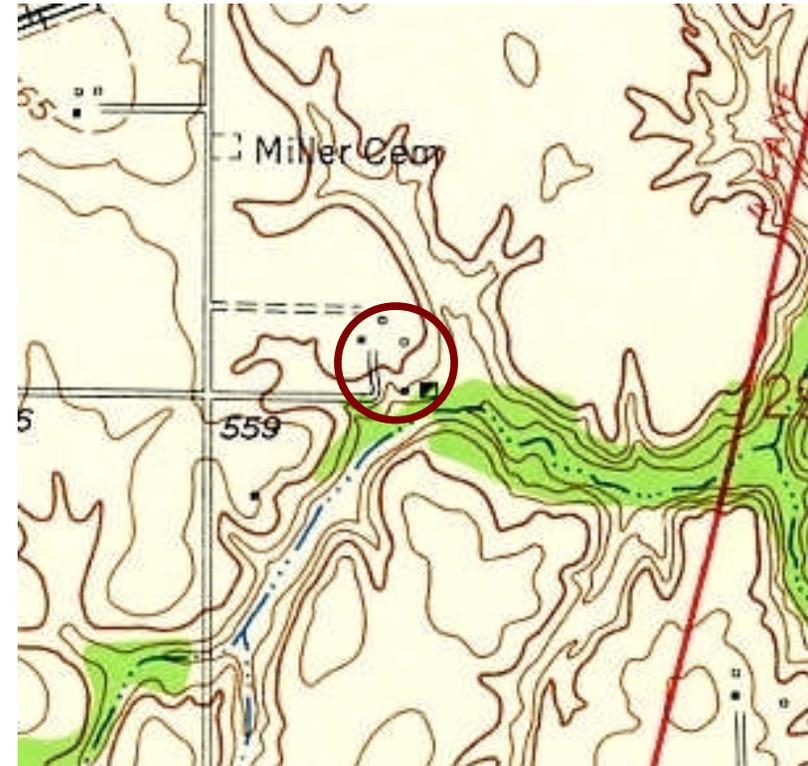


Figure 6. Comparison of two USGS 7.5-minute topographic maps illustrating the location of the Young Shaft Site (circled in red). The map at LEFT was based on a 1948 survey and was published in 1950. It clearly indicates the location of the mine shaft, which is labeled as the “Black Diamond Coal Mine.” The image at RIGHT was surveyed and published in 1954 and marks the shaft with a large cross-hatched square. The hoist engine house also is indicated on this map, to the left of the shaft.

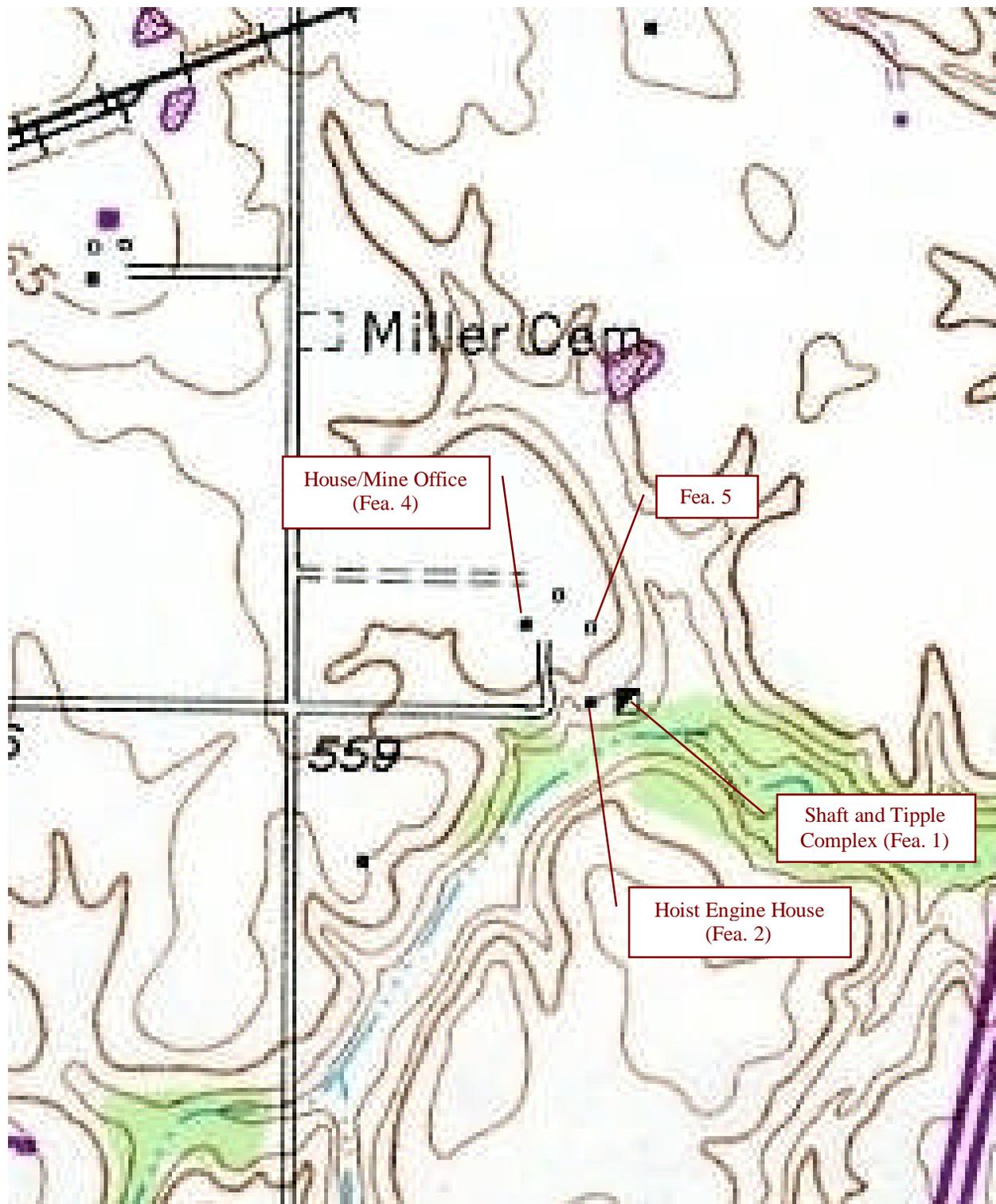


Figure 7. Detail of a 1968 USGS topographic map showing the Location of the proposed Young Shaft project area in rural Madison County, Illinois (Section 29, Township 4 North, Range 7 West) (Edwardsville 7.5-Minute Topographic Quadrangle Map, United States Geologic Survey, 1968).

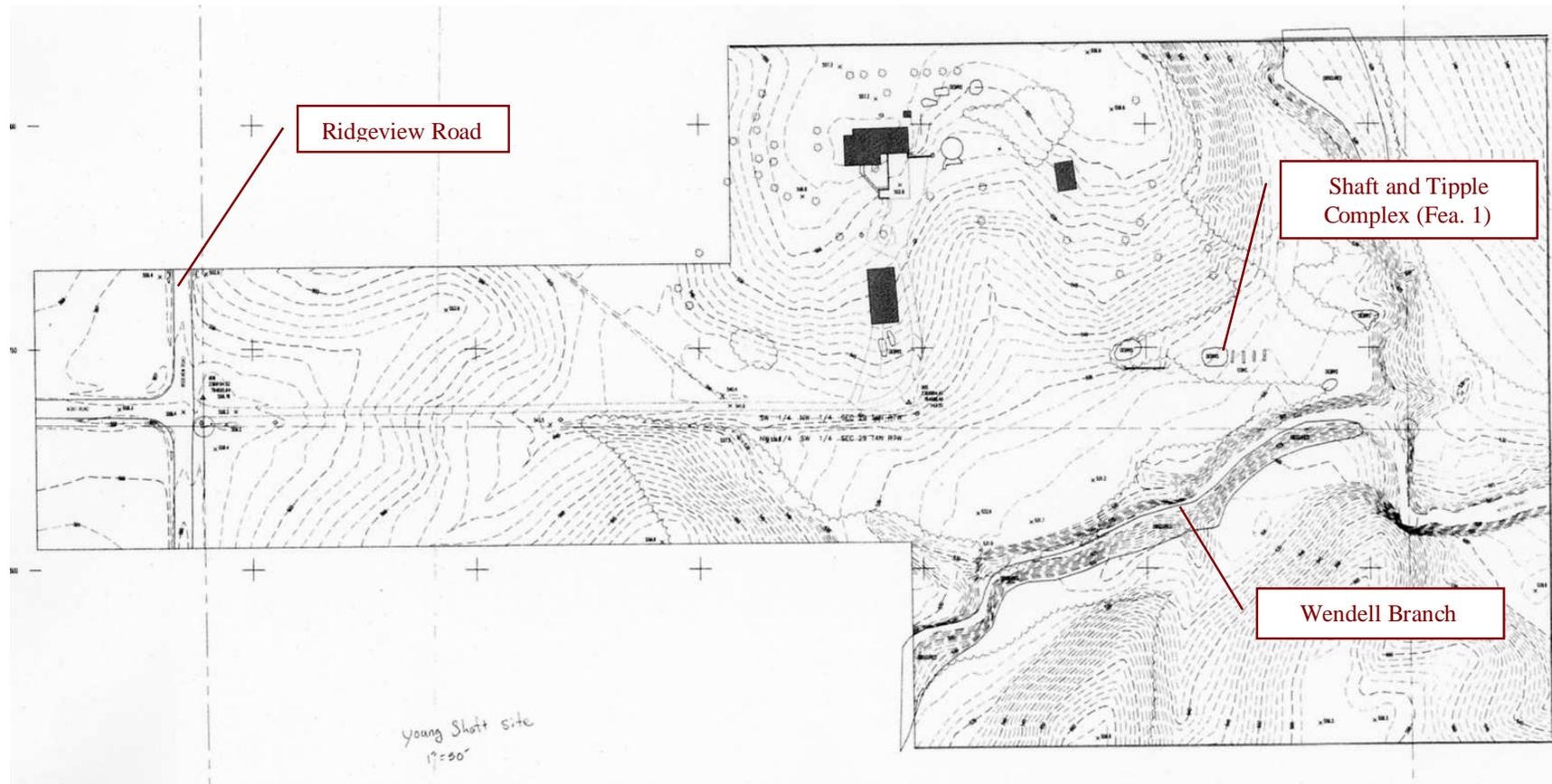


Figure 8. Map of the Young Shaft project area, showing existing conditions. This map covers the area lying between Wendell Branch on the east and Ridgeview Road on the west (Illinois Department of Natural Resources 2005).

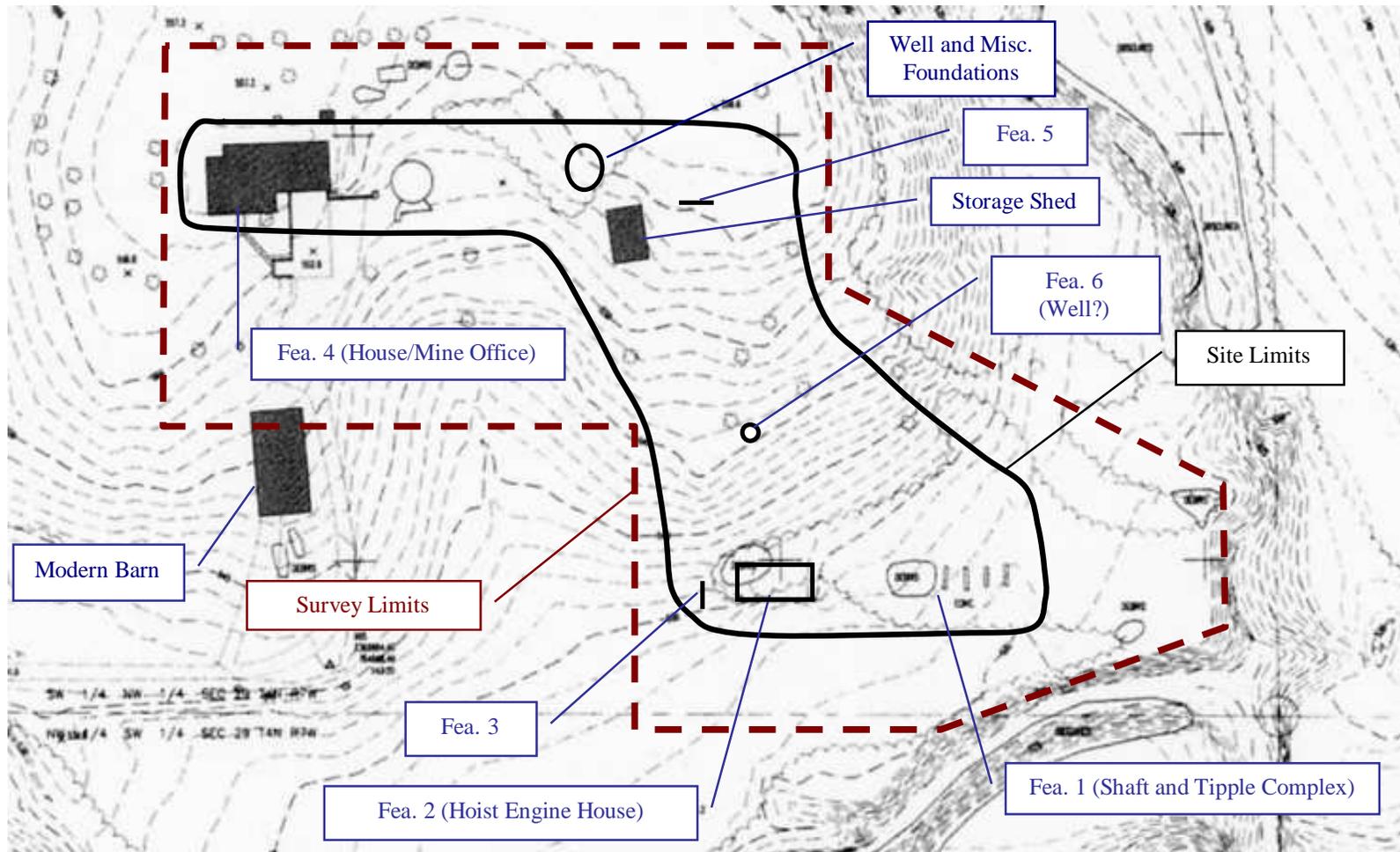


Figure 9. Enlargement of previous figure, showing the area surveyed, site limits, and features identified. Feature numbers have been assigned to buildings and structural remains known to be, or potentially, associated with the mine (Illinois Department of Natural Resources 2005).

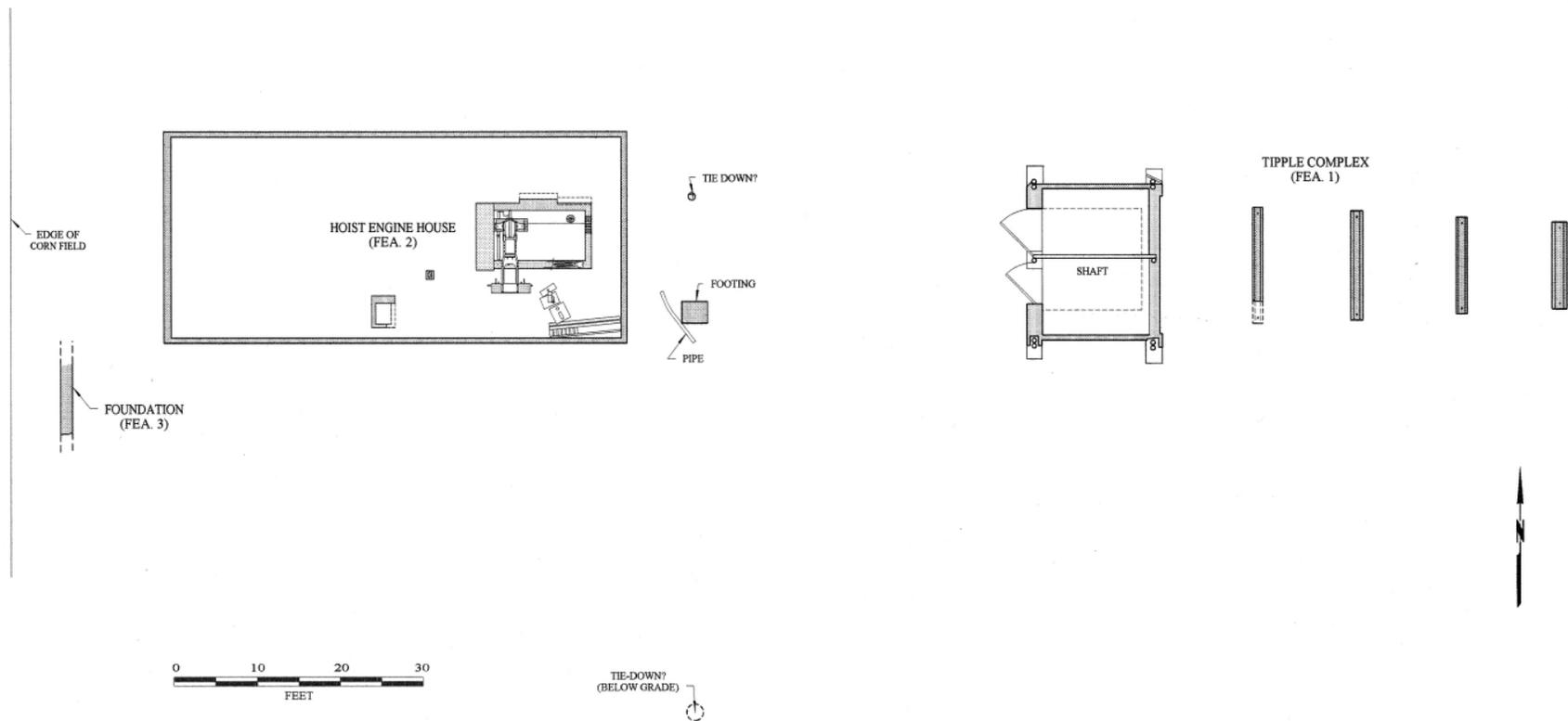


Figure 10. Plan of the tippel complex (Feature 1) and hoist engine house (Feature 2) at the Young Mine Site (FRR 2005).

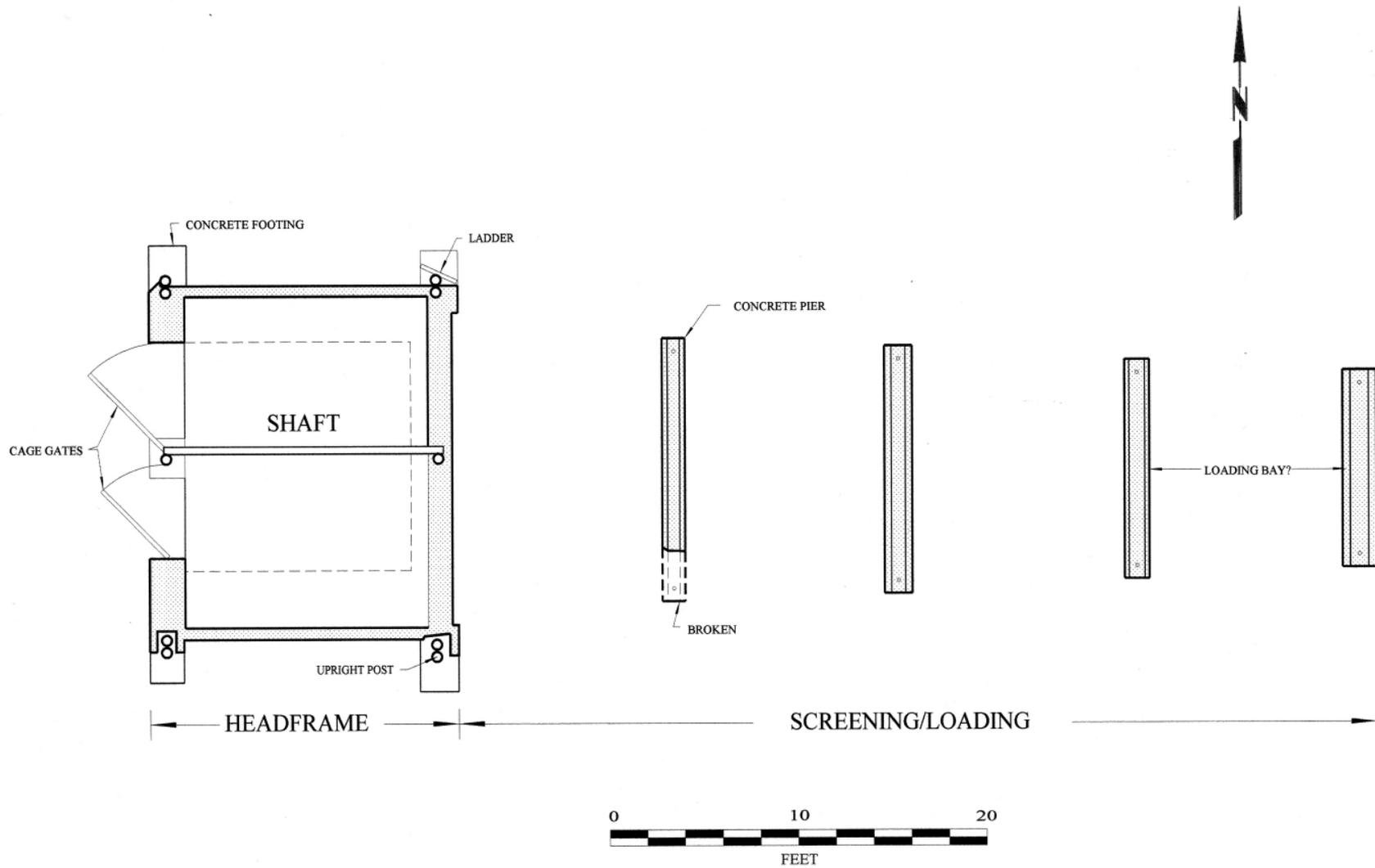


Figure 11. Plan view of the tippel complex (Feature 1) (FRR 2005).

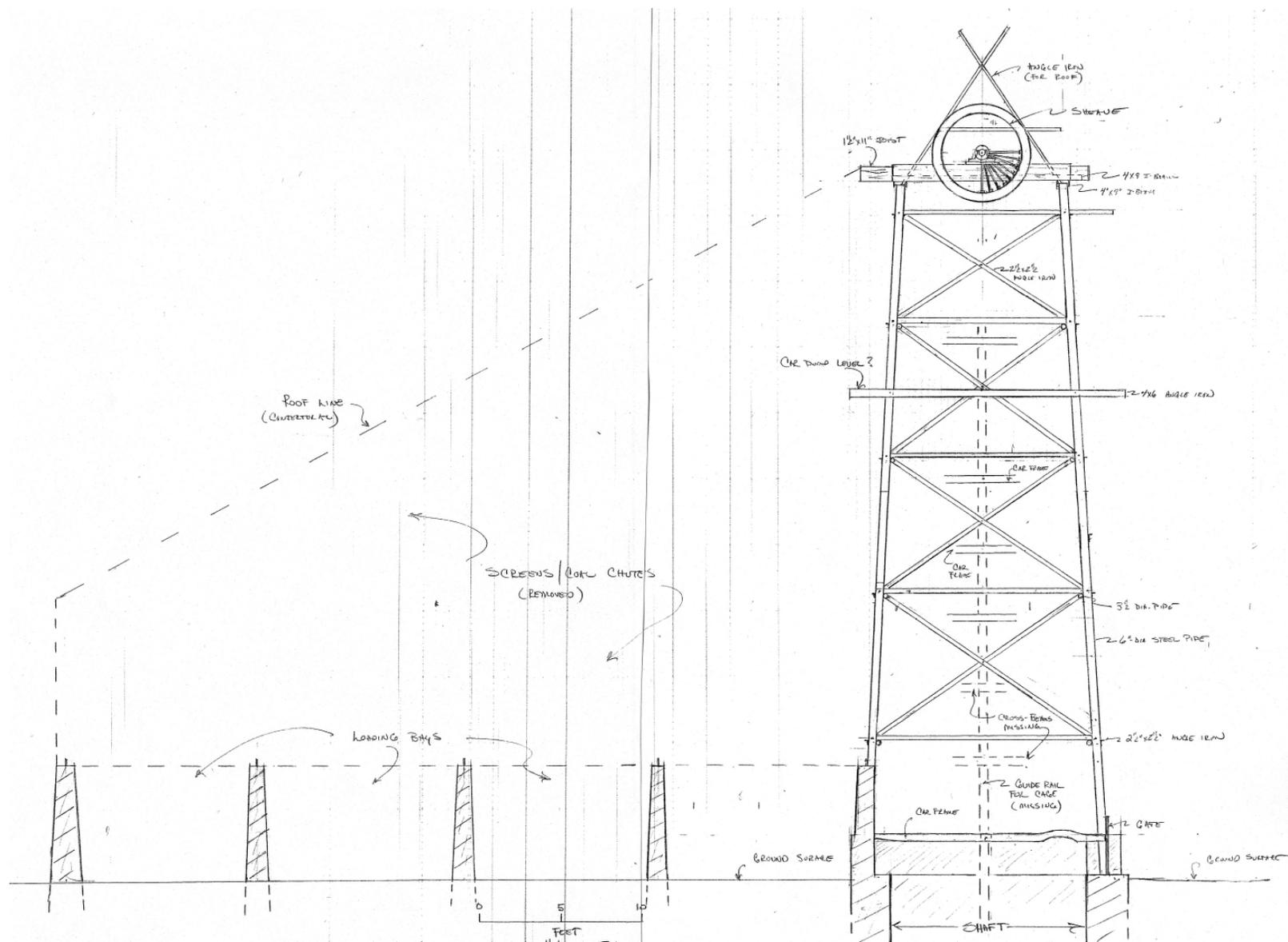


Figure 12. Longitudinal view of the tippel complex, looking south (FRR 2005).



Figure 13. Two views of the intact headframe of the tippel complex at the Young Mine Site, showing the southern elevation of the steel-frame structure (FRR September 2005).



Figure 14. Views of the southeast (LEFT) and southwest (RIGHT) corners of the tippel headframe (FRR September 2005).



Figure 15. (LEFT) View of the headframe, looking southeast and showing the west and north elevations. (RIGHT) View of the steel beams used to support the cage guide rail. Some of these beams (note arrow) were salvaged from a Buick automobile (FRR September 2005).



Figure 16. View of the platform at the top of the headframe, on which the sheave(s) rested. The platform appears to have been roofed over originally (FRR September 2005).



Figure 17. Detail of the sheave platform. The deck is framed with 1-1/2"x11" floor joists, in between which 12-1/2"x12-1/2" beams are laid (FRR September 2005).



Figure 18. Another detail of the sheave platform, showing one of the bolts by which the sheave was attached to the deck (FRR September 2005).



Figure 19. Photograph of a sheave associated with the headframe. This now lies on the ground at the bottom of the structure (FRR September 2005).



Figure 20. Framing detail showing the northwest corner of the sheave platform. Steel I-beams were used tie the upper ends of the corner posts together, as well to support the sheave platform (FRR September 2005).



Figure 21. The corner posts of the headframe consist of 6'-diameter steel piping, which is doubled up on the lower half of the structure, as seen above (FRR September 2005).



Figure 22. The corner posts are ties together, in part, with 3-1/2" diameter piping such as that shown above. Such piping was used for horizontal bracing on the structure. The base of a ladder ascending the northeast corner post also is shown (FRR September 2005).



Figure 23. Framing detail showing juncture of horizontal and diagonal bracing with southwest corner post (FRR September 2005).



Figure 24. Detail of the northwest corner post, showing 2-1/2" angle iron used for diagonal and horizontal bracing (FRR September 2005).



Figure 25. View of center post on west elevation, showing bracing (FRR September 2005).



Figure 26. View of the gates at the base of the headframe, on its west side. These gates allowed access to two paired cages, by which men, material, and coal were hoisted. This photograph also one of the beams (in this a case part of a salvaged car frame) to which the guide rails for the cages were attached (FRR August 2005).



Figure 27. (LEFT) View of the base of the northwest corner post of the headframe, showing the concrete footing in which the post is set and the concrete foundation wall surrounding the shaft. (RIGHT) Photograph of the ladder on the northeast corner post (FRR August and September 2005).



Figure 28. Photograph of the concrete piers extending east of the headframe. These piers are suspected to have supported the section of the tippie in which coal was screened and separated into hoppers by size (FRR August 2005).

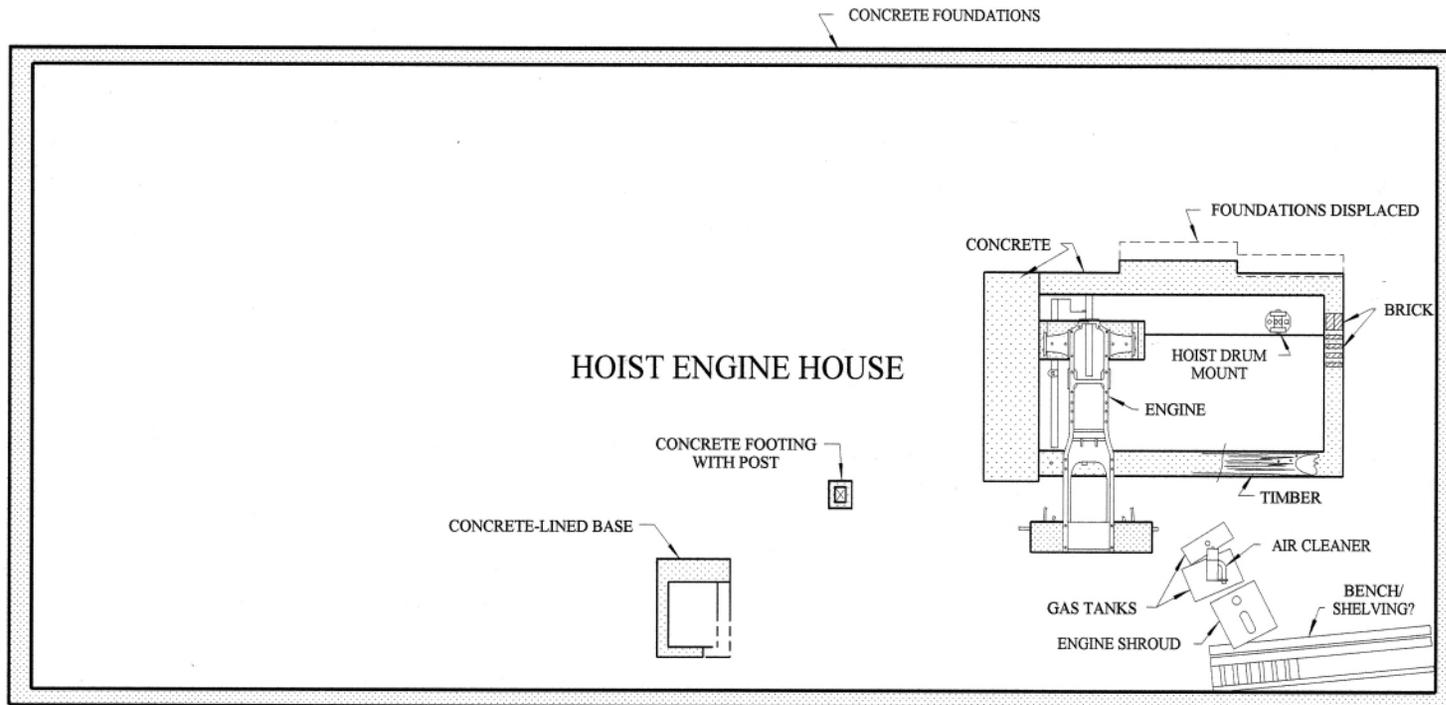


Figure 29. Plan view of the hoist engine house (Feature 2) (FRR 2005).



Figure 30. Photograph of the remnants of the hoist engine mechanism. Power for the hoist was provided by a gasoline engine salvaged from a farm tractor, the lower portion of which remains in place, encased within concrete footings (FRR August 2005).



Figure 31. Another view of the tractor engine associated with the hoist engine, looking due west (FRR August 2005).



Figure 32. Photograph of the residence at the Young Shaft Site, looking northeast. This house, identified as Feature 4, reportedly functioned as the mine office during the period it was in operation (FRR September 2005).



Figure 33. The house has seen considerable modifications in recent decades. The image above shows the southeast corner of the original house foundations (marked with arrow) (FRR September 2005).



Figure 34. Photograph of the pasture in which the building foundations identified as Feature 5 are location. The foundations have been reduced to grade. The residence at the site appears in the far background (FRR September 2005).



Figure 35. View of an unidentified set of foundations located west of Feature 5. It is unclear whether these foundations are mine or agricultural related (FRR September 2005).



Figure 36. View of a well located directly south of the foundations shown in the previous figure (FRR September 2005).



Figure 37. Photograph of a small concrete (building?) pad located west of the well shown in the previous figure. It is not known what originally sat here (FRR September 2005).

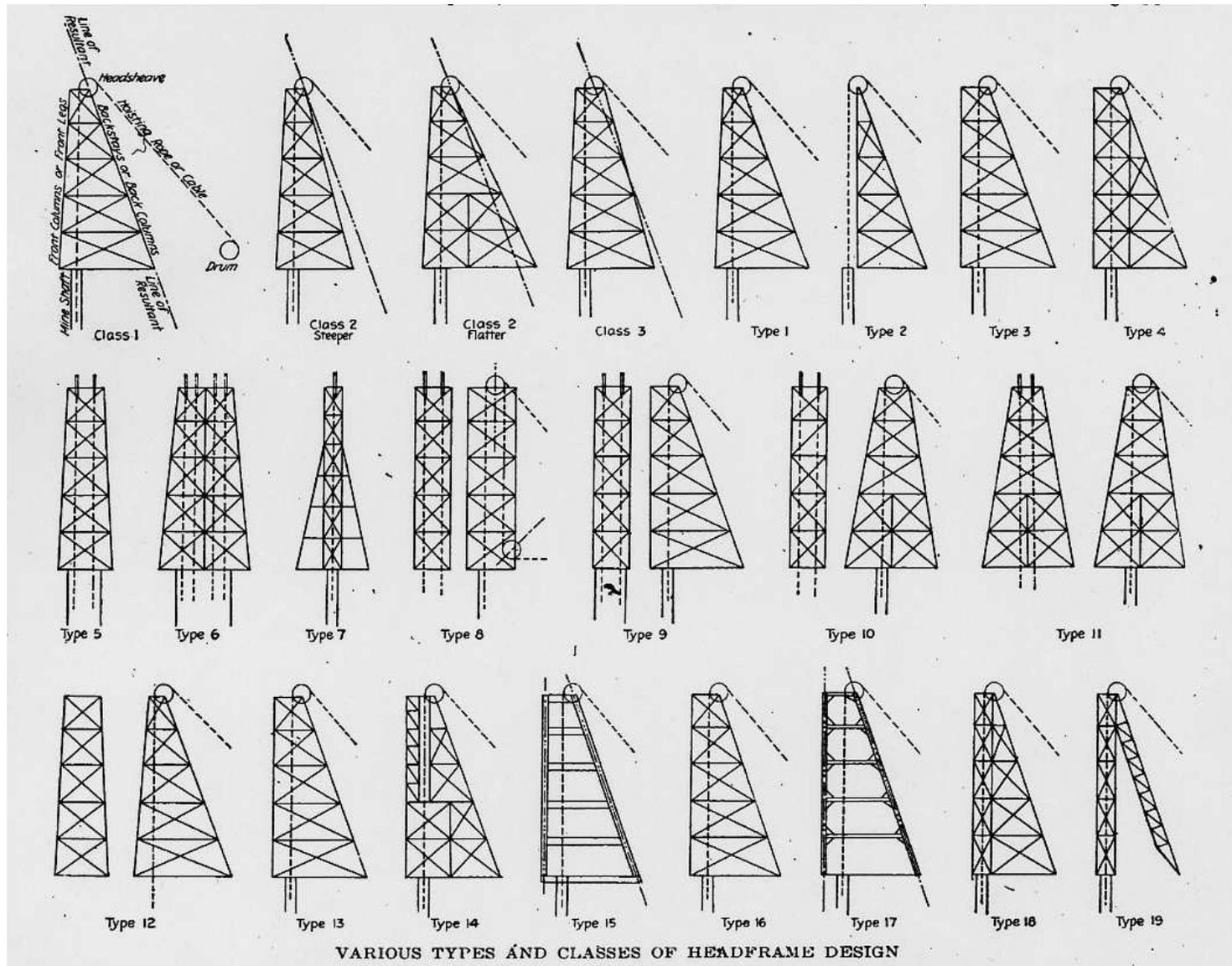


Figure 38. Headframe typology devised by Floyd Burr in 1917 (Burr, 1917). The Young Shaft tippel resembles the Type 11.

APPENDIX I

ILLINOIS ARCHAEOLOGICAL SITE RECORDING FORM

ILLINOIS ARCHAEOLOGICAL SITE RECORDING FORM

County: Madison

Site Name: Young Shaft Site

Revisit: N

Field Number:

State Site No.: 11MS2183

Quadrangle (7.5'): Edwardsville

Date Recorded: 10/03/2005

LEGAL DESCRIPTION (to quarter quarter quarter)

Align: SW 1/4s: SE SW NW

Align: 1/4s:

Align: 1/4s:

Align: 1/4s:

Section: 29 Township: 4 N Range: 7 W

Section: Township: Range:

Section: Township: Range:

Section: Township: Range:

UTM Coordinates (by ISM): UTM Zone: 16 UTM North: 4294736

UTM East: 247303

Ownership: Private

ENVIRONMENT

Topography: Bluffslope

Elevation (in meters): 119

Nearest Water Supply: Wendell Branch

Drainage: Kaskaskia

Soil Association: Fayette—Rozetta--Stronghurst

Description: The mine site is located along the upper reaches of Wendell Branch of Silver Creek, on a loess-covered till plain near Edwardsville. The terrain around the mine slopes gently down to the creek bed, which is deeply entrenched at this point.

SURVEY

Project Name: Young Shaft Survey

Site Area (square meters): 10,720

Ground Cover (List up to 3): Grass Brush Forest

Visibility (%): 10

Survey Methods (List up to 2): Pedestrian

Standing Structures: Y

Site Type (List up to 2): Commercial

SITE CONDITION

Extent of Damage: Moderate

Main Cause of Damage: Vandalism

MATERIAL OBSERVED

Number of Prehistoric Artifacts (count or estimate): 0

Number of Historic Artifacts (count or estimate): 1

Prehistoric Diagnostic Artifacts: 0

Historic Diagnostic Artifacts: Y

Prehistoric Surface Features: N

Historic Surface Features: Y

Description: Features documented during the survey included an extant tipple (with open shaft), the remains of a hoist engine house, and several other features possibly associated with the mine. A dwelling at the site reportedly served as the mine office.

TEMPORAL AFFILIATION (check all that apply)

Colonial (1673-1780):

Prehistoric Unknown:

Late Archaic:

Mississippian:

Pioneer (1781-1840):

Paleoindian:

Woodland:

Upper Mississippian:

Frontier (1841-1870):

Archaic:

Early Woodland:

Protohistoric:

Early Industrial (1871-1900):

Early Archaic:

Middle Woodland:

Historic Native American:

Urban Industrial (1901-1945): Y

Middle Archaic:

Late Woodland:

Historic (generic):

Post-War (1946-present): Y

Description: Coal mine directories indicate that this mine shaft was sunk in 1943 but saw limited, to no, production, and was briefly re-opened in 1958. A 1941 aerial photograph, however, suggests that the mine site possibly had been developed by that date.

Surveyor: J. Yingst, F. Mansberger

Institution: FRR

Survey Date: 08/04/2005

Curation Facility: FRR

Site Report by: C. Stratton

Institution: FRR

Date: 09/28/2005

IHPA Log No.:

IHPA First Sur. Doc. No.:

Compliance Status:

NRHP Listing: N

APPENDIX II

YOUNG SHAFT DOCUMENTATION DATA

[SOURCE: Chenoweth and Barrett 2004a:16]

Mine Index 2771

Black Diamond Coal Company, Young Mine

Type: Underground Total mined-out acreage shown: none Production indicates less than 1 acre was mined.

SHAFT, SLOPE, DRIFT or TIPPLE LOCATIONS

Type County Twp-Rge Section Quarters-Footage
Shaft Madison 4N 7W 29 NW corner NE NW SW

GEOLOGY

Thickness (ft) Mining
Seam(s) Mined Depth (ft) Min Max Ave Method
Herrin 210 5.6-6.0

Geologic Problems Reported:

PRODUCTION HISTORY

Production

Company Mine Name Years (tons)

Black Diamond Coal Company Young 1943 (none) *

Forsythe-Carterville Coal Company Forsythe-Carterville 1958 (none) **

* The shaft was sunk in 1943, but no production was reported. This does not appear to be the same Black Diamond Coal Company mine that operated in 1931, listed in the back of this report under "Mines Whose Locations Are Not Known, Edwardsville Quadrangle".

** pumped out shaft in 7 hours in November 1958, started an eastbound entry to get 4 to 5 ton sample for pilot scale coke test by ISGS (about 8 feet length). No record of mining from Coal Reports. Channel samples taken in two sites along this entry.

Last reported production: (no reported production)

SOURCES OF DATA

Original Digitized

Source Map Date Scale Scale Map Type

ISGS mine notes Undated (text only) 1:24000 *** Undated

*** Point plotted onto 1:24,000 USGS quadrangle and digitized.

Annotated Bibliography (data source, brief description of information)

Directory of Illinois Coal Mines (Madison County) - Mine names, mine index, ownership, years of operation.

Mine notes (Madison County) - Mine type, shaft location, depth, thickness, geologic problems.