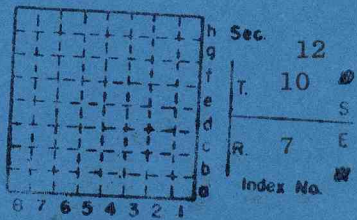


JADER FUEL COMPANY  
FEDERAL LANDSCAPING NO. 1 MINE  
MINE INDEX NO. 1003

ABND. - 1982

Strip Mine



SALINE COUNTY

Period Mo. Day Year Mo. Day Year Tons

JADER FUEL CO. "FEDERAL LANDSCAPING				NO.	1"
Initial production	December	1980		196	
		1981		50	778
Final production	October	1982		14	535

SUMMARIES			65509	
No.	to	No.		

Railroad, Wagon, Strip, Idle, Abandoned

Sec. 12

IDENTIFICATION

County No. \_\_\_\_\_

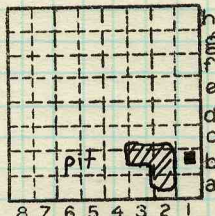
Coal No. \_\_\_\_\_

Coal Report No. \_\_\_\_\_

Herrin  
  
 (No. 6)

Quad. Rudement

County SALINE



T. 10 S.

R. 7 E.

Index No.

COAL MINE—PRODUCTION

ILLINOIS GEOLOGICAL SURVEY, URBANA

JADER FUEL COMPANY FEDERAL LANDSCAPING NO. 1

Sept. 16, 1981

Notes by John Nelson on visit with D.K. Lumm

Rudement 7½-Minute Quadrangle. Reference: Note 12-18.*Sect 12, T.10S-R.7E Saline*

Surface Mine. Active pit located approx. NE¼ SW¼ SE¼ SE¼. Pit trends NW-SE with a SW-facing highwall, approximately 500 feet long. A little coal is uncovered but there is no complete face exposed. The people we talked to were not sure whether the No. 5 or the No. 6 Coal was being mined.

Equipment on the site includes a small Bucyrus-Erie dragline, a Bucyrus-Erie 30-H coal loader, a Denver-Gardner drill for drilling overburden, two scrapers, and several bulldozers including a D-10 Cat.

The best exposure of the coal seam is near the northwest corner of the pit, where the uppermost 3 feet are visible. No shale bands were observed but there is a zone of pyrite lenses about 0.4 feet from the top. The cleat is well-developed; face cleat trends 155 (N 35 W) and the butt cleat is indistinct and variable. Calcite and pyrite line the cleat faces.

The following section of strata above the coal was measured:

TOP

- 20' Siltstone, light gray, thinly laminated, micaceous, carbonaceous; interbedded with sandstone, light gray, very fine-grained; and shale, medium gray, silty, micaceous, carbonaceous. Bedding discontinuous and lenticular. Indistinct, probably gradational contact.
- 20' Sandstone, light gray, fine to medium-grained, generally coarser near the base; well-cemented, hard, massive to thickly bedded, with distinct large-scale planar cross-lamination. Occasional lenses of shale and siltstone, as above, and a few thin shaly partings. Occasional conglomeratic zones with angular clasts of shale. Basal contact clearly erosional; truncates underlying units.

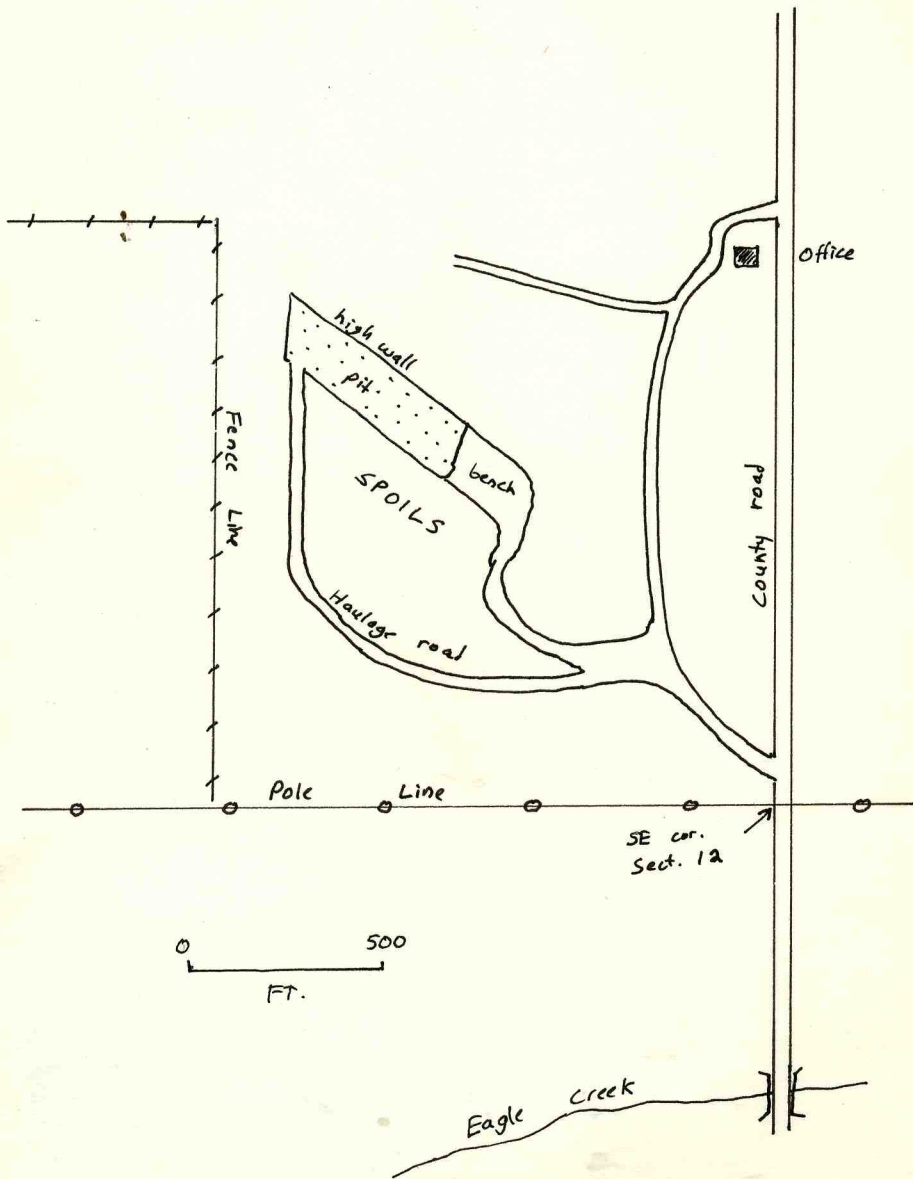
- 0-4' Limestone, dark gray, very fine-grained, with scattered fossil fragments; hard, dense, massive. Locally eroded and replaced by sandstone.
- 0-1' Shale, black, hard, smooth, fissile. Occurs in lenses below limestone. Locally eroded and replaced by sandstone.

Top of coal.

From examination of the coal and the strata overlying it, I am convinced that the Herrin (No. 6) Coal is being mined. No other coal bed in Eagle Valley is overlain by limestone this thick. On the west wall of the pit the limestone is as much as 6 feet thick. The coal is covered there.

In the southeastern part of the pit, where the coal is being prepared for loading, the sandstone lies directly on the coal.

The coal dips toward the northeast at 5 to 10 degrees. The upper surface undulates, possibly as a result of erosion. No faults were observed, and no jointing other than in the coal, and occasional irregular joints in the sandstone.



Jader Fuel Co. - "Federal Landscaping No. 1"  
December 19, 1981. Notes by John Nelson on visit with  
D. K. Lumm. Rudement Quad., Part 12.

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12-39 Pit is in nearly the same location as on our last visit, and it appears that not much mining has occurred since then. The west part of the pit is largely filled with spoils; no coal is being loaded today. In the east part of the pit there are highwalls both to south and north. The pit is roughly 70 feet wide. There are small exposures of coal.

At best exposure of coal the seam is 3.8 feet thick with 0.2' of hard shale (Blue Band) 0.9' above the base. There are thin discontinuous shale lenses near the top of the seam and a horizon of fusain 2 feet from the top. Lenses of pyrite up to a foot long and several inches thick are common near the top of the seam, along the fusain parting, and in the Blue Band. There is also much calcite and pyrite along cleat surfaces. The cleat orientations are not very consistent. Major directions are N 10° W to N 45° W, with N 30° W apparently most typical face cleat. I cannot determine the butt cleat.

The immediate floor is hard dark gray claystone full of pyrite nodules.

The seam is nearly horizontal or has a slight dip to the north or northeast.

The coal is overlain in places by Brereton Limestone, but in most of the pit by sandstone. The lower part of the sandstone is in places a conglomerate, with rounded pebbles of limestone and shale in a matrix of extremely hard well-cemented fine-grained sandstone that rings when struck with the hammer. Bedding varies from massive to large-scale cross-bedding. In places large stringers of coal, probably rafted mats of peat; and lenses of gray shale or siltstone occur within the sandstone.

The sandstone grades upward to thinly laminated siltstone and very fine-grained sandstone with abundant mica and fine carbonaceous debris. Cross-bedding still is prominent in the finer-grained rock. We do not observe any medium- or coarse-grained sandstone in the pit. The overburden is at least 40 feet thick.

The siltstone in turn grades upward to a medium to dark gray, silty, micaceous shale or mudstone, with occasional lenses of siderite and thin beds of fine-grained sandstone.

So we have overall, a fining-upward sequence with basal conglomerate, grading upward from sandstone to siltstone to shale and mudstone. As we have noted previously, the hill northeast of the mine is capped by relatively coarse-grained massive or cross-bedded sandstone. I believe that the hill-top sandstone is the Trivoli, and the sequence exposed in the pit is a channel phase of the Anvil Rock Sandstone.

The following is a detailed description made in the office of two large hand specimens of the basal conglomerate from the Federal Landscaping No. 1 Mine.

The matrix is a medium-light gray, fine-grained orthoquartzite, moderately well-sorted, the grains subrounded to subangular. It is cemented by silica, thus extremely hard, and possibly is recrystallized. It contains no minerals other than quartz that I could identify. This is most unusual for middle Pennsylvanian sandstones.

The clasts include, in approximate order of abundance:

- (1) Buff to brown highly calcareous highly porous claylike material with very abundant crystals of pyrite.

- (2) Buff to brownish very fine-grained limestone (Bankston Fork?)
- (3) Dark gray to gray-brown very fine-grained limestone (Brereton?)
- (4) Large thin contorted stringers of coal with white calcite along fractures. Probably incorporated into matrix while in the peat stage.
- (5) Fragments and sheets of dark gray to black pyritic clay-shale.
- (6) Small crystalline aggregates of pyrite.

Size of clasts range from coarse sand or granules, up to pieces several inches long. No consistency in roundness, no sorting, and no fabric visible.

9-24

Equality Quad., Part 9

Line of sandstone cliffs continues unbroken toward the southwest, and is 20 to 30 feet high. Large-scale tabular cross-bedding is common in the upper part; foreset beds consistently dip to south or southwest. Lower exposures show festoon(?) cross-bedding as at 9-22, and locally overturned cross-bedding, accentuated by iron banding. Rock shelters are common at the base of the cliffs. The sandstone is remarkably free of joints and has no noticeable dip.

The line of cliffs becomes lost farther south, just into Map Part 13, where the valley turns to a heading of due south. Sandstone is seen in bare exposure on top of the ridge (see note 9-5).