

3000

WESTERN MINING CO.

Abnd. about 1974

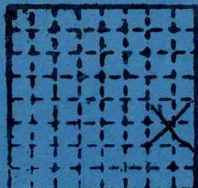
Abandoned Strip Mine

MINE INDEX NO. 935

COAL REPORT NO. L-258

Mt Rosah coal

WILLIAMSON



Sec. 34

| | | |
|---|----|----|
| T | 10 | S. |
| R | 4 | E. |

Tract No.



FORM 180 W

WESTERN MINING COMPANY (?) Abandoned Strip MineNE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 34 10S-4E Williamson County.

Notes by John Nelson 8/24/77

This is an abandoned strip mine located on the northeast end of Wise Ridge. It was a small contour-mining operation and apparently only one coal seam was mined. The property is owned by the family living just east of the mine. The lady at the house said the mine was operated by the Western Mining Company who ceased operations about three years ago.

The coal seam that was mined is not exposed in place. There are only scattered piles of coal left behind during mining. There is, however, an excellent highwall exposure with an interesting lithologic sequence.

At the time of the visit I do not know what coal seam was mined or the stratigraphic names of any of the units in the highwall. I only know that it is lower Pennsylvanian, probably below the Davis and DeKoven Coals.

See sketch map of mine area (over).

Measured Section on NW-Facing Highwall

- 5' Glacial drift, brownish, silty to finely sandy clay, soft and loose, with a few scattered pebbles. Abundant black carbonaceous debris. Fairly porous. Probably varies in thickness; much of it has been excavated.
- 10' Sandstone, light gray, weathered medium orange-brown, fine-grained, porous and fairly friable. Upper portion thin-bedded and very soft due to weathering. Becomes thicker bedded and better indurated downward. Cross-bedded throughout. Contains irregular partings and layers of dark, carbonaceous shale. Lower contact very sharp

Sketch Map of Western Mining Co. (?)

← ~ 1/4 mile →

NORTH



Dirt Road

access road
(washed out)

Land Owner's house

"Feather fractures" ?

Wooded Area

Not Mined

Gully

Mined Area

bench

pit

Mined Area

main highwell

pit

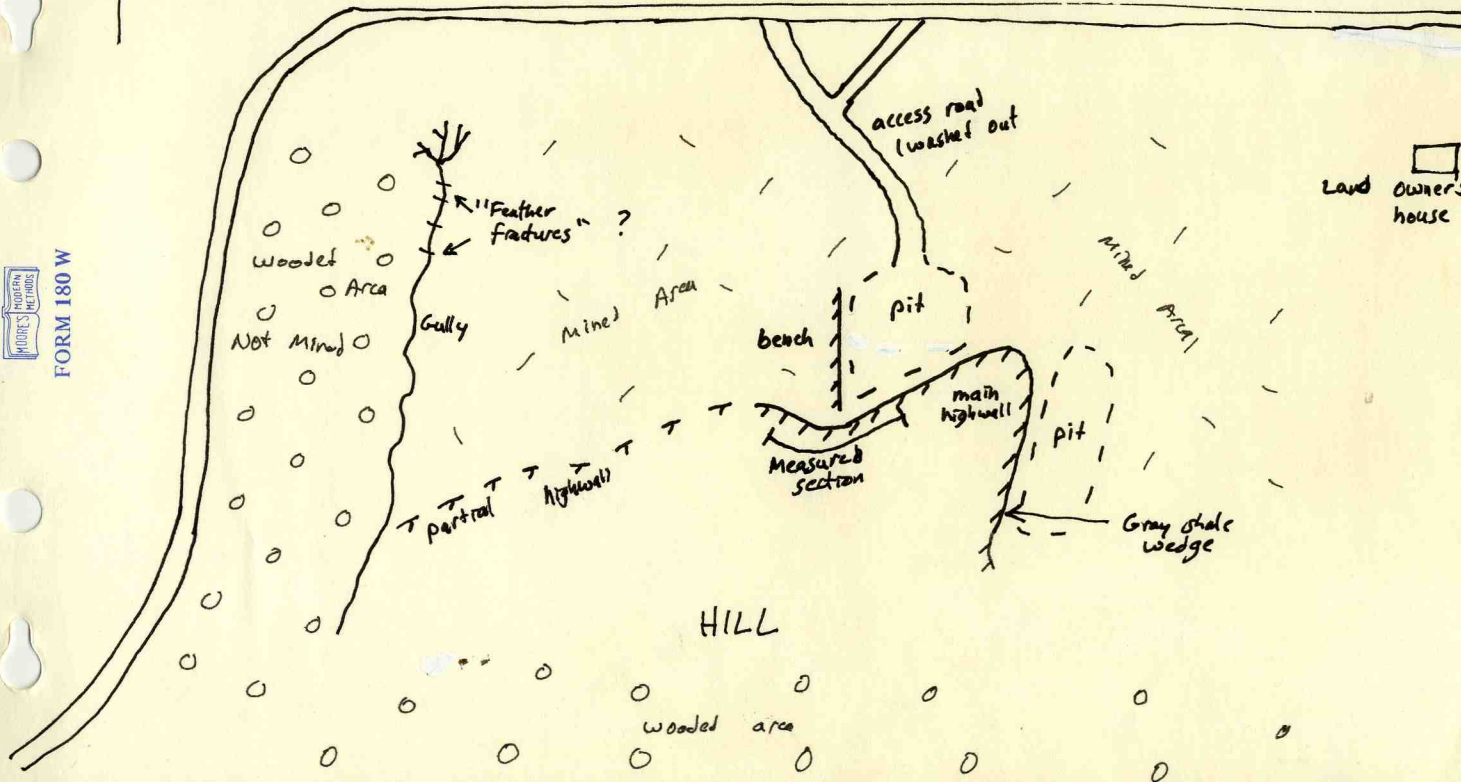
Measured section

Gray shale wedge

part road
highwell

HILL

wooded area



FORM 180 W



John C. Moore Corporation, Rochester, N.Y. 14604



FORM 180 W

(2)

and slightly uneven. This appears to be a river channel deposit.

Note fracture surfaces trending $020/70^{\circ}$ E, $025/70^{\circ}$ E, and $160/90^{\circ}$. No slickensides or displacement of layers.

- 8' Shale, medium-dark to dark gray, weathered brownish, smooth, thinly laminated, contains disseminated carbonaceous debris, thin sandy laminae, and scattered siderite nodules. Also contains a fair amount of gypsum; I found a perfect crystal more than an inch long weathered out. Fairly sharp contact.
- 0.5' Shale, dark gray to black, soft, poorly bedded highly carbonaceous, pyritic, grades into:
- 5.1' Shale, black, smooth, fissile, well-jointed; joints trend 045° and 100° , the 045° set more prominent. Contains scattered septarian concretions about 1 foot in diameter near middle of unit. Evidently overlies a coal horizon, but no coal is present. Sharp contact:
- 0.7' Claystone, olive gray, very soft, mottled, finely carbonaceous, grades with irregular contact:
- 1.3' Limestone, medium gray, fine grained, sandy, nodular with very irregular elongate nodules in a matrix of dark gray, poorly bedded, firm calcareous shale. Grades into:
- 5.7' Claystone, dark greenish-gray, mottled with flecks of red, fairly soft, silty, carbonaceous. Incipient bedding in lower part. Contains numerous sandy limestone nodules and many slip-fractures. Large inclined coaly partings, probably coalified roots, are common. Sharp contact:



FORM 180 W

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- 1.1' Limestone, medium-dark gray, weathered buff to cream, silty, argillaceous, forms one massive bed but contains thin partings near base. Appears brecciated or fragmental on weathered surfaces, with angular fragments in a fine-grained matrix. Unit varies in thickness. Not noticeably fossiliferous. Sharp contact:
- 3.2' Shale, dark gray, soft, smooth, deeply weathered, non-resistant layer. About 1 foot below top are occasional large ovoid masses of limestone similar to that above. These range up to 1.5' X 0.5'. Sharp contact:
- 0.3' Coal, normally-bright-banded with bony lenses, especially near top. Forms an undulating, lenticular bed ranging from 0.6' thick to nearly zero. Sharp contact:
- 0.7' Limestone, medium gray, fine-grained, fairly hard, nodular or lenticular with shaly matrix, in most places coal rests directly on thin layer of shale or claystone. Irregular contact:
- 2' Shale, medium gray, very soft, poorly bedded, becomes first silty, then sandy downward, grades into:
- 3' Sandstone, light gray, weathered buff with greenish cast, fine-grained, argillaceous, porous, friable, upper part very soft, becomes firmer downward, weathers to smooth, rounded surface. Bedding massive but contains fine internal lamination with very well-developed, large-scale, low-angle cross-bedding. Unit thickens eastward to about 5 feet at the



FORM 180 W

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NE corner of the highwall. Looks like another river channel deposit. Sharp lower contact:

- 12' Siltstone, grayish, weathered buff to greenish to light orange, thinly bedded, shaly, rather soft, carbonaceous. Contains numerous hard sandy lenses and nodules, also siderite nodules. Grades into:
- 6' Shale, dark gray, smooth, platy, fissile, carbonaceous, becomes almost black near base and highly carbonaceous. Poorly exposed on lower part of highwall; bottom contact (presumably to the coal that was mined) covered with mud and debris.

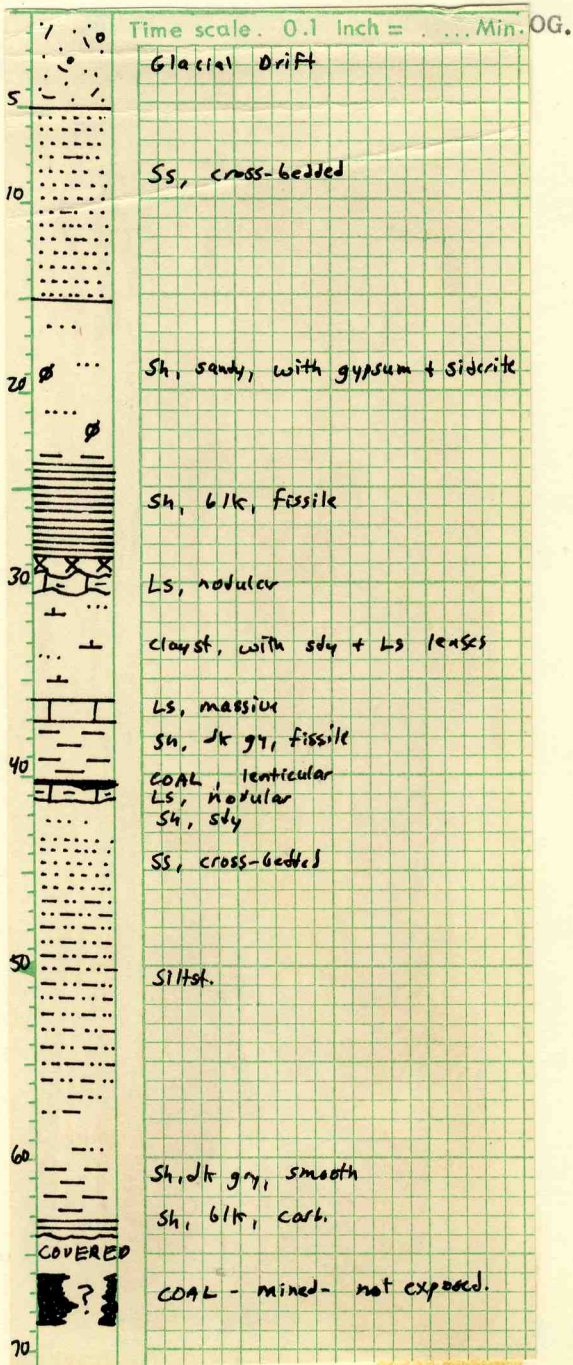
All the above units appear to be continuous along the NW-facing highwall, though they vary in thickness. The black shale probably is most uniform in thickness. Both channel sandstones thicken to the east, and all the limestones are lenticular.

On the east-facing highwall an important stratigraphic change takes place above the thin coal seam. Along most of this stretch the coal is overlain by dark gray shale like that in the measured section. Where not deeply weathered this shale appears almost black, smooth, and somewhat fissile. It contains occasional oval concretions and resembles the typical Pennsylvanian black "slate".

Near the south end of this east-facing highwall an abruptly thickening wedge of soft medium gray shale intervenes between the thin coal and the dark shale. Within about 12 feet laterally the gray shale attains a thickness of about 2 feet and it holds fairly constant thickness southward until it is lost to view. The black shale and limestone above are strongly arched but do not change in thickness. The nodular claystone thins above this arch, and higher



FORM 180 W





FORM 180 W

(5)

units appear not to be affected. See sketch (over).

The contact between the dark shale and the gray shale wedge is very sharp but I cannot tell if it is conformable or not.

On re-examination of the NW-facing highwall, a similar but thinner and less abrupt wedge of gray shale is found above the thin coal.

This situation is analogous to the pods or wedges of Energy Shale above the No. 6 Coal, and of Dykersburg Shale above the No. 5 Coal. I would speculate that the soft gray shale is a crevasse-splay deposit and the dark shale and limestone are marine units.

Extending westward of the main highwall is a series of lower highwalls exposing rock units in the upper part of the section. It appears that this area was benched to prepare for overburden removal that was never completed. The coal was apparently mined farther downhill, and the pits partially graded over with spoils. The area east of the main highwall has also been graded over, but the surface is all broken rock with nothing growing. It is a very poor attempt at reclamation. The lady who owned the property also complained about the poor restoration of the surface. It seems surprising that so recent a mining operation got away with such shoddy reclamation.

Westward in the benched area, it appears that the thin coal seam pinches out. The capping limestone is well-developed up to 2 feet thick, and underlain by a medium gray, silty shale with thin bands or inter-laminations of darker gray near the top. The dark fissile shale and the coal are not seen, but the nodular limestone that lies below the coal position appears just about as it does in the measured section.

A narrow, steep-sided gully runs along the west border of the mined area between graded spoils and unmined territory. An incomplete rock section is exposed in the bottom of the gully. The mined coal is not present, but I believe the gully exposes rocks below the coal. It is difficult to make correlations, and I did not measure a section.



FORM 180 W

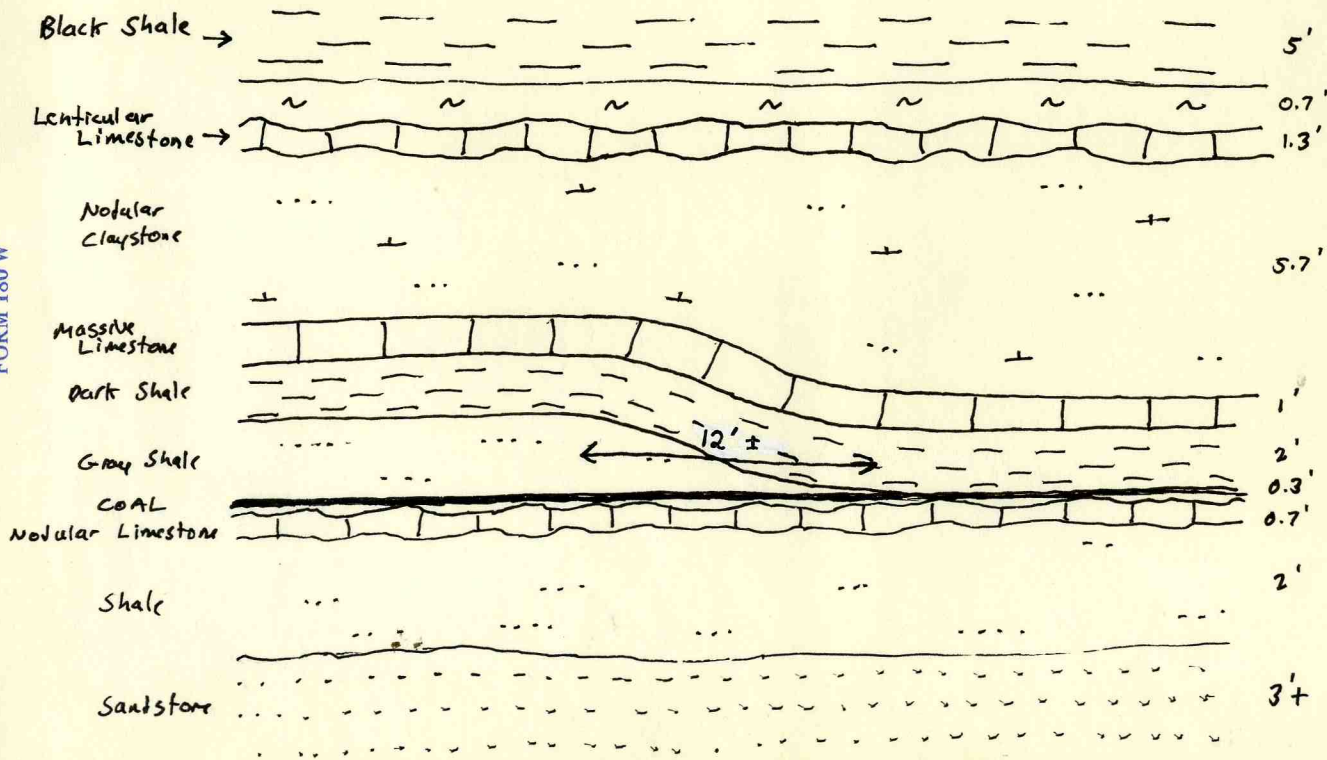
(6)

Near the lower end of the gully, where it spills out onto flats, it cuts through gray silty shale that shows some peculiar structures. In several places the bedding of the shale appears to be sharply folded and broken up. In places the bedding appears to stand vertical. The exposures are poor and very near the weathered zone, and I am inclined to think that these are large "feather fractures". I have seen similar structures in shales in Alabama and eastern Kentucky. Some of these extended 30-40 feet up mine highwalls and had the appearance of clastic dikes with bedding of the shale turned vertical. But without more complete exposures here, I cannot be sure that these are "feather fractures".

Other possibilities would include tectonic faults or flexures, and glacial drag. This area is near a known fault zone with the main structures running roughly NE (Flourspar district faulting) and also possible offshoots of the Cottage Grove Fault Zone. Glacial drag seems remote but I throw it in as a possibility. Spectacular effects have been observed occasionally, as in the Peoria-Canton district.

This mine presents an excellent exposure of lower Pennsylvanian rocks and is probably deserving further study, particularly on the lower part of the section and the supposed "feather fractures."

Sketch of gray shale wedge on E-facing highwall





FORM 180 W

WESTERN MINING CO. (Abandoned strip mine)
NE $\frac{1}{4}$ SE $\frac{1}{4}$ Sect. 34 10S-4E Williamson County, Ill.
Visit by John Nelson and John Popp 9/14/77

Visit mainly to sample coals for spore analysis by Russ Peppers. We still do not know which coal seam was mined here.

Sampled the thin coal seam in the highwall (see measured section of 8/24/77). Also sampled coal from a pile in the pit. This presumably represents the coal which was mined. No natural exposures of this coal are available, except for a possible partial exposure in an eroded ravine along the haulage road.

Here is a deeply weathered layer of coal several inches thick. It contains numerous branching clay dikes and veinlets, most of which trend roughly ENE. The coal is overlain by brownish highly carbonaceous claystone and is underlain by soft laminated shale containing inclined coal stringers (rootlets). Believe this may be the lower bench of a split coal seam.



View looking west at part of highwall of the abandoned Western Mining Co. pit. At the level of John Popp's shoulders is a thin coal bed that lies horizontal. A wedge of gray shale pinching out from left to right overlies the coal. The arching of the overlying black shale and limestone above the gray shale wedge is clearly shown. A second limestone layer higher in the photo is not affected and lies horizontal.



FORM 180 W

Western Mining Company -- Abandoned Surface Pit
Williamson County
September 14, 1977 -- J. Nelson, J. Popp; notes by Popp

We visited the abandoned pit of the Western Mining Company west of Stonefort (34, 35, 10S, 4E, Williamson County). The pit has been abandoned approximately 3 years. We sampled a thin upper coal in the highwall, and took grab samples of the coal mined in the pit (although the coal was not exposed).

This exposure is not much to visit in consideration for stops for the IX-ICC Fieldtrip. Of course it would be nice to have a correlation for the coals.

Back in the office Russ Peppers stated that the coal mined was probably the Mt. Rorah Coal as correlated with samples taken and analyzed near Stonefort. The Mt. Rorah Coal crops out near the base of the hill on the edge of the north side of Stonefort, and the Wise Ridge (Stonefort) Coal crops out above the Mt. Rorah on the hill side.