

Form 180 Blue

1942

Harrisburg Coal Co. Mine # 1

HARRISBURG COAL CO.  
MINE # 1

Mine Index No. 947  
County No. 1810  
Coal Report No. L-195

WILLIAMSON COUNTY

D1

	Sec. 27
	T. 9
	R. 4
	Index No.



Mine originally operated by: (1)

Date

Harrisburg Coal Co., Marion, Ill.

Original name or number: No. 1  
Illinois Coal Report 1949 p. 46

LATER OPERATORS

Date	Operator	Name or No.
2		
3	HARRISBURG Coal Co.	
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

\*Also owners

#See ownership sheet

Railroad, Wagon, Strip, Idle, Abandoned

Slope

IDENTIFICATION

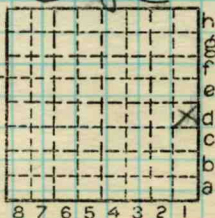
County No. 1810

Coal No. 5

Coal Report No. L-195

Quad.

County Williamson



Sec. 27

T. 9 N. S.

R. 4 E. W.

Index No.

COAL MINE OPERATOR

Arlic King - Rt. #3, Marion  
1961-45,356T

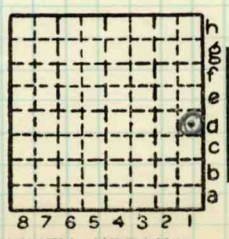
Slope

Harrisburg C.C. #1  
#5 Coal

By \_\_\_\_\_ Date \_\_\_\_\_

Quad \_\_\_\_\_ Part \_\_\_\_\_

County Williamson #1810



Sec. 27  
N.  
T. 9 S.  
R. 4 E.  
W.  
Index No.  
L-195



Period		Tons	
Mo.	Day Year	Mo.	Day Year
	1949		804
	50	2	962
Shipping Mine	51	12	428
	1952	7	676
	53	23	574
	1954	37	961
	1955	27	012
	1956	32	717
	1957	40	749
	1958	50	164
	1959	43	552
	1960	46	994
	1961	45	356
	1962	42	309
	1963	90	090
	1964	67	002
	1965	73	915
	1966	83	107
	1967	75	589
	1968	85	198
	1969	87	882
	1970	106	195
	1971	88	466
	1972	64	106
	1973	69	447

SUMMARIES

No. to No.

1974 99 803

Railroad, Wagon, Strip, Idle, Abandoned

IDENTIFICATION

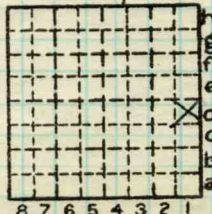
County No. 1810

Coal No. 5

Coal Report No. L-195

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County Williamson



Sec. 27

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COAL MINE—PRODUCTION

ILLINOIS GEOLOGICAL SURVEY, URBANA

Period				Tons	
Mo.	Day	Year	Mo.	Day	Year
		1975		104	248
		1976		73	047
		1977		84	623
		1978		23	065

HARRISBURG COAL CO.  
Reported abandoned June 1979.

SUMMARIES

No. to No.

Railroad, Wagon, Strip, Idle, Abandoned

Sec. 27

IDENTIFICATION

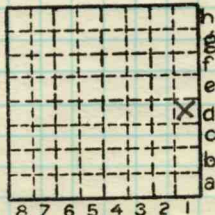
County No. \_\_\_\_\_

Coal No.  5

Coal Report No. L-195

Quad.

County WILLIAMSON



T. 9

R. 4

Index No.

HARRISBURG COAL COMPANY      WILLIAMSON COUNTY

Visit by John Nelson 9/21/77

This slope mine in the Harrisburg (No. 5) Coal is currently the smallest underground mine in Illinois, with only one working unit. It is owned by United Energies, Inc. of West Frankfort, a small firm that operates only one other mine (the recently re-opened \* Parton Mine just north of Crab Orchard.)

The coal seam averages about 4'3" high and is 70 feet deep at the slope. The depth generally increases northward and away from the slope.

The mine was opened in 1948 and has operated since then with only one working section. Originally the coal was hand-loaded and hauled by mules, the only mechanical equipment being an undercutting machine and a post drill. Today the mine is fully mechanized, but is still primitive compared to the larger mines in the state.

The coal is undercut with a Joy cutter and 8 shot holes 10 feet deep are placed with a Long-Airdox drill. Four evenly-spaced holes are drilled across the face at the roof line and four more are drilled about 2 feet above the floor. Shooting is by Airdox, as required by state law. Shooting is done on shift and holes are fired one at a time, beginning with the center bottom holes, then center rib, upper center, and upper rib, in that order.

The loading machine and shuttle cars are made by Joy. Two of these buggies are six-wheelers hinged in the middle to negotiate turns more easily. Rooms are 26' wide with pillars on 50' centers.

The buggies run to a ramp and dump into the pit cars. The roof has to be shot down at the loading point to make room. The pit cars hold three tons each and there are seven cars in a trip. The locomotives are small and ancient; said to date back to 1920. The track is single line and there is a trolley cable. Harrisburg Coal Co. is the last mine in Illinois to use rail haulage for coal, and they are planning to change over to belt haulage soon.

\* First production in 1978. Mine was opened as Morris Coal, Inc. No. 7. J.N. 11/78.

The cars are hauled to the bottom and then are pulled up the slope one at a time by cable. They are dumped at the top into the rickety wooden tippie. The slope is barely wide enough for the cars so there is no room to walk the slope while hoisting is in progress. Men ride the slope, and to and from the working place in empty coal cars.

The mine formerly had its own cleaning plant but now the coal is trucked to the old Barbara Kay Mine just north of Crab Orchard where it is sorted and washed. Much of the output is sold at retail for domestic use, and some is sold on contract. 1976 production was a little over 73,000 tons.

A complete cycle at the working face (undercutting, drilling, shooting, and loading) takes about 3 hours under ideal conditions and results in about 30 tons of coal. Five faces are worked in rotation. Recovery is said to average 60%. The mine experimented with pulling the pillars; according to Andy Jones, examiner, they pulled all of the pillars leaving no stubs at all. This was halted after a man was killed and covered up in a fall and, so it is said, his body was never recovered.

Roof bolting is done with a single boom Acme bolter. Bolts are normally installed 5 wide in a room or entry and no header boards are used; just a steel plate about 4" square. Normally 30" bolts are used, but in areas of rolls or bad top 60" bolts are installed. This requires joining two 30" bolts as clearance is usually less than 60". In most places the roof is excellent and no props or other auxiliary roof supports are needed.

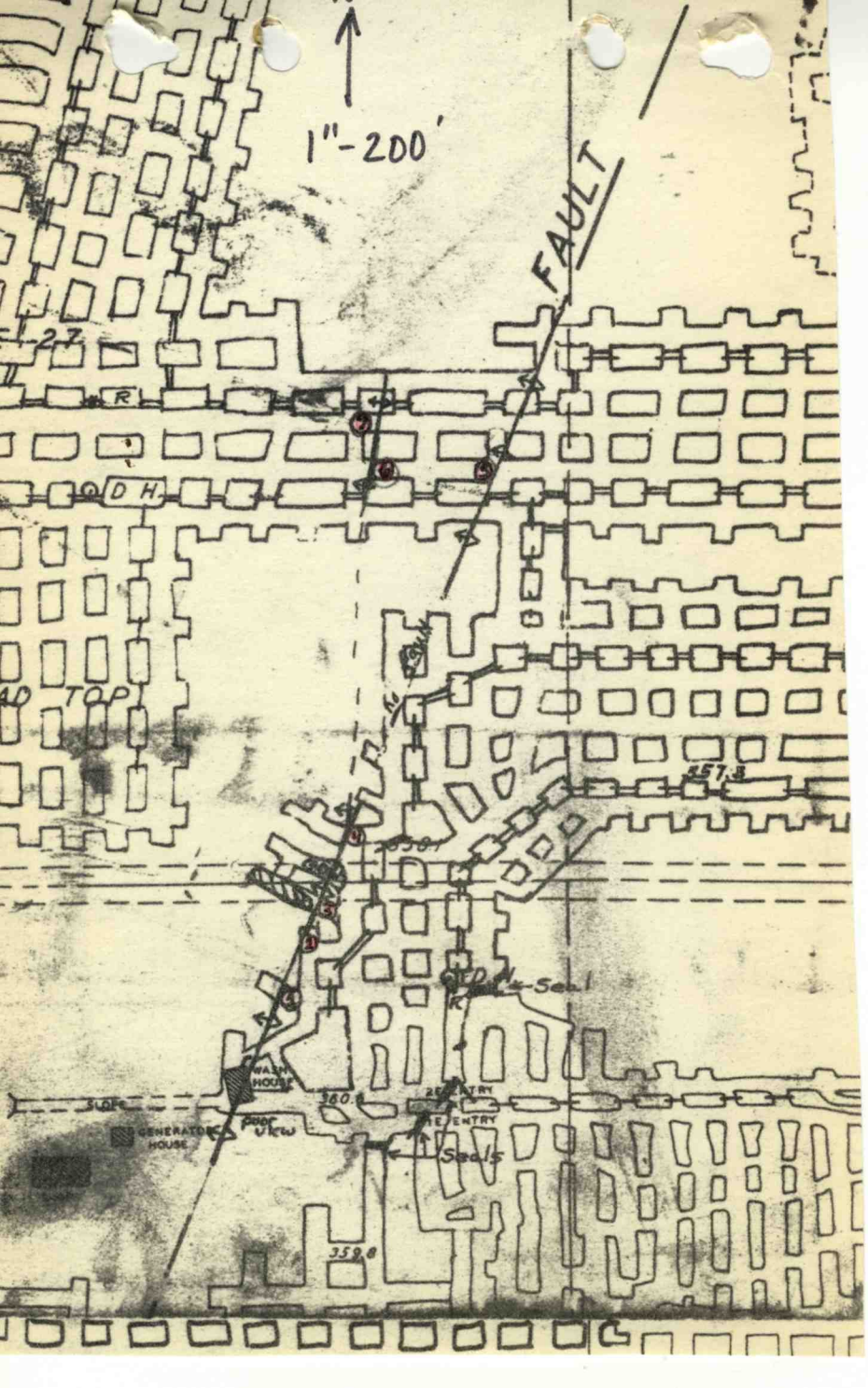
The main reason for visiting this mine, aside from general interest, was to examine the fault shown on company maps crossing near the slope bottom. This is one of three fault systems shown on the map; all trend N-S or slightly east of north. The fault near the bottom is the only one currently accessible.

#### Numbers Refer to Locations on Map

- 1.) Fault as seen here is a low-angle reverse fault trending about 045/20 SE with the SE block thrust over

1" = 200'

FAULT







the NW block. Vertical displacement at the top of the coal is 0.75' on the north rib and 1.1' on the south rib. Slickensides on the fault plane trend in dip direction. The fault cuts all of the exposed coal seam and roof.

Along the fault plane is a zone of crushed coal an inch or more wide. The fault plane splits and some branches appear to die out along bedding planes.

The roof consists of shale, medium-dark gray, moderately hard, well-bedded, finely silty, and finely carbonaceous. It forms excellent top away from the fault zone though there are a few narrow open fractures parallel with the fault.

2.) This room barely mined into the fault. A low-angle shear plane with pulverized coal is visible near the floor at the face. Impossible to tell much here.

The fault is said to have seeped water when first mined into, but now it has dried up. However, there is much standing water in this part of the mine blocking access to much of the old works.

3.) Room driven across fault. All of the roof below the fault plane has fallen out as far back as I can see. There is a zone of crushed and contorted shale along the fault plane and this turned to mud making a very bad plane of weakness in the roof.

The coal seam is barely displaced here but effects of shearing and folding are obvious. See sketch. Note in sketch low-angle fault antithetic to main (SE-dipping) fault.

4 ) Fault not seen in this area. According to Andy Jones it has turned to a due north heading and the rooms were not driven far enough west to intersect it. There is said to be bad top at the faces of the rooms, which are inaccessible due to gob and standing water.

I believe it is also possible that the fault has died out, and possibly another one was struck near the faces of the rooms.

stop 1 - NE Rib

SE

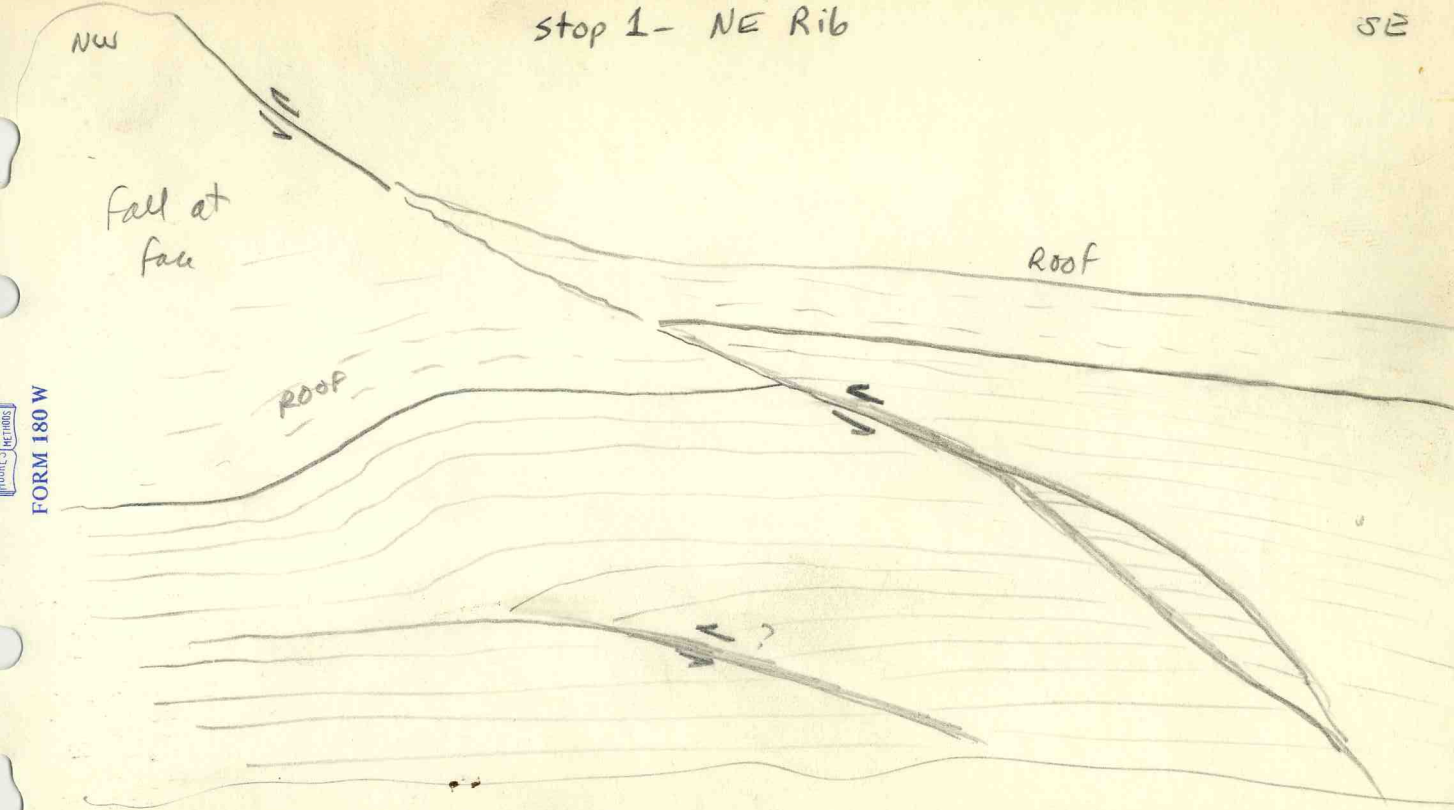
NW

Fall at  
face

Roof

Roof

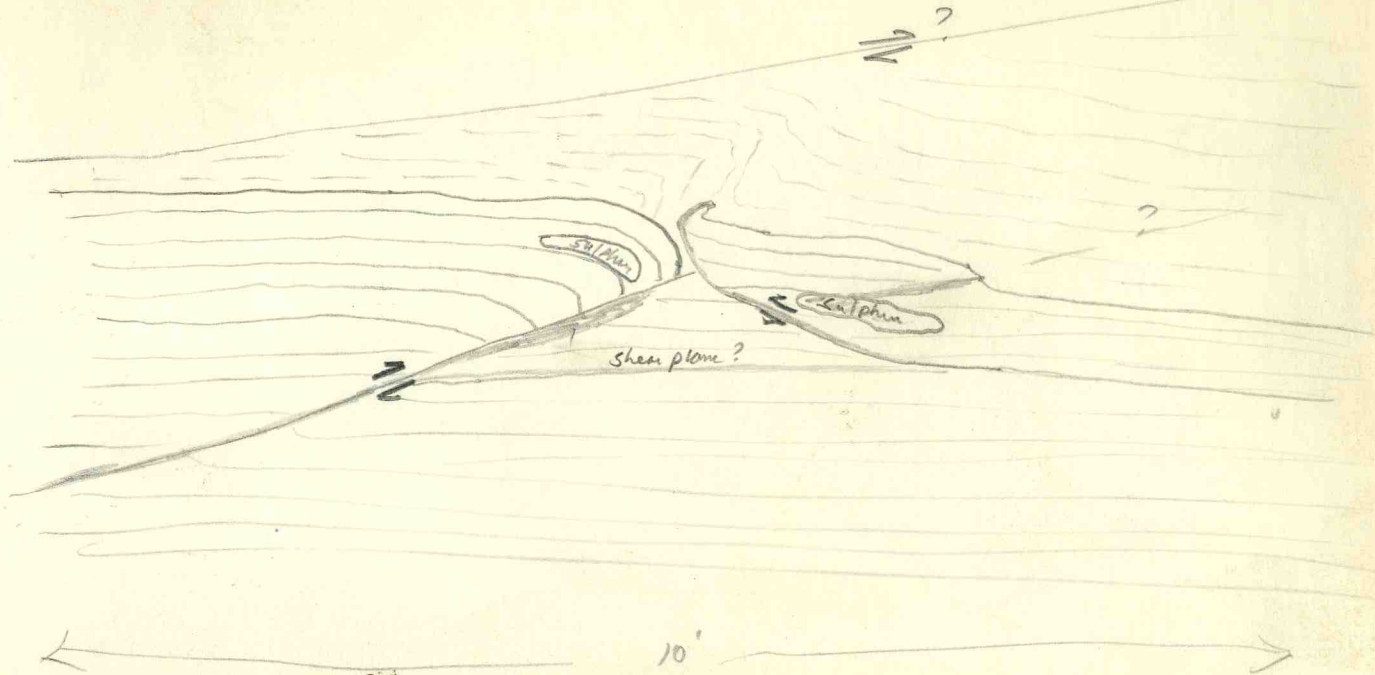
MOORE'S  
PAPER  
FORM 180 W



ESE

stop 3 - S Rib

WNW



5.) Faults here appear as a zone of multiple fractures. To the north the crosscut has fallen in along a series of fractures trending 015-025. All of these dip westward at moderate to almost vertical angles. It appears that some may curve sharply, becoming horizontal. The fractures are not easy to trace in the roof shale because weathering has removed the slickensides.

West of the intersection is a flexure and a small reverse fault in the coal (see sketch). The thrusting again is toward the west. Note in the sketches that the fault plane and fold axes are steeper than those seen at previous stops. This view is of the south rib. There is a shallow reverse fault on the north rib, but it is poorly exposed.

6.) Another fault zone about 200' west of that at Stop 5. Mostly low-angle to horizontal shearing is seen, with practically no vertical offset. Difficult to determine directions of movement. See sketch.

7.) No disturbance in coal can be seen on this entry. However, there is a very shallow (about 5°) west-dipping zone of sheared rock in the roof. This may merge with the bedding planes farther west-very difficult to tell.

8.) (See second map) Feature indicated as 3' fault on company map actually is a "roll" in the gray shale roof. There are numerous parallel N-S slips in the roll and the coal splits on both east and west, with splayed interfingering of coal and roof.

This roll becomes shallower in the entry to the south and is present as a broad, gentle swell in the roof along the track entry. It is definitely not a tectonic feature like the faults described earlier.

Similar rolls, generally trending N-S or thereabout were seen in the face area about 300-400 feet north of here. These create problems with mining and roof control.

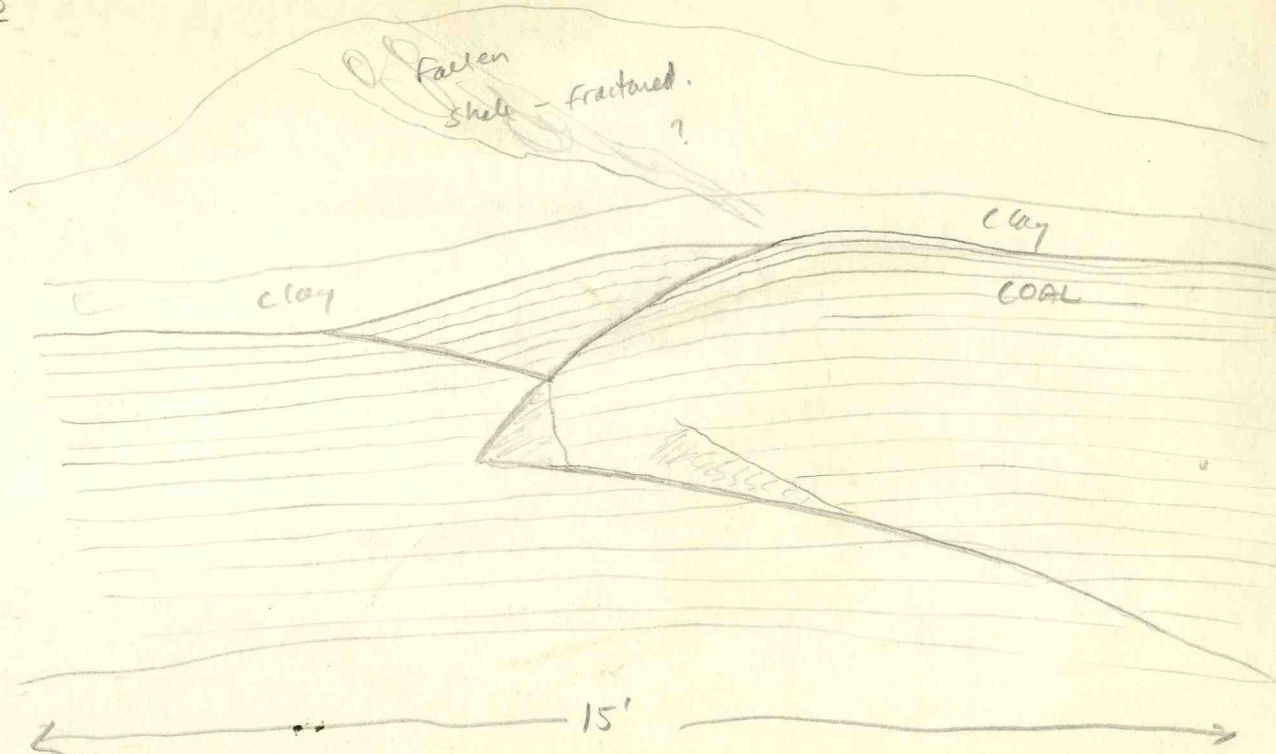
stop 5 S ~20' W



Stop 6 Looking S

W

E



According to Andy Jones there was minor splitting of the coal in the south works and the overburden thickness decreases southward. The roof throughout this mine is gray shale with black "slate" 15-20' up. The No. 6 Coal is variable over the property. In some places it was thick and was strip mined. Elsewhere it has been removed by erosion. Near the slope and in some drill holes the No. 6 is said to be very thin or absent but overlain by thin limestone. I cannot determine what type of disturbance caused this reported thinning of the coal.

In the face area the coal measures 4.3' with cleat trending 060 and 142. There are occasional pyrite lenses in the coal, mostly near the top. The roof is hard gray shale as described at Stop 1 and forms good to excellent top except for minor slabbing and falls along "rolls". Occasional large coalified tree trunks are seen in the immediate roof. The floor is soft, olive gray claystone.

### CONCLUSIONS

This mine is located well south of the Cottage Grove Fault which runs roughly east-west at Crab Orchard. South of the main fault are numerous branch faults, most of which trend NW or NNW. However, a few faults or zones of disturbance shown on maps of old mines trend due N-S or slightly east of north, and the fault described here is one of this type.

Sahara No. 21 has a fault running due N-S which is very similar to the fault seen today. The fault in Sahara consists of a series of small, mostly low-angle reverse faults dipping both east and west. This has created a zone of bad top but no major displacement of the coal. See notes of this taken 5/27/77.

Most of the other N-S trending faults shown on maps of abandoned mines in this area apparently had



little or no displacement but represented zones of bad top severe enough to affect mining plans. On some maps no faults are shown but there are clear lines or belts of N-S disturbance as indicated by unmined areas or regions of peculiar mining plan. Among the mines showing this form of N-S disturbance are Sahara No. 5, Blue Bird Coal Co. No. 6, and Wasson Coal Co. No. 2, all abandoned. I speculate that all of these may have been zones of low-angle shearing producing bad roof but no significant displacement of the coal seam.

At this time I am not sure whether these N-S faults or disturbances relate to the Cottage Grove Fault or to some other tectonic feature. I see a difficulty in obtaining more data on these as they apparently are not generally recognized or mapped as faults, and the effects are not easy to discern in the few exposures that exist.

NOTE: COMPLETE ORIGINAL MAP  
OF MINE IS FILED IN MAP  
ROOM - 4103.WS2 IS.1-184.  
SHOWS ENTIRE WORKINGS OF MINE.