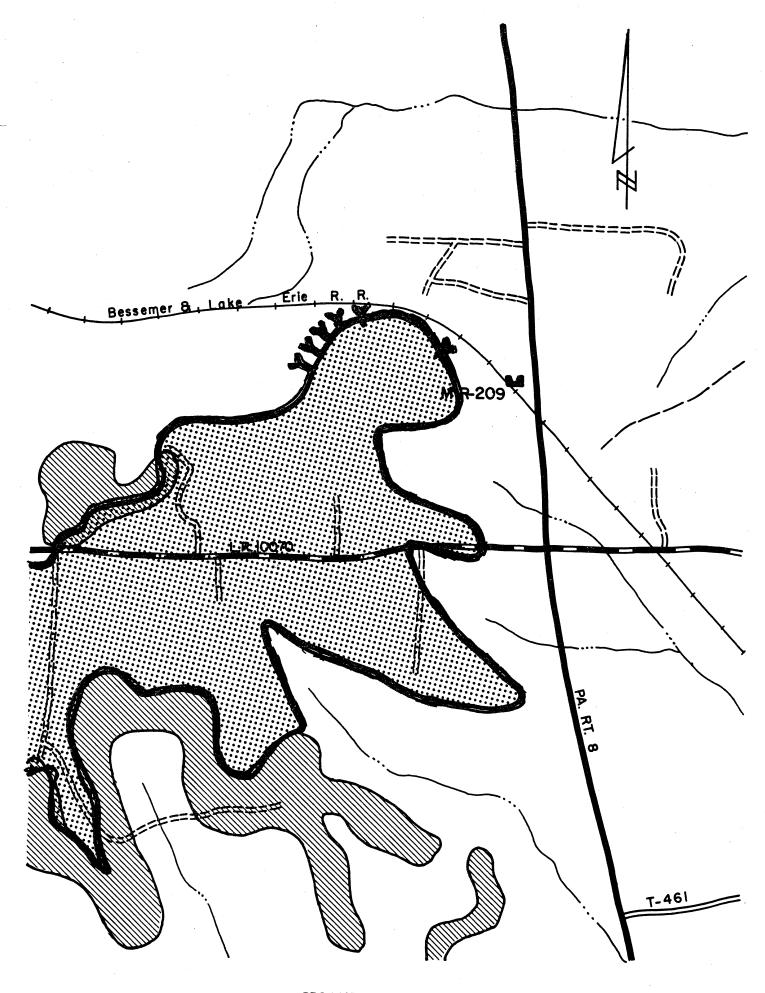
Location Forestville Township Mercer County Butler

Priority Rating 3

This area includes several deep mine openings associated with the Barnes Mine which operated in the Middle Kittanning seam. The coal seam is relatively level in this vicinity. The water discharge is flowing through Weir MR 209 into McMurray Run. This discharge produces an average acid load of 10 pounds per day and a maximum load of 430 pounds of acid per day. The proposed abatement project consists of surface sealing 6 deep mine drifts in the area.

Deep Mine Surface Seals	\$3,000
Design, Supervision and Inspection	<u>1,000</u>
Estimated Reclamation Costs	\$4,000



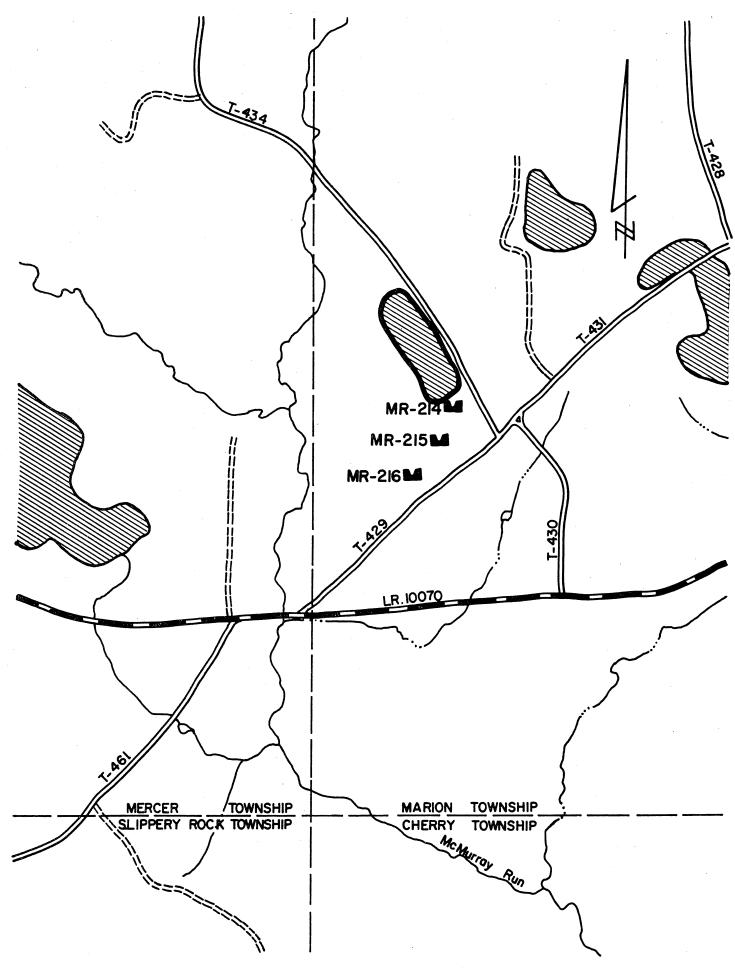
PROJECT MAP NO. 15
DEEP MINE NEAR FORRESTVILLE

Location Forestville Township Marion County Butler

Priority Rating 3

This area consists of a small strip mine in the Clarion seam of coal which has not been backfilled or planted. The discharge flows through MR 214 into McMurray Run. This discharge has an average acid load of 17 pounds per day and a maximum acid load of 60 pounds per day. The proposed abatement project consists of strip mine restoration for an estimated 15 acres of affected area.

Strip Mine Reclamation	\$15,000
Design, Supervision and Inspection	<u>2,000</u>
Estimated Reclamation Costs	\$17,000



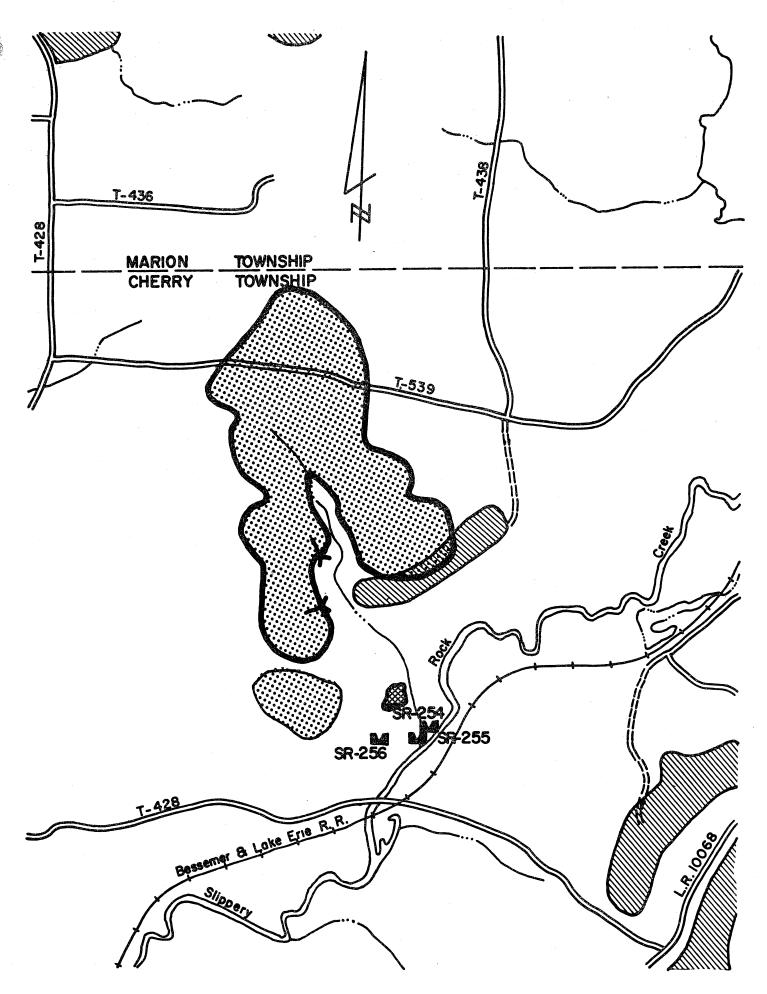
PROJECT MAP NO. 16
STRIP MINE NEAR FORRESTVILLE

Location Atwells Crossing Township Cherry County Butler

Priority Rating 3

This area consists of a small deep mine in the Clarion seam with the associated refuse pile. The discharges flow through Weirs SR 254, 255 and 256 into Slippery Rock Creek. In 1969 these discharges had an average acid loading of 42 pounds per day and a maximum acid loading of 220 pounds per day. The proposed abatement project consists of hydraulic deep mine seals for two entries and a 7,000 cubic yard refuse pile reclamation.

Deep Mine Hydraulic Seals	\$40,000
Refuse Pile Reclamation	14,000
Design, Supervision and Inspection	6,000
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Estimated Reclamation Costs	\$60,000



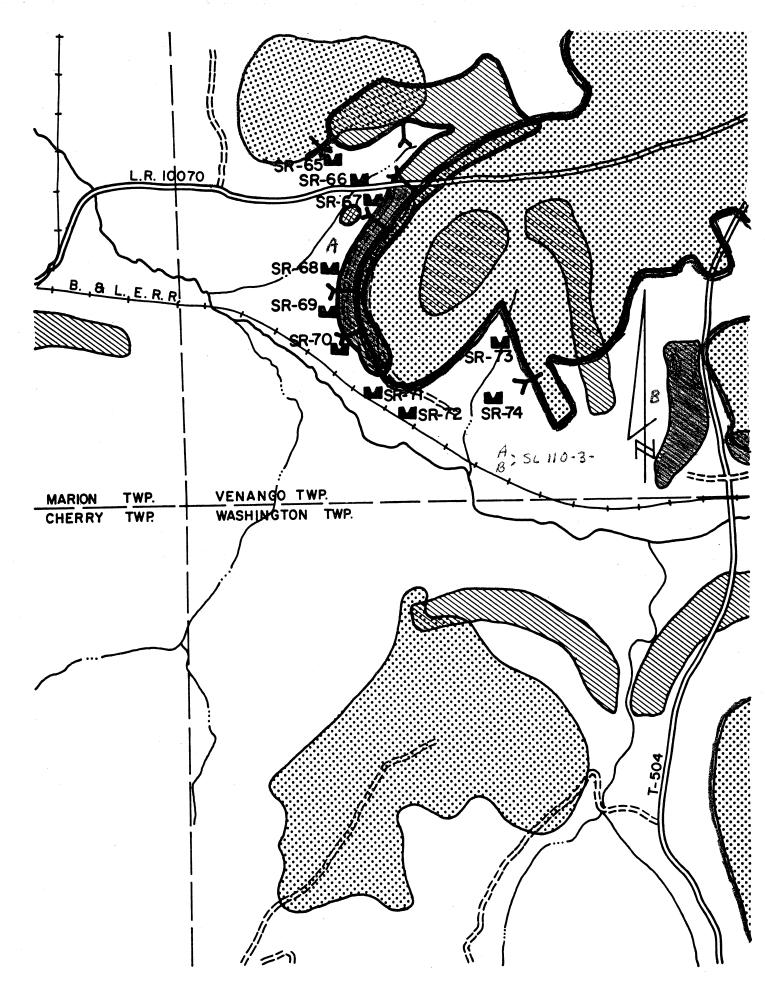
PROJECT MAP NO. 17
DEEP MINE & REFUSE PILE NEAR ATWELLS CROSSING

Location Keenan Township Venango County Butler

Priority Rating 2

This area comprises several interconnected deep and strip mines in the Clarion seam of coal, most of which are in State Game Lands. The discharges flow through Weirs SR 65 to SR 74 into Slippery Rock Creek. These discharges have an average acid loading of 113 pounds per day and a maximum acid loading of 220 pounds per day. The proposed abatement work consists of hydraulic sealing for 8 deep mine entries, grout curtain installation along the applicable highwall and outcrop areas, strip mine restoration for an estimated 50 acres and a 5,000 cubic yard refuse pile removal project.

Deep Mine Hydraulic Seals	\$160,000
Grout Curtain Installation	40,000
Strip Mine Reclamation	75,000
Refuse Pile Reclamation	5,000
Design, Supervision and Inspection	<u>25,000</u>
Estimated Reclamation Costs	\$305,000



PROJECT MAP NO. 18 KEENAN AREA

Location Keystone Mine Area Township Washington County Butler Venango

Priority Rating 1

This area contributes the largest acid load off any of the project areas. The discharges flow through Weirs SR 76, SR 80 thru SR 82, and SR 84 thru SR 97 into Slippery Rock Creek. During 1969 these discharges had an average production of 1,562 pounds of acid per day and a maximum loading in the range of 2,900 pounds of acid per day. The following deep mines in the Clarion seam of coal are located in the project area: Keystone #1, Keystone #2, Wildwood, Erie #1, Erie #2, Ferris #2, Spring Valley, Penn Brook and Hamilton #3. In addition to these deep mines there are several strip mines which have intercepted the deep mine working, associated refuse piles and a large flowing well known locally as 'Big Bertha'. The proposed abatement work consists of hydraulic sealing of 10 deep mine entries, plugging the Big Bertha well, extensive grout curtain installation along the applicable highwall areas, an estimated 180 acres of strip mine restoration and an estimated 15,000 cubic yards of refuse pile reclamation.

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Deep Mine Hydraulic Seals	\$200,000
Well Plugging	15,000
Grout Curtain Installation	300,000
Strip Mine Reclamation	180,000
Refuse Pile Reclamation	30,000
Design, Supervision and Inspection	<u>75,000</u>
Estimated Reclamation Costs	\$800,000

