## WESTERN MIDDLE FIELD—NOTES OF REVIEW OF MINE MAPS

Primrose Map \# 2786—Seven Foot Vein—shows extensive workings crossing 60 ft . barrier pillar, lowest elevation found 1069 ft .

Primrose Map \# 2794—Buck Mountain Vein—shows extensive workings and "water course" crossing the 60 ft . barrier pillar. /the water course goes from elevation 1293 ft . on east side to 1270 ft . on the west side.

Primrose Map \# 2787 Primrose Colliery Bottom Split of Buck Mountain Vein -scale 1" $=400 \mathrm{ft}$. Map shows numerous interconnected collieries: Park No. 1, Park No. 2, near the breaker, Park No. 7, easternmost section of the complex, Park No. 3, Park No. 4, Vulcan Slope and Primrose Shaft. The Vulcan slope goes down 7 levels from elevation 1430 to elevation 350 ft . at the bottom. The map shows that Vulcan, Park No. 1 \& 2 and Primrose are not only interconnected without barrier pillars but are one and the same with different names.

Vulcan Colliery Map \# 3530—Bottom split Buck Mountain vein; this map shows what appears to be an intact barrier pillar with no implication of flow to Tunnel Ridge Colliery.Most of the gangways and third mined breasts terminate at this pillar.

Tunnel Ridge Colliery Map \# 3521—shows only surface topo and location of slope (38 degree pitch), hoist house and U.S.C.G. benchmark (1959). The benchmark is in the northwest corner of intersection LR 53035 and LR 53119 ( Frackville to Morea). Benchmark elevation 1642.63 ft .

Tunnel Ridge Map \# 3520—shows what resembles barrier on the east end, but completely mined through. North center of map shows the main surface structures and a "drift level tunnel" and an adjacent "water level tunnel"; everything third mined.

Tunnel Ridge Map \# 3524—shows Elmwood slope and engine house on the south dip and Lykens Valley tunnel on the north dip.

Tunnel Ridge Cross-Section \# 3519—sepia print located 1850 east of main hoisting slope through Schuylkill No. 4 underground slope with elevation -690 ft. west of Elmwood Tender Slope and -670 ft . east of slope.

Tunnel Ridge Map \# 3595 - shows drift level tunnel and water level tunnel. This map also shows excellent surface features including Main St., Harrison St. and Church St. within Mahanoy City, and surface boundaries of the Slavonian Lutheran Cemetary, St. Fidels German Catholic Cemetary, St. Casmir Roman Catholic Cemetary, St. Josephs Congregational Lithuanian Cemetary and St. Peter and Pauls Cemetary on the south side of the township road to Locust Valley , and St. Canicus Irish Catholic Cemetary and

German Protestant Cemetary on the north side of the road. There appears to be an intact barrier pillar, 120 ft . wide underlying the German Protestant Cemetary.

Tunnel Ridge Map \# 3585-Bottom Split of Mammoth Vein ; map shows south dip and north dip workings down 3 levels and the start of a fourth level connecting the north and south dip workings. This map shows well developed surface features including a dump chute structure, engine house and fan. The barrier pillar between Tunnel Ridge and Vulcan Collieries is clearly delineated and does not show any breaching.

Tunnel Ridge Map \# 3597-workings in the Skidmore Vein, shows large breaker structure on the south dip side of workings; there appears to be a reservation pillar in this to allow only limited first mining and protect surface structures.

Tunnel Ridge Map \# 3583—Holmes and Top Split Mammoth Veins; May 26, 1903. This is a very good map with respect to surface features including streets in Mahanoy City and it clearly shows the barrier pillar on the eastern end of the colliery. On this map the Holmes workings intrude 70 ft . into 120 ft . barrier from the Vulcan side. The western barrier pillar is not breached; in southwest corner pillar is 225 ft .. wide at widest part. Note on map that pillar line adopted May 9, 1902; two breasts extend 80 ft . into pillar leaving 150 ft . intact.

Tunnel Ridge Map \# 3590—Lykens Valley No.2; eastern barrier pillar intact, no intrusions; 120 ft . wide western barrier pillar also intact.. Part of barrier pillar is 200 ft . wide.

Tunnel Ridge Map \# 3599—Lykens Valley No. 1 vein. This is a blueprint showing only a small portion of the workings; no barrier pillars in view.

Tunnel Ridge Map \# 3589 - Skidmore vein, May 28, 1908. This shows 3 lifts on the south dip Skidmore; third labeled St. Nicholas $3^{\text {rd }}$ lift; shows 5 lifts on the north dip. There is a 120 ft . wide barrier pillar with minor intrusions. This is a good map.

Tunnel Ridge Map \# 3588 -Lykens Valley No. 1 shows barrier pillar between Vulcan and Tunnel Ridge to be intact; also shows a "water level tunnel" on south dip near main colliery buildings.

Tunnel Ridge Map \#3592 - Buck Mtn. vein, May 9, 1914 There are Vulcan workings extending completely through the barrier pillar, with dates "rob April 47" on the north dip of the colliery. The map shows a distinct kink in the barrier, making several right angle turns. Map shows down to the $6^{\text {th }}$ lift, lowest elevation found 521.2.

Tunnel Ridge Map \#3582—Seven Foot Vein; linen original . Several small intrusions into barrier pillar exist, less than 10 ft , with one being 30 ft .

Tunnel Ridge Map \#3591—Buck Mountain Vein; shows land line in the center of the barrier. On the north dip lowest elevation found 381.1 near Elmwood slope. Buck Mtn. stripping 1919 - 1920 intruded 45 ft . into barrier on the Tunnel Ridge side.

Tunnel Ridge Map \#3584—Holmes and Top split Mammoth Veins; shows the south dip is down 5 levels , lowest elevation found 370.4 ft . The Tunnel Ridge and St. Nicholas workings connected by a tunnel.

Tunnel Ridge Map \#3593 -Little Primrose slope shown but very small amount of abandoned mine features.

Tunnel Ridge Map \#3587—Holmes and Primrose veins; shows only a small portion of the colliery; no barrier pillars shown.

Tunnel Ridge Map \#3581—Mammoth Top-Split and Middle Split veins; blueprint of central portion of colliery, no barrier pillars shown.

Tunnel Ridge Map \#3568-Top Split Mammoth vein; shows many cross-cut tunnels but no barrier pillars.

Tunnel Ridge Map \#3564—Seven Foot Vein; no distinguishing features.
Tunnel Ridge Map \#3660 -vellum cross section with important notation; 1125.3 ft . elevation of mine water pool April 22, 1971

Tunnel Ridge \#3655—Holmes and Top-Split Mammoth veins ; of little value to study except 70 ft . intrusion into 1120 ft . wide barrier.

Tunnel Ridge Map \#3656—Top Split Mammoth stripping through the barrier and extending 240 ft . east of the barrier.

Tunnel Ridge \#3628-Cross Section of a portion of the syncline.
Tunnel Ridge \#3630—Cross Section through Shenandoah and Mahanoy Basins; 3200 ft . east of Knickerbocker No. 4 main hoisting slope; on line of Schuylkill No. 3 Buck Mtn. slope; shows $4^{\text {th }}$ lift Elmwood gangway connected with the $3{ }^{\text {rd }}$ lift east gangway in Tunnel Ridge at 381.6 ft . elevation.

Tunnel Ridge \#3626-Cross Section No. 31 and No. 32 show Tunnel Ridge working on the north dip and St. Nicholas on the south dip side of the syncline. Water level 1180 ft . elevation in No. 31 and 1179.4 ft . in No. 32.

Tunnel Ridge \#3629—Cross Section through Kaiers Borehole shows 1967 water level at 1106 ft . elevation in Top Split Mammoth vein.

Tunnel Ridge \#3619—Cross Section with no water levels or cross cutting tunnels shown.

Tunnel Ridge \#3625—Cross Section west of No. 1121; no water levels or crossconnecting tunnels shown.

Tunnel Ridge \#3631 Cross Section of No. 1118; no water levels or cross cutting tunnels shown.

Tunnel Ridge \#3623—Cross Section No. 34 on line of $12^{\text {th }}$ street; elevation of water in Lehigh Valley Workings April 20, 1933 is 1249 ft . elevation.

Tunnel Ridge \#3622 -Cross Section No. 1124 ; north dip water level is elevation 1190.2 ft. in Buck Mtn. vein.

Tunnel Ridge \#3620—Cross Section through Shenandoah and Mahanoy Basins; 800 ft . west of main hoisting slopes; water level 1187 in Buck Mtn vein.

Tunnel Ridge Cross Section 1124—located 1850 ft. east of Knickerbocker No. 4 main hoisting slope; water level elevation of mine pool 1125.3 April 22, 1971.

EXAMINED 45 DRAWINGS OF TUNNEL RIDGE COLLLIERY
Mahanoy City Map \#3309 complex shaped barrier pillar includes 2 types of reservation pillars; appears to be completely intact.

Mahanoy City Map \#3311—Seven Foot vein workings breached by 2 gangways; note "gangway driven by bootleggers. This map shows extensive North Mahanoy Colliery workings interconnected to and overlapping Mahanoy City Colliery workings with no barrier pillar separating these 2 colllieries.

Mahanoy City Cross Section \#3287-this drawing is an excellent cross section completed December 16, 1896 with the surface elevation at the Kaiers brewery 1224.0 ft . and the bottom of the borehole at -761 ft. elevation; shows water level elevation 1100 ft . in Elmwood in June 1970, and 1099ft. in Mahanoy City Colliery

Mahanoy City Map \#3281—map showing workings on the Holmes and Primrose veins; Primrose water level gangway flows to drift discharge at elevation 1245.0 ft . at edge of barrier pillar; highly irregular patterns of breasts and pillars due to complex geology.

Mahanoy City Map \#3273 small portion of Seven Foot vein shows water level 1141ft. elevation on Nov. 4, 1960. Note states West Shenandoah overflow at 1014 ft . elevation, but another note states driven by bootleggers and pump stopped and valves closed on June 25, 1954.

Mahanoy City Map \#3291-Mahanoy City and Shenandoah water connections in the Shenandoah area; shows all of Reading Anthracite properties in the Shenandoah area and should be the subject of further study. The map and notes list 17 items to consider.

Mahanoy City \#3792-cross section shows eastern barrier pillar and notation valves closed June 26, 1954.

Mahanoy City Map \#3272—linen original of Top Split and Middle Split Mammoth; this is a very complicated map. The eastern barrier pillar shows a "water level Top Split gangway' going through the barrier to a drift opening. The geology is very complex and the mining patterns follow the geology.

Maple Hill Map \#3313 - shows 2 shafts; Shaft No. 1 is 4 compartment with top elevation at 1250.1 ft . and bottom at 531.3 ft .; Shaft No. 2 is 3 compartment with a top elevation at 1251.4 ft . and a bottom elevation at 273.9 ft .

Mahanoy City Map \#3282—Skidmore vein shows a 3 compartment shaft 275 ft . west of reservation pillar for the breaker; shaft had gangway sump at 606.4 ft . elevation.

Mahanoy City drawing \#3274—shows surface features only including large St. Nicholas Central Breaker with Dorr thickener. Road leads uphill to Patriotic Hill.

Shenandoah City and Indian Ridge Collieries Map \#2939—shows the Shen City Breaker and surface support facilities and the Kehley Run Breaker ; lowest mining elevation found is 634.7 ft .

Indian Ridge Map \#2943 -contorted basin center mostly third mined. Map in excellent condition, a good example of complexity of mining patterns.

Map \#2942—shows land line of Girard Estate to west and Gilbert Estate to the east; large West Shenandoah Breaker and Kehley Run Breaker ; Indian Ridge main shaft and Kohinoor Shaft.

Indian Ridge, Shen City, West Shenandoah Map set—seven sheets showing 120 ft . wide barrier pillar separating Packer No. 3 and West Shenandoah to the north and William Penn and Turkey Run in the south.

Cross Section \#2937 -shows from west to east West Shenandoah, Shen City, Turkey Run, Ellengowan, Cambridge, Furnace and Gilberton Collieries

Kehley Run Colliery Map \#937—shows mine in west gangways was developed 4 levels ; lowest elevation found 822.7 ft .

Kohinoor Colliery Map \#904—shows 120 wide barrier on the west side and 200 ft . wide barrier on the east, both of which appear to be intact. Lowest elevation found is 231.7 ft .

Kehley Run \#918-Cross section No. X-16 on line of borehole slope; large synclinal basin with anticlinal fold in basin bottom ; lowest elevation found in gangway is 546 ft . where surface is elevation 1407 ft .

Kehley Run \#921 - cross section along west line of barrier pillar between Shenandoah and Maple Hill Collieries shows 6 collieries interconnected; lowest Buck Mtn. gangway in Mahanoy Basin is 180 ft . elevation, where the surface is elevtion 1278 ft .; down 9 levels.

Kehley Run \#920—cross section 80 ft . west of main hoisting slope; lowest Buck Mtn. gangway in adjacent Indian Ridge Colliery is 668.7 ft . elevation where surface is 1278.6 ft. elevation..

Kehley Run \#917 - Kohinoor and Indian Ridge collieries are across barrier pillar from Kehley; it appears that those 2 collieries are interconnected to the point of being 2 divisions of the same workings.

Kehley Run \#924-Cross section 1800 ft . west of main slope and through Jardin Street; lowest Buck Mtn. gangway elevation 839.5 ft .; surface above 1306.0 elevation.

Kehley Run Map \#925—shows barrier pillars intact at both ends in Seven Foot bed.
Kohinoor Colliery Map \# 901 Little Buck vein—shows No. 6 tunnel connecting West Shenandoah to Kohinoor collieries; lowest elevation found in Buck Mtn. is $4^{\text {th }}$ lift 411.8 ft.

Kehley Run \# 935—Cross section No. 7 shows Shen Penn stripping 190 ft . depth on Mammoth vein.

Maple Hill Map \# 3317—down 7 levels on the south dip; lowest elevation found 277.6 ft.; Maple Hill shaft No. 2 top 1251.4 ft . elevation; bottom is 293.2 ft . elevation. A 150 ft . wide barrier pillar runs north/south and connects to 60 ft . wide semi-circular barrier feature.

Maple Hill Map \#3318—shows St. Nicholas $2^{\text {nd }}$ lift tunnel connected to Maple Hill Buck Mtn. gangway; lowest elevation found is 304.5 ft .

Boston Run and St. Nicholas Map \# 214—shows Boston Run south dip down 4 lifts to 158.4 ft . elevation; St. Nicholas down to 128 ft . elevation ; shows a 230 ft . wide barrier pillar but workings are continuous across what is barrier to the south.

Boston Run \#293-Cross section of syncline with Boston Run on the north dip and St. Nicholas on the south dip; connected at basin bottom by gangway.

St. Nicholas Map \#3110—shows a rock tunnel connecting the north dip Boston Run colliery connected with St. Nicholas south dip at elevation 370.6 ft . Curiously below north dip Boston Run is Draper $3{ }^{\text {rd }}$ lift; this documents a connection with Gilberton colliery to the west.

Gilberton Colliery Map \#1512—Lowest elevation found is -100 . ft. at base of main hoisting slope dated Nov. 12, 1918. No evidence of barrier pillars labeled. Top lift on Buck Mtn. vein also labeled Furnace Colliery.

Draper Colliery Map \#690-shows the Gilberton 'water shaft', 4 compartments Top elevation = 1138 ft .; bottom elevation 68 ft ; shows sump below main hoisting slope At -100.3 ft . elevation. Draper mined the Buck Mtn. 5 lifts on the north dip; no Draper workings on the south dip.

Weston Map \#3797—on Buck Mtn bed shows western barrier pillar for a distance of 580 ft.; the western side was encroached 50 ft . by stripping in the Hammond Colliery.

Weston \# 3803 -Cross sections through the No. 9 rock hole; another section through No. 6 rock hole and Seven Foot slope.

Weston Map \#3804--- shows large Weston breaker structure with gunboat plane; a relatively large structure adjacent to breaker labeled ‘Du Pont Experimental Plant".

Willian Penn Colliery Map \#3820---rock tunnel apparently connects Weston with William Penn, but may be sealed by concrete dam; the western barrier is breached by 2 gangways; one of these states ' old works open-robbed by bootleg miners’; stripping from William Penn side completely through the barrier would connect to Turkey Run workings. The breasts were developed in a strange tree-like pattern known as slants.

William Penn Map \#3821-barrier pillar on west side 60 ft . wide; gangway from Packer No. 5 penetrates 50 ft .; barrier pillar 120 ft . wide on the north side ; barrier on the east side 60 ft . wide but gangway and associated chutes continue through barrier from the William Penn side into West Shenandoah and Turkey Run Collieries.

William Penn Map \#3754—Buck Mountain bed; south barrier was mined through; lowest elevation found is 104.0 ft .; almost entirely third mined.

Drawing \# 3768—Cross section through William Penn shaft; excellent section shows major syncline with a large recumbent fold; shows No. 2 shaft bottom elevation 217.6 ft . but on the Packer No. 4 side of the syncline the Buck Mtn. was mined to $7^{\text {th }}$ slope level which equals 168 ft . elevation.

Drawing \#3760—William Penn No. 2 shaft shows basin barrier pillar 120 ft . wide.
William Penn Map \#3759—Primrose vein ; shows ‘counter gangway" coal mined from this minor feature is dumped to some intermediate point before hauling out of mine.

William Penn Map \#3753—Top Split vein; some slants, barrier pillar appear to be intact.
William Penn Map \#3769—shows a number of drifts surrounding old shaft; the largest drift is the No. 2 Top Split Mammoth.

East Bear Ridge Map \#815—shows long longitudinal barrier pillar, only 1 small area of encroachment ; Mammoth Top Split bed.

East Bear Ridge Map\# 814—mining on the Bottom Split Mammoth is continuous; workings appear to be all south dip; eastern barrier is intact; western barrier pillar completely mined through.

East Bear Ridge Map\# 813—shows 2 barrier pillars, Seven Foot vein pillar on south side and basin pillar to the north., lowest gangway is 795 ft . elevation, with surface above 1426 ft . elevation.

Drawing \# 818 East Bear Ridge Colliery - shows lowest working on Buck Mtn. is 673.8 ft. elevation with surface 1384.7 above; all south dip workings.

Stanton and Lawrence Map \#1734—map of Four Foot and Leader veins; eastern and western barrier pillars appear intact.

West Shen and Turkey Run Map \#2893--Skidmore vein; this map shows numerous barrier pillars of various sizes including barrier pillar between West Shen and Maple Hill collieries was 325 ft . wide with note 'south line of pillar tentative ; will be established when necessary. Apparently West Shen and Turkey Run workings are intertwined and indistinguishable.

Girard Colliery Map \#1486-two Girard water level drifts extending about 550 ft . north of breaker; entry elevation on westernmost drift 985.9 ft . elevation. Ash et al. Bulletin 521, p. 39 states ' The Girard pool lies against its east side to altitude 986 feet and overflows to the surface through a water level tunnel (adit)".

Drawing \# 1472 - blueprint showing proposed ditch and pipe at eastern end of Girardville to provide surface outfall for the combined flows of Suffolk, Maple Hill, Mahanoy City, North Mahanoy, Knickerbocker, Indian Ridge, Kohinoor, West Shenandoah, Shenandoah City, Turkey Run, William Penn and Packer Nos. 2,3,4,5 Collieries.

Raven Run/Continental Map \#3534—Mammoth vein basin mined from the south dip to the north dip ; the western end of this colliery has a barrier pillar with tunnels penetrating through the barrier. Map shows an area designated 'reserve to insure safety of Raven Run water’.

Packer No. 3 -Buck Mtn. vein-on eastern end this map shows the barier pillar between Packer No. 3 and Kohinoor , indicating that the mine overlaps the Weston colliery ; on the western end there is at least one tunnel through the barrier pillar.

Hammond Colliery Map \# 1249—Buck Mtn vein longitudinal barrier pillar plus 2 cross valley barrier pillars; shows airway and tunnel penetrating $3 / 4$ of way through the barrier.

Drawing \# 1264—Hammond Section No. 37 basin barrier pillar with a proving hole driven through barrier on the Diamond vein.

Raven Run Map \#2812—According to Ash et al. (19530 p. 40, ‘ Mine workings adjoining the barrier pillar in the Continental mine are interconnected to those of the Raven Run mine in the Buck Mountain bed at altitude 1,379 ft. Map shows at least 2 gangways going completely through the barrier.

Raven Run Map \# 2811—125 ft. wide barrier pillar not breached by deep mining, but surface mining went through the western part of the barrier.

Bast Colliery Map \#173—Buck Mtn vein workings shows sump elevation at 245.7 ft . Apparently the Preston No. 2 and the Preston No. 3 were interconnected. At tunnel elevation 926 ft .

Continental Buck Mtn vein Map-barrier pillar on the west between Continental and Centralia mined through , and the Valera slope on the south dip extends workings through the pillar.

Centralia Map \#482 -shows a gangway that partially penetrates barrier and connects to a rock tunnel that goes completely through the barrier pillar.

Centralia Map \#434—Lykens valley Vein shows intact barrier pillar; shows Big Mine Run Drainage Tunnel. Gangways connect with tunnel at 993.5 ft and 995 . ft elevation.

Germantown Map \#1429—this map shows a long narrow colliery 14,900 ft. or more in length; appears to include only the south dip workings.; lowest elevation found 574.3 ft .

Germantown/Locust Run Map \#1450-drawing shows the Centralia Drainage Tunnel diagonally crossing the eastern side of mine map; apparent tunnel mouth at elevation 985.2 ft . with Big Mine Run workings connecting at 995.4 ft .

Potts Colliery drawing \#2707—cross section across basin on line of $13^{\text {th }}$ street in Ashland ; third lift, north dip Mammoth vein gangway at 27.0 ft . elevation..

Potts Map \#2701—lowest elevation found 8.9 ft .
Locust Gap Colliery Map \#1744-7 $7^{\text {th }}$ level gangway elevation in rock tunnel headed southward with an opening elevation of 755.8 is probably the Doutyville tunnel. ; water level tunnel to Locust Spring Basin with terminus elevation of 1183.4 ft . is the Helfenstein Tunnel.

Locust Gap Map \#1747—Bottom Split Mammoth vein ; lowest elevation found was in the $5^{\text {th }}$ lift near sump at 370.6 ft .

Locust Gap Map\#1742 -Top Split Mammoth vein; lowest elevation found was 370.6 ft . Shows Centralia drainage tunnel.

Mid Valley Map \#2021—a very long rock tunnel connects the No. 1 and 2 mines with the No. 3 and 4 mines at elevation approx. 1205 ft .

Mid Valley Map \#2065—Holmes vein workings an No. 1 mine; lowest elevation found is 800.2 ft .

Mid Valley Map \#2604—According to Ash (1953) p. 45 Mid Valley No. 3 pool is at elevation 212 ft ., 'water from this pool flows through a tunnel into the Mid Valley No. 1 and 2 mine.

Sayre Colliery Map \#3454 -Skidmore vein shows the Sioux \#3 mine situated west of Sayre and the barrier pillar between them is completely mined through as if only 1 colliery existed.

Sioux No. 3 Map \#3040—Top Split Mammoth vein; barrier pillars on east and west sides of this small colliery both mined through; lowest elevation found 418.7 ft .

Richards colliery Map \#2806—Buck Mtn. vein; No. 4 slope shows a classic spoon of a synclinal basin with curved gangways and radiating chutes; lowest elevation found 1165 ft.

Reliance Colliery Map \#2850—Lykens Valley vein ; western barrier pillar completely mined through ; lowest elevation found is -93.10 ft .

Reliance Colliery Map \#2843—shows Buck Mtn vein connection to Alaska Colliery $2^{\text {nd }}$ lift.; lowest elevation found is 93.5 ft .

Natalie/Colonial Map \#2541—Bottom Split Mammoth vein; long drainage tunnel, north and south dip workings are tight.

Pennsylvania colliery Map \#2238—apparently Susquehanna Collieries owned both Reliance and Pennsylvania adjacent collieries; explains the breach in the barrier pillar; lowest elevation found is 78.7 ft .

Pennsylvania Colliery Map \#2245—Lykens Valley bed; shows barrier pillar completely mined through to the Scott Colliery. According to Ash et al. (1953) "The barrier pillar ,as designed , is removed in the Lykens Valley bed at 349 feet, considered to be the effective altitude of barrier pillar LV."

Map \#3076 of Susquehanna Collieries Co. Lands Owned, Leased and Sold—includes Greenough,Sayre, Richards, Pennsylvania, Colonial (Natalie), Scott, Hickory Ridge, Hickory Swamp, Buck Ridge, Luke Fidler, Glen Burn and Neilson Collieries.

Map \#9 Alaska Colliery-Mammoth vein extensive workings; on the west side there is a variable width reservation pillar stepping down from 300 ft . width to 200 to 100 ft . width, essentially separating Alaska workings from Excelsior to the north and Enterprise workings to the south.

Scott Colliery Map \#2948—barrier pillars on the perimeter appear to be intact except for provisions to allow Lykens Valley vein overflow at elevation 349 ft .

Scott Colliery Map \#2950—on the south dip there is a connection at top of breast to Pennsylvania Colliery; two shafts shown and numerous rock tunnels.

Scott Drawing \#2951 Cross Sections on Mammoth vein—show lowest elevation of five gangways to be -62 ft

Corbin Map \#1804—barrier pillar between Corbin and Big Mountain collieries appears to be intact.

Colbert Colliery Map \#641—shows longitudinal barrier pillar between Colbert and Hickory Ridge/Hickory Swamp completely mined through from Hickory Swamp side.Lowest elevation found 202.9 ft .

Collbert Colliery Map \#639—No. 4 vein barrier pillar between Colbert and Hickory Swamp was encroached, nearly mined through in several places; barrier pillar on the east side between Scott or Pennsylvania completely mined through. Lowest elevation found is 204.6 ft .

Drawing \#1067-Cross section, lowest elevation found at 395 ft . in Hickory Swamp side, and in Colbert the lowest elevation found would be a No. 4 vein tunnel and gangway at 201 ft . elevation; steep pitch 70 degrees.

Hickory Swamp Map \#1064—steep pitch 89 degrees; according to Ash et al. p 59, "barrier between Richards and Hickory Ridge, acts as a dam for pool 58 in Natalie mine....overflows through a tunnel into Greenough mine".

Map \#1093-it appears that Hickory Ridge and Hickory Swamp collieries are essentially undifferentiated. Colonial (Natalie) also appears to be connected.

Map \#1054 Hickory Swamp No. 6 vein—lowest elevation found in $3^{\text {rd }}$ lift gangway at 132.2 ft . elevation; same elevation in bottom of Hickory Ridge.

Drawing \#4870—Cross section Luke Fidler Colliery; lowest elevation mined -373.7 ft.
Drawing \#4870—cross section Luke Fidler Colliery, 4800 ft . east of no 1 slope; Lykens vein, $8^{\text {th }}$ level, lowest elevation found -549.6 ft .

Drawing \#395—Buck Ridge No. 1 cross sections-lowest elevation found is 70.7 ft . located 1530 ft . east of main hoisting slope.

Buck Ridge Map \#388—shows a drift tunnel location with an opening elevation of 833 ft., and it sloped inward.

Drawing \#3343 -Maysville section on center line of No. 1 slope; blueprint shows bottom of slope at elevation 300 ft .

Maysville Map \#3352—No. 8 vein ; barrier pillars appear to be intact
Luke Fidler Map\#1802—shows the deepest mining found; No. 2 vein workings; seven levels down in gangway 13 near No. 2 shaft is elevation - 586.9 ft .; the 60 ft . wide barrier pillar completely encroached in 2 locations; this mine had 3 shafts in close proximity.

Neilson Drawing \#2580—cross section through shaft; top of shaft 739.0 ft . elevation; bottom is elevation -475.6 ft .; lowest mining on No. 8 vein at -557.9 ft . elevation. According to Ash et al. "The water level of the pool in the Luke Fidler mine is at an altitude of 542 feet, and the water overflows into the pool 57 in the Cameron mine."

Cameron Map1343-the workings are very extensive on the No. 9 vein; there appears to be a barrier pillar on southwest side of colliery but tunnel No. 131 is cut right through barrier, appearing to connect to another tunnel in adjacent colliery; on the east side no barrier pillar is shown and the Luke Fidler gangways continue and appear to merge with the Cameron gangways, especially at the No. 3 slope level.

Drawing \#1401—Cameron Colliery cross section No.4; lowest elevation shown is -124 . in gangway in No. 4 vein; shows mining on 10 vein through the barrier pillar.

Cameron Map.\#498—shows extensive workings; lowest elevation found -147.7 ft. in rock tunnel.

Cameron Map \#496-shows a portion of Luke Fidler workings which are connected to Cameron in No. 7 vein $3^{\text {rd }}$ lift gangway.

Cameron Map \#500—this map conclusively shows a major interconnection with Luke Fidler workings; shows gangways linked together and chutes continuing across.

Glen Burn Colliery Map\#1392—shows mostly Cameron and Luke Fidler workings; presumably coming from Glen Burn workings to the west.

Glen Burn Map \#1381—apparent overlap of Cameron interconnected with Glen Burn. Western barrier pillar 120 ft . wide down to elevation 920 ft ., then 250 ft . wide below that elevation.

Glen Burn Map\#1339—shows 250 ft . wide western barrier pillar; note on barrier "water level= 775 ft ."

Henry Clay Colliery Map \#1122_"old Buck Ridge" workings to the east tied into Henry Clay by at least 1 chute, and very much connected to "old Burnside" workings on the south side.

Henry Clay/Stirling Map \#1130—shows 120 ft . wide barrier pillar between Henry Clay/Stirling and Burnside and Big Mountain Collieries.

Henry Clay Map \#1129—No. 9 vein workings; lowest elevation fouind 27.7 ft .
Burnside Colliery Map \#349—shows eastern barrier pillar, No. 9 vein, 120 ft . wide between Burnside and Big Mountain, was completely breached; gangway running through it ; on western end of colliery is a 120 ft . wide barrier between Burnside and Bear Valley that appears to be intact.

Drawing \#362 Burnside cross section—shows the lowest elevation found in Burnside 209.5 ft .; lowest elevation in Stirling is 205.4 in shaft third lift.

Bear Valley Map\#4577-Bear Valley Rock Slope workings were separated from other Bear Valley workings by a 200 ft . wide pillar line between the Rock Slope and Bear Valley shaft workings ; shows a 200 ft . wide pillar line between West Rock Slope and North Franklin.

Bear Valley Map \#4590—shows the No. 2 shaft Rock Gangway fully penetrating the 200 ft . wide barrier between "Rock Slope" and Bear Valley Shaft workings at elevation 437.9 ft.

Bear Valley Map\#4595-lowest elevation found on 10 vein is 393.7 ft ., this is not the western Rock Slope part of Bear Valley.

North Franklin Colliery Map \#2434—the Tender Slope is the present discharge location; a 120 ft . wide barrier pillar on the east end was completely mined through by a gangway and chutes.

Addendum: Doutyville Tunnel Map\#1758—found map misfiled; shows in Locust Gap Colliery, the Doutyville Tunnel is 3800 ft . long and connected in mine with other tunnels third lift; the Helfenstein Tunnel is 4000 ft . long connected with shaft, fourth lift.

These notes of the review of mine maps and cross sections of the Western Middle Field are from documents in the archives of the Bureau of Deep Mine Safety of the Pennsylvania Department of Environmental Protection, Pottsville District Office. In many cases the original ink on linen original drawings were available; in other cases blueprints of the drawings were reviewed. Some of the drawings are in excellent
condition; others are in fair to poor condition. In some cases every map and cross section for a colliery was examined; in other cases where abundant maps exist, selected drawings were reviewed. The Bureau of Deep Mine Safety has a current project to scan all of the documents in the archives so that they will be computer retrievable.

## SOUTHERN FIELD—NOTES OF REVIEW OF MINE MAPS

Nesquehoning Map\#2616-shows numerous rock gangways; not a typical room and pillar type of mine; lowest elevation found elevation 320.8 ft .

Nesquehoning Drawing \#2620—Cross section through 203 tunnel 3200 ft . west of No. 2 shaft; very complicated geologic structure; north dip and south dip of beds, in center Primrose vein vertical; lowest elevation found 610.0 ft in No. 3 tunnel

Nesquehoning Map \#4637—shows 3 shafts; lowest elevation found 349.5 ft .
Nesquehoning Drawing \# 3502—cross section shows very complex geologic structure; Primrose Coal on 2 splits; shows Hackleburnie Tunnel cross basin.

Nesquehoning Map \# 3456—Holmes vein workings; a 150 ft . wide barrier pillar on east end near tunnel 248, but Holmes vein south dip $2^{\text {nd }}$ level gangway goes directly through barrier pillar.

Nesquehoning Map \# 4323—Buck Mountain vein; map in poor condition but has the best info on the Nesquehoning Colliery found; shows Lausanne Tunnel (drainage tunnel) running along strike of beds near center of basin flows to Lehigh River. Lausanne Tunnel turns north near the Hacklebernie Tunnel.

Lansford Colliery Map \# 1585—general map shows several long tunnels across basin.
Lansford Map \# 1597—shows main shaft tunnel in relation to No. 4 shaft.
Lansford Map \#1596—Bottom split Mammoth shows reservation pillar to protect No. 4 shaft. 500ft. barrier pillar between No. 6 and No. 8 collieries, but No. 7 tunnel runs down center line of pillar.

Lansford Drawing \# 1591—cross section on line of Lansford tunnel; shows Lansford Tunnel going through mountain (RR tunnel?); gangway $8^{\text {th }}$ level elevation -129.6 ft .; rock tunnel connects from this gangway up to the Mammoth vein from below the Seven Foot Bed.

Lansford Map \# 1601—shows Poncharies air tunnel on center line of barrier; shows barrier pillar between Lansford and Coaldale collieries 770 ft . wide but shows $2^{\text {nd }}$ and $3^{\text {rd }}$ level gangways and breasts crossing the barrier in Primrose vein.

Drawing \# 1594—shows the west Primrose gangway going through the barrier between No. 4 and No. 5 mines; lowest working found elevation 213.0 ft .

Lansford Map \# 1600 --shows different mining pattern like slants; shows 3 levels of gangways and breasts through the barrier.

Lansford Map \# 1599—Orchard vein shows Summit Colliery Tunnel on center line of barrier pillar. Note on map west pillar line to protect No. 3 tunnel; western barrier pillar to protect No. 7 tunnel with railroad line through it.

Drawing \# 1587—Lansford Colliery cross section F-F shows 3 synclinal folds and 1 large anticlinal fold .

Coaldale Colliery Map \# 560 - shows the breaker on North side of Coaldale Borough and No. 7 and No. 8 shafts near the breaker.

Drawing \# 571 -Cross section on line F, 1250 ft . west of No. 8 shaft; lowest elevation found -597 ft . on the $10^{\text {th }}$ level.

Coaldale Map \# 676—Mammoth vein off west rock gangway
Coaldale Map \# 665 - Coaldale No. 9 Colliery, west rock gangway in No. 11 Mammoth vein basin in $3^{\text {rd }}$ level.

Drawing \# 575 -cross section through No. 14 chute ; shows 40 ft . vein in complex folding; lowest elevation found -141.0 ft.

Coaldale Map \# 573 - plan of workings in Mammoth vein west off No. 598 tunnel.
Coaldale Map \# 672 plan showing $3^{\text {rd }}$ level No. 9 mine off No. 351 tunnel in No. 11 Mammoth basin; shows Top Split and Bottom Split Mammoth vein gangways.

Coaldale Map \# 659—No. 7 tunnel entry of railroad elevation 1015. ft.
Coaldale Map \# 553-8 ft. dam and 13 ft . dam in 702 air tunnel.
Greenwood//Rahn Map \# 3505—not much strip mining shown and not many spot elevations of deep mine workings.

Drawing \# 3506—Greenwood cross section through No. 300 and 400 tunnels; shows coal (Diamond, Orchard, Primrose) almost vertical in limb of syncline.

Rahn Map \# 2835 -barrier pillar to preserve Fosters Tunnel.
Greenwood Map \# 1153—shows No. 10 shaft top 1000.9 and bottom - 24.0 ft. elevation.
Drawing \# 1150 -details of pump installation at No. 10 and No. 14 shafts; August 8, 1958.

Greenwood/Rahn Map \# 1151 -shows No. 11 shaft in what would later be Pit \# 111; looks like first cut on Primrose completd.

Tamaqua Colliery Map \#1902—water pumping shaft is in the area of Shaft No 14 East and west pillar lines shown; mining terminated at east line.

Tamaqua Map \# 1900—shows $4^{\text {th }}$ level west side and east side barrier pillar lines around tunnel 394A.

Tamaqua Map \#1901-large reservation pillar across basin around shafts no. 14 and no. 15; approximately 500 ft .

Tamaqua Map \# 1907 - proposed south dip barrier pillar between Tamaqua Colliery of LCN Co. and adjoining lands controlled by Ashton Coal Co.; shows barrier pillar beneath the channel of the Little Schuylkill River.

Tamaqua Lands Map \# 1886 - shows Tioga Colliery, Tuckers slope and Benner \& Erdmans drift.

Ashton Map \#85 -lowest elevation found 784.2 mouth of eastern drift; not shown to be third mined in this colliery.

Reevesdale Map \#2819—what looks like main entry point at Reevesdale is the No. 2 drift, but it is driven perpendicular to the strike, across the basin and looks like a tunnel opening; to the west and clearly connected is the Buckville Colliery complete with the Buckville Tunnel

Drawing \# 2821-- Tamaqua Lands proposed shafts at Tuckers; shows 4 deep synclinal structural features; Reevesdale workings are on the south side of drawing and Buckville workings are on the north side; lowest elevation found 625 ft .

Reevesdale Map \#2824—almost all workings are not third mined. ;east Diamond gangway and east Orchard gangway are labeled "inverted dip".

Drawing \# 1892—Newkirk Colliery cross section No. 8 \& 18; Lehigh shaft workings; lowest elevation shown in Skidmore vein, D slope gangway 596 ft .

Map \# 2595—Newkirk Colliery and Newkirk Tunnel—the Newkirk workings are clearly connected to the Reevesdale Tunnel and workings.The west Buck Mountain rock gangway No. 4 connects to the Reevesdale Tunnel, as does west Bottom Split Mammoth.

Drawing \#2596—Newkirk longitudinal cross section through Holmes vein north dip; excellent example of rock gangway, rock chutes driven upward to slants.

Tamaqua Lands Map \#2588-mostly shows surface pits, not deep mine workings.
Newkirk Colliery Map \#2594—shows Reevesdale Tunnel No. 1 driven southward.
Newkirk Map \#2593—shows a map view of Newkirk Tunnel.

Bell Colliery Map \#153—shows mostly surface features; shows Old Bell Tunnel and nearby slope.

Bell Colliery Map \#147—shows small part of colliery; lowest elevation found 420.02 ft .
Bell Colliery Map \#184—shows reservation pillar on both sides of Bell Tunnel and barrier pillar to the north side of the workings on Top Split Mammoth and Holmes veins.

Bell Map \#152—shows plan for barrier pillar agreement.
Mary D Colliery Map—shows mostly south dip workings; lowest elevation found 374.1 ft.

Middleport Colliery Map \#2532—Shanferoke Coal Co.; Middleport Lands leased to Major Lee White and Ralph Peters trading as Tuscarora Stripping and Mining Co.

Middleport Map \#2501—shows mostly surface but No. 1 Tunnel with outlet at 733.8 ft .
Kaska-William Map \#910—shows 2 shafts and at least 3 drifts.
Kaska-William Map \#915-bottom bench Mammoth vein; does not show any barrier pillars.

Kaska-William Map \#911—shows variable width barrier pillar on eastern side of colliery; lowest elevation found 394.0 ft .

Alliance Colliery Map \#79—shows railroad layout only; was in or near to Middleport Collierey.

Middleport Lands Map \#81—shows surface features only.
Alliance Map \#80—water level workings; No. 1 tunnel outlet 706.5 ft. ; shows 120 ft . barrier pillar on west side of workings.

Drawing \#82—Alliance cross section line 293; shows north water level tunnel at 973.0 ft.;elevation of water Feb 23,1937 was 171.0 ft ; lowest elevation found -194 ft .

Silver Creek Map \#916-a 200 ft . barrier is on the west end of this colliery, but the north end of it is breached by a gangway that connects it to Eagle Hill Colliery; lowest elevation found 69.8 ft .

Silver Creek Map \#2957—shows Kaska-William water level 885.0 ft . at barrier pillar on east end; indications that no intact barrier exists between Silver Creek and Eagle Hill. Appears that barrier between Silver Creek and Kaska-William intact.

Eagle Hill Map \#2641—apparently Silver Creek and Eagle Hill are highly interconnected on west side of Silver Creek.

Eagle Hill Map \#2666-no additional information.
Eagle Hill Map \#2670—three compartment shaft with $6^{\text {th }}$ lift elevation -223.86 ft .
Eagle Hill Map\#2649—at east end is 300 ft . wide barrier pillar; gangways stopped at the barrier.

Eagle Hill Map \#2674—no additional information.
Eagle Hill Map \#2640—shows considerable development without barrier pillars to separate from Silver Creek workings.

Eagle Hill Map \#2648—shows no barrier pillars.
Eagle Hill Map \#2647—no additional information.
Drawing \#4311—cross section of Silver Creek and Eagle Hill shows $6^{\text {th }}$ lift Middle Split basin -200.7 ft.

Saint Clair Colliery Map \#4320—shows No. 30 Buck Mtn. slope and Raversdale Tunnel (804 ft. elevation).

St. Clair Coal Co. Map \#4565 -Pine Forest section.
Drawing \#4565—cross section No. 27 shows bottom of no. 2 slope elevation 128.4 ft .
Drawing \#4316-cross section Eagle Hill through No. 1 tunnel , $6^{\text {th }}$ level - 215 ft . elevation

Randolph Colliery Map \#5058-three barrier pillars shown intact.; No. 1 water level tunnel 706.5 ft .

Randolph Map \#5057-lowest elevation found 158.3 ft.; an L shaped barrier shown.
Randolph Map \#2828-no additional info.
Randolph Map \#2827—no additional info;
Randolph Map\#2829—no additional info.
Randolph Map \#2830—no additional info.

Lucie R Colliery Map \#2832—Port Carbon Coal Co.; shows 120 ft . wide barrier on the east end and the west end.

Lucie R Map \#--no additional info.
Salem Hill Map \#3163—barrier pillar agreement; shows 110 ft . wide longitudinal barrier separating Hudson Coal Co. and Salem Hill tract.

Salem Hill Map \#3168—shows breaker and other surface features.
Salem Hill Map \#3151 -No. 11 bed; lowest elevation found 382.1 ft . in $2^{\text {nd }}$ level rock tunnel.

Salem Hill Map \#3145—shows L shaped barrier pillar completely breached by 2 rock tunnels and gangway; shows point of entry Salem Hill Water Tunnel at elevation 623 ft .

Salem Hill Map \#3152—no additional info.
Salem Hill Map \#3150—no additional info.
Drawing \#3149—Salem Hill theoretical cross section on center line of water level tunnel.
Salem Hill Map \#3171—shows main tunnel entry; barrier pillars intact on this map.
Salem Hill Map \#3142—shows 5 levels, heavally third mined; lowest elevation found is sump in $5^{\text {th }}$ lift gangway at elevation -68.9 ft .

Salem Hill Map \#3147 -no additional info.
Salem Hill Map \#3143—no additional info.
Salem Hill Map \#3158—no additional info.
Salem Hill Map \#3160—no additional info.
Salem Hill Map \#3148—shows 100 ft . wide western barrier to be intact
Salem Hill Map \#3144—mostly not third mined
Salem Hill Map \#3169—no additional info.
Salem Hill Map \#3159—no additional info.
Salem Hill Map \#3170—no additional info.

Salem Hill Map \#3156-shows barrier pillar intact on the west end but penetrated on the north side by a rock tunnel marked "water level tunnel".

Salem Hill Map \#3166—no additional info.
Salem Hill Map \#3155—no additional info.
Salem Hill Map \#3161—no additional info.
Salem Hill Map \#3154—no additional info.
Drawing \#3226—Salem Hill cross section on the line of water level tunnel.
Pottsville Map \#2753-Chamberlain Colliery; shows only main hoisting slope.
Pottsville Map\#2756-shows Rosenbergers tunnel near $13^{\text {th }}$ street.
Sherman Colliery Map\#2910—on a line slightly west and parallel to Hotel Street, shows a Buck Mountain drift, a Skidmore drift, a Mammoth drift and a Holmes drift; lowest elevation found 452.7 sump on west Holmes.

Sherman Map \#2909—shows a drift like "water course" near Hotel Street; shows workings on Diamond, Tracy, and Black veins near Rosenbergers tunnel.

Sherman Map \#4978—no additional info.
Sherman Map \#3503—no additional info.
York Farm Colliery Map \#2686-shows Guinea Hill slope and 2 large drifts; lowest elevation found 318.1 ft .

York Farm Map \#2680—no additional info.

York Farm Map \#2687—no additional info.
York Farm Map \#2681—shows notation of Rickerts Colliery
York Farm Map \#2689—shows Fogarty’s Colliery localized in the west
York Farm Map \#2695—shows Beltheisers tunnel on the eastern end.
York Farm Map \#2696—shows first level tunnel passing under Pottsville High School Stadium and connecting with York Farm Tracy slope.

York Farm Map \#2694—no additional info.

York Farm Map \#2691—shows Garcia’s drift close to the West Branch Schuylkill River.
York Farm Map \#2698—no additional info.

York Farm Map \#2697-shows large breaker and boiler building and other surface features.

York Farm Map \#2685—no additional info.

York Farm Map \#2682—shows Beltheiser’s tunnel and Westwood Junction
York Farm Map \#2684—no additional info.
York Farm Map \#2678—shows notation of Bartholomew Tunnel.
York Farm Map \#2676—shows deep mining and strip mining in the area of the Sharp Mountain cropfalls; shows a major drift entry near the West Branch of the Schuylkill River.

York Farm Map \# no number-shows Greenwood slope and Bittle’s tunnel and Thomas Owen drift.

Repplier Colliery Map \#2853-shows what appears to be the breaker and main slope in area known as Elsworth; there is also a basin slope plunging eastward to Darkwater where there is a water level tunnel.

Repplier Map \#2852—shows mostly surface features including the Pott-Bannon area.
Repplier Map \#2856—shows West slope, Old slope and Hexter’s tunnel; lowest elevation found 429.0 ft .

Wadesville Colliery Map \#3744—shows a 3 compartment shaft with a top elevation 781.8 ft . and a bottom elevation of 62.6 ft .

Wadesville Map \#3746—shows gangways at $81.4 \mathrm{ft} ., 80.1 \mathrm{ft}$. and 78.8 ft . elevations.; does not show any third mining.

Drawing \#4878—Wadesville cross sections including a folded and faulted Skidmore vein gangway at -152.0 elevation.

Thomaston Colliery Map \#2222-shows an intact barrier between Pine Knott and Thomaston;shows that is labeled barrier pillar but has numerous workings going through it-it is more like a reservation pillar for the Rhorersville basin tunnel; shows the Buck Run and Thomaston barrier pillar, but it is breached by Thomaston plane gangway.

Thomaston Map \#2223—shows Thomaston and Pine Knott barrier pillar is intact;shows Richardson and Glendower barrier pillar intact; shows Glendower water level tunnel at 1155 ft . elevation; lowest elevation found 359 ft .

Thomaston Map \#2221—shows pillar labeled "Pillar to protect Rhorersville Tunnel".
Oak Hill Colliery Map \#2479—looks like mining was down 11 lifts, but lowest is labeled $6^{\text {th }}$ level; lowest elevation found -225.7 ft .; shows a 120 ft . wide barrier pillar in west center but a Buck Mountain vein gangway goes through it.

Oak Hill Map \#2133—no additional info.
Pine Knott Colliery Map \#2138---on Top Split Mammoth vein the barrier pillar with Thomaston appears to be intact.

Drawing \#2149—Pine Knott cross section shows bottom of No. 1 shaft -290.ft. elevation but no workings are shown below 178 ft . sump level.

Pine Knott Map \#2134-barrier pillar is intact on north dip workings on the Skidmore vein, but breached on the south dip; shows top of No. 1 shaft 954.65 ft . elevation and bottom elevation -294.35 ft.

Pine Knott Map \#2136—no additional info.
Pine Knott Map \#2137 - southern end of barrier pillar with Thomaston breached in the Seven Foot vein.

Pine Knott Map \#2139—rock tunnel to Oak Hill penetrates the Thomaston barrier pillar; shows there is also a Thomaston water level rock tunnel at elevation 995.0 ft .

Pine Knott Map \#2141 -no additional info.
Pine Knott Map \#2142—no additional info.
Drawing \#1732—Glendower cross section shows mining in a basin composed of 2 synclines and 1 small anticline; lowest elevation found 690 ft .

Lytle Colliery Map \#1814-main entry is two adjacent slopes, the pump slope and the tender slope; no distinct barrier pillars shown on this drawing.

Drawing \#1824—Lytle cross section no. 92; shows deep synclinal basin with gangways at nearly -450.0 ft .

Lytle cross section no. 97—no additional info.
Lytle Map \#1817—shows 5 compartment shaft in south edge of workings.

Drawing \#1821—Lytle cross section no. 94 and $1 ⁄ 2$; shows barrier pillar between Lytle and Otto that appears to be intact; Phoenix Park breaker shown in southwest corner.

Drawing \#1809—no additional info.
Drawing \#1812—no additional info.
Drawing \#1827—no additional info.
Lytle Map \#1822—General outside map, shows No. 2 breaker is a washery near to the West Branch of Schuylkill River.

Lytle Map \#1816-on this map is a longitudinal barrier pillar separating Lytle and Phoenix Park to the south and on the east and on the west a barrier labeled Herbine tract, Pine Hill Coal Co.; all of these barriers appear to be intact; lowest elevation found -446.4 ft.

Drawing \#1820-there are 10 levels of gangways on the south dip of Lytle.
Drawing \#1819—no additional info.
Drawing \# 1808—cross section Lytle no. 87;; shows the Pine Hill workings to be further north or east.

Lytle Map \#1970—shows intact barrier on the west end connected to longitudinal barrier separating Lytle from Phoenix Park.

Phoenix Park Map \#2305—perfect anticlinal feature near center of colliery; lowest elevation found -4.7 ft .

Phoenix Park Map \#2300—John Veth colliery, Phoenix Park no. 1 and no. 3 collieries with 2 five compartment shafts.

Map \#2303—Phoenix Park no. 1,2 \&3 and Otto Colliiery; shows Fisher Basin on west end of Otto.

Phoenix Park Map \#2299—nearly flat bottom; lowest elevation found -274.4 ft.
Otto Colliery Map \#2541—shows intact barrier pillars on the west end and east end; lowest elevation found -187.4 ft.

Otto Map \#2442—shows numerous old drift openings.
Otto Map \#2448—shows no. 3 Holmes slope 1450 ft . north of the Nest slope.
Otto Map \#2445—very complex mining patterns and complex geologic structure.

Otto Map \#2450—Skidmore workings; no barrier pillars shown.
Drawing \#2449—Otto cross section no. 29 ; in Primrose vein shows water level gang way at 860 ft . elevation.

Otto Map \#2449—shows reservation pillar for shaft or partial barrier pillar.
Drawing \#3940—no additional info.
Drawing \#2441—no additional info.
Otto Map \#2443-shows 5 compartment shaft.
Otto Map \#2440—no additional info.
Otto Map \#2452—very extensive map; shows some small reservation pillars.
Middle Creek Colliery Map \#4684—shows breaker and surface support structures.
Middle Creek Map \#4682—shows lower west Buck Mtn. water level drift, (no elevation)
Middle Creek Map \#4683—shows gangways stop at barrier pillar.; lowest elevation found 192.0 ft ; Shows Colket water level tunnel entry at 942.8.

Midddle Creek Map \#4687—shows undisturbed barrier on the west end in Four Foot vein.

Middle Creek Map \#4703—shows workings merge (no barrier) with Colket Colliery.
Colket Colliery Map \#4703-shows the barrier pillar between Colket and Good Spring No. 3 appears to be intact; lowest elevation found 945.8 ft .

Indian Head Colliery Map \#4695—note on map "Clinton vein joins Middle Creek Colly"
Indian Head Map \#4692—shows Middle Creek and Middle Creek Dam in the central part of the workings; shows Marshfield slope at elevation 861.0 ft .

Indian Head Map \#4700—no additional info.
Drawing \#4696—no additional info.
Indian Head Map \#4699-has notation "mine pool water level measured in shaft October 29, 1979 elevation 919.7 ft ."

Indian Head Map \#4693-shows no. 1 slope connecting subsurface with no. 1 tunnel;
Goodspring no. 3.

Good Spring Colliery Map \#874—shows no. 3 slope with 300 ft . barrier on the east end; it is questionable whether it is breached and west barrier as well.

Good Spring Map \#5102—shows east barrier partially penetrated and shows west barrier intact; lowest elevation found 493.6 ft .

Good Spring Map \#1314—shows that Tracy vein terminates at the barrier; gangway stops; shows that the Good Spring no. 1 mine was chiefly developed on the south dip.

Good Spring Map \#1292—shows the same lowest elevation found as above (493.6)

Good Spring Map \#1290-eastern barrier pillar appears to be breached.

Good Spring Map\#1299—shows water level tunnel, may be the Pennag tunnel.

Good Spring Map \#1288—shows far western barrier intact.

Markson Colliery Map \#2078—only shows 2 gangways in Four Foot vein.

Markson Map \#2076-on Primrose vein, shows 2 entries adjacent to stream; lowest elevation found 649.5 ft .

Williamstown Colliery Map \#4340—Bear Valley area; 12 long rock tunnels cross the synclinal basin to connect the north and south dip; Big Vein is Lykens Valley No.5; rock gangway 7600 ft . long; gangway near shaft on south dip at elevation -488.9 ft .

Williamstown Map \#4341—shows Bear Valley shaft and Bear Valley slope.
Drawing \#4374—Williamstown cross section through no. 84 tunnel shows no. 222 tunnel at gangway at -417 ft . elevation.

Drawing \#4369—Williamstown cross section no. 42 shows Big Vein no. 224 tunnel on $5^{\text {th }}$ level at -633 ft . elevation.

Drawing \# 4385-no additional info.

Drawing \#4395—cross section no. 63 shows Short Mountain slope in Lykens Valley no. 2 vein gangway at syncline bottom -852 ft . elevation.

Drawing \#4397—no additional info.

Drawing \#4396—no additional info.

Drawing \#4412—Williamstown section no. 56 shows where 2 gangways are connected by no. 156 tunnel at elevation -1292 ft . on the Big vein at bottom of syncline.

Drawing \#4394—no additional info.
Drawing \#4346 Williamstown cross section no. 88 shows syncline plunging to the east.
Williamstown Map \#4337-shows Williamstown water level tunnel and further west The Big Lick water level tunnel.; shows no. 10 slope first level west rock gangway at elevation -479 ft.

Drawing \# 4418-Williamstown cross section no. 50; Big vein is the Lykens Valley no. 5 and Little vein is the Lykens Valley no. 6.

Drawing \#4415-Williamstown cross section no. 52; no. 9 tunnel projected 140 ft . west at elevation -1286.6 ft.; down dip mining progresses in 9 to 10 ft . of coal; to elevation 1342 (April 24, 1930) to -1467.2 (June 14, 1930) to elevation -1489.1 ft. on June 25, 1930. At this point the Big vein was still 7 ' 10 " thick on the no. 10 level.

Drawing \#4413—Williamstown cross section no. 54 ; mining on the Big vein terminates at 9 th level tunnel at elevation - 1278 ft .

Drawing \#4390—Williamstown cross section no. 55; mining on the Big vein terminates at no. 193 tunnel on $9^{\text {th }}$ level at elevation -1284 ft .; surface elevation is 1273 ft .

Drawing \# 4419—no additional info.
Drawing \# 4393—no additional info.
Williamstown Map \#4467—very extensive workings on the Primrose at the -200 ft. elevation.

Williamstown Map \#4454-many parallel tunnels crossing the basin; shows sections of this big colliery designated by letters and numbers. (e.g. 9, K, 8, 10)

Williamstown Map \#4476—Big vein workings; shows no. 1 shaft top elevation 897.1 ft ., bottom elevation -743.4 ft.; shows the Big Lick Tunnel extending entirely across this big map; shows syncline plunges to the east, a basin slope in included; shows the Bear Gap tunnel.

Williamstown Map \#3900—No. 11 vein shows extensive workings in Bear Valley and area of Big Lick Tunnel; map is 22 feet 6 inches long; shows the Lykens Valley Tunnel at far western end.

Brookside Colliery Map \#4466-shows barrier pillar between Williamstown and Brookside is intact based upon water level evidence; elevation of overflow on Williamstown side is 860 ft . and corresponding level in Brookside was 976.3 ft .

Valley View Colliery Map \#3937—shows barrier pillar far to east with Good Spring intact.; shows Ney’s drift.

Valley View Map \#3933—shows two reservation pillars; lowest elevation found 553 ft . questionable.

Valley View Map \#3930—lowest elevation found on north dip 902.0 ft .; on south dip the lowest found 891.1 ft .

Valley View Map \#4102—shows Valley View water level tunnel; this colliery appears to be connected to Brookside and Markson Collierys workings.

Drarwing \#1918—cross section through East Brookside shaft shows bottom sump at 469.8 lowest elevation found.

Tower City Colliery Map \#1921—shows shaft top 1398.6 elevation, bottom elevation 465.5 ft . lowest elevation found; shows Tower City No. 1 tunnel (mouth 1250.4 ft .), Tower City No. 2 tunnel, mouth 1259.8 elevation, and Keffers Tunnel, mouth 1250.4 ft. : 2 small reservation pillars separate workings tied to tunnels.

Tower City Map \#1915—shows limited south dip workings, north dip workings extensive.

Tower City Map \#1917—reservation pillar for Keffers tunnel compromised by 4 gangways.

Drawing \#1918—cross section on line of Tower City No. 1 tunnel shows the stratigraphy of the tunnel.

Drawing \#1291—shows the stratigraphy of the Tower City No. 2 tunnel and the Porter Tunnel.

Drawing \# 5025—no additional info.
Drawing \#5032—No additional info.
Drawing \#5031—no additional info.
Drawing \#3219—shows the stratigraphy of the Keffers tunnel.

Joliett Colliery Map \#3579—shows north dip workings only; shows east and west lines for a barrier pillar, but at east end of workings a gangway goes through the barrier; lowest elevation found elevation 787.1 ft .

Westwood Colliery Map \#3784—shows large breaker near eastern barrier pillar, appears to be intact;gangway terminates at western barrier pillar.

Westwood Map \#3779—Shows workings in Bottom Split Mammoth vein; lowest elevation found 497.4 ft .

Westwood Map \#3787—shows workings in Buck Mtn.,Seven Foot, Holmes, Primrose, Orchard, Diamond and Tracy veins.

Westwood Map \#3788-in north dip Four Foot vein lowest elevation found 492.8 ft .
Westwood Map \#3785-shows surface features including huge refuse bank no. 232; office and breaker appear to be close to present cogeneration plant.

New Lincoln Colliery Map \#4167-cross section at Sharp Mtn.Basin; shows big syncline; lowest elevation found 680 ft .

Lincoln Colliery Map—very complex mining patterns and complex geologic structure; to the north a barrier pillar with New Lincoln is completely breached; the west end of the colliery is labeled Kalmia Colliery workings with no barrier pillar separating this from the main Lincoln workings; Rowe Tunnel is the major drainage structure but at the west end is the Kalmia tunnel; lowest elevation found 63.2 ft .

Lincoln Map \#1758-shows mostly south dip workings; Rowe Tunnel is greater than 3,000 ft. long.

Lincoln Map \#1750—details of the Rowe Tunnel.
Lincoln Map \#1751—shows Kalmia workings.
Lincoln Map \#1763-cross section shows the Kalmia water level tunnel at elevation 1189.2 ft .

Lincoln Map \#1776—no additional info.
Lincoln Map \#1753—no additional info.
Lincoln Map \#1793-looks like Rowe Tunnel leading south from water shaft; to the west of water shaft is the large Lincoln breaker.

East Franklin Colliery \#872—cross section through East Franklin and Good Spring barrier pillar; synclinal basin; lowest elevation found 277.7 ft .

Rausch Creek Colliery Map\#2858—drift or tunnel with a discharge from Diamond vein; water level tunnel at elevation 939.2 ft .

Kalmia, Rausch Creek and Lincoln Collieries Map \#4267-they are all connected.he Blackwood

Blackwood Colliery Map \#158-shows a very well developed tunnel system; Blackwood tunnel is the main tunnel $3,740 \mathrm{ft}$. long; excellent example of a 4 compartment shaft, top of shaft is elevation 1023.5 ft ., bottom sump is 518.5 ft . elevation. The Blackwood Tunnel was entirely through the mountain with entrances on both sides. A secondary rock tunnel is 200 ft . west of the main tunnel with an interior connection. Drainage is to the north.

Blackwood Map \#161-the Dundas Tunnel was a secondary tunnel.
Drawing \#159—cross section showing the Dundas Tunnel was part of the Blackwood Colliery; the mouth of the Blackwood Tunnel is at elevation 815 ft ; the Dundas is 4600 ft . west of the Blackwood Tunnel and at elevation 988; a third tunnel, the Woods Tunnel is 700 ft . east of the Blackwood Tunnel at elevation 1130.5 ft .

Blackwood Map \# 185—Dundas Tunnel workings.
Blackwood Map \#302—Woods Tunnel workings.
Short Mountain Colliery drawing \#3011—cross section of large synclinal basin.; gangways on both dips are at -615 ft . and -630 ft .

Drawing \#2985—Short Mtn. cross section shows $9^{\text {th }}$ level workings in the Lykens Valley veins at -1300 ft. elevation.

Short Mtn. Map \#2483—shows bottom of No. 1 shaft -698.38 ft. elevation.
Short Mtn. Map \#3020—no additional info.
Short Mtn. Map \#3033—no additional info.
Short Mtn. Map \#3024—shows Shiro’s Tunnel.
Short Mtn. Map \#3007—no additional info, but deepest working is -474 ft. elevation.
Short Mtn Drawing \# 3025-lowest elevation shown -229 ft.
Short Mtn. Drrawing \#3000—cross section No. 26 ; lowest elevation shown is a gangway at elevation -477 ft.; appears to be on the Lykens Valley veins.

These notes of the review of mine maps and cross sections of the Southern Field are from documents in the archives of the Bureau of Deep Mine Safety of the Pennsylvania Department of Environmental Protection, Pottsville District Office. In many cases the original ink on linen drawings were available; in other cases blueprints of the drawings were reviewed. Some of the drawings are in excellent condition; others are in fair to poor condition. In some cases every map and cross section for a colliery were reviewed; in other cases selected drawings were reviewed. The Bureau of Deep Mine Safety has a current project to scan all of the documents in the archives so that they will be computer retrievable.

