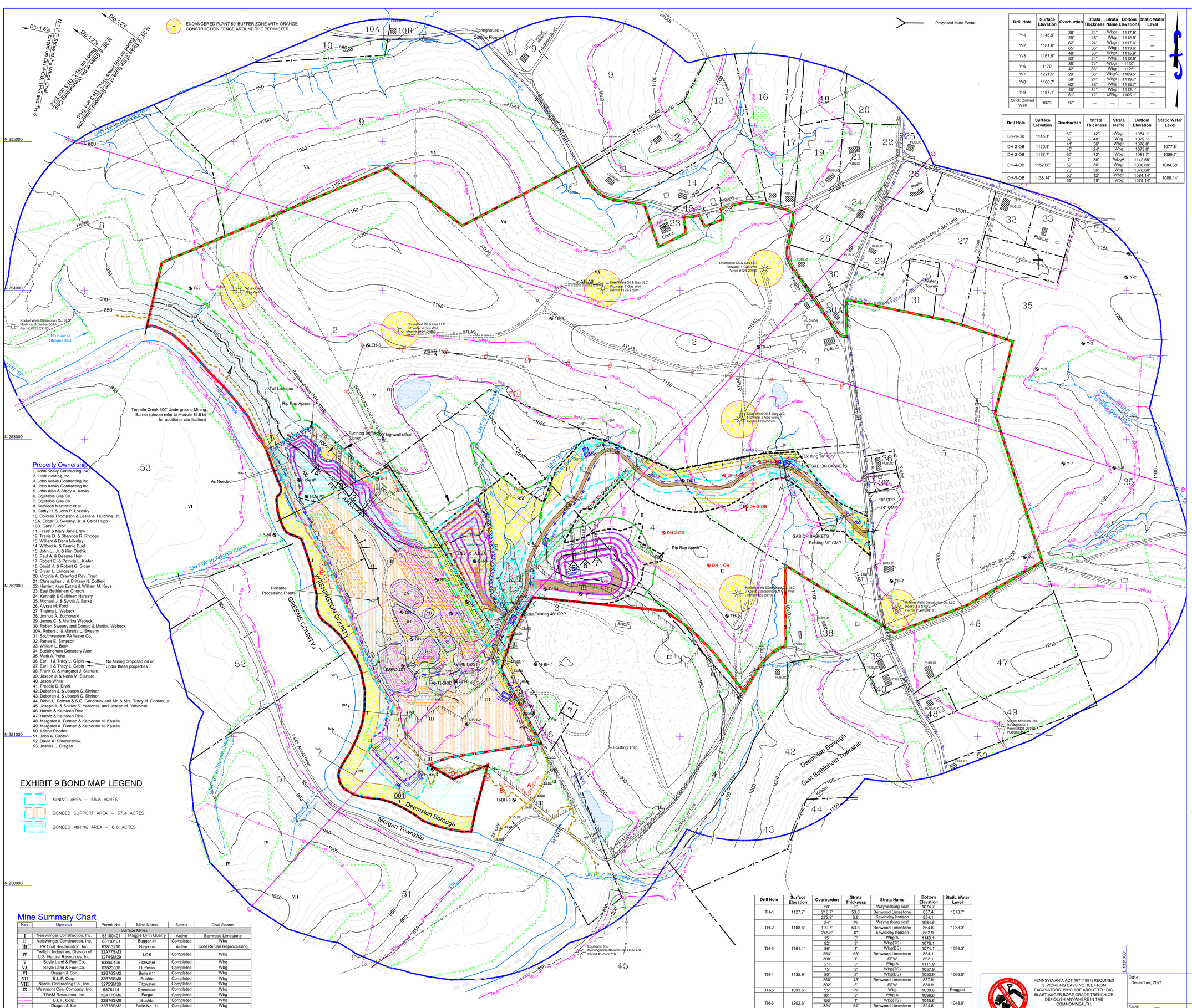

Drill Hole	Surface Elevation	Overburden	Strata Thickness	Strata Name	Bottom Elevations	Static Water Level
Y-1	1145.9'	26'	24"	Wbgr	1117.9'	---
		29'	48"	Wbg	1112.9'	
Y-2	1181.6'	62'	24"	Wbgr	1117.6'	---
		65'	36"	Wbg	1113.6'	
Y-3	1167.9'	49'	36"	Wbgr	1115.9'	---
		53'	24"	Wbg	1112.9'	
Y-6	1170'	38'	24"	Wbgr	1130'	---
		42'	36"	Wbg	1125'	
Y-7	1221.5'	29'	36"	WbgA	1189.5'	---
Y-8	1180.7'	59'	24"	Wbgr	1119.7'	---
		62'	36"	Wbg	1115.7'	
Y-9	1167.1'	48'	84"	Wbg	1112.1'	---
		61'	12"	LWbg	1105.1'	
Crick Drilled Well	1073'	97'	---	---	---	---

Drill Hole	Surface Elevation	Overburden	Strata Thickness	Strata Name	Bottom Elevation	Static Water Level
DH-1-OB	1145.1'	60'	12"	Wbgr	1084.1'	---
		62'	48"	Wbg	1079.1'	
DH-2-OB	1120.8'	41'	36"	Wbgr	1076.8'	1077.8'
		45'	24"	Wbg	1073.8'	
DH-3-OB	1137.7'	50'	72"	Wbg	1081.7'	1089.7'
DH-4-OB	1152.68'	7'	36"	WbgA	1142.68'	1084.68'
		69'	36"	Wbgr	1080.68'	
		73'	36"	Wbg	1076.68'	
DH-5-OB	1138.14'	53'	12"	Wbgr	1084.14'	1088.14'
		55'	48"	Wbg	1079.14'	

Drill Hole	Surface Elevation	Overburden	Strata Thickness	Strata Name	Bottom Elevation	Static Water Level
TH-1	1127.7'	50'	3'	Waynesburg coal	1074.7'	1078.7'
		216.7'	53.6'	Benwood Limestone	857.4'	
		272.8'	0.8'	Sewickley horizon	854.1'	
TH-2	1108.6'	24'	Pit	Waynesburg coal	1084.6'	1038.3'
		190.7'	53.3'	Benwood Limestone	864.6'	
		245.6'	0"	Sewickley horizon	862.9'	
TH-3	1161.1'	15'	3'	Wbg A	1143.1'	1099.3'
		82'	3'	Wbg(TS)	1076.1'	
		86'	1'	Wbg(BS)	1074.1'	
		254'	53'	Benwood Limestone	854.1'	
		308'	1'	SEW	852.1'	
TH-4	1135.9'	21'	3'	Wbg A	1111.9'	1066.8'
		75'	3'	Wbg(TS)	1057.9'	
		80'	2'	Wbg(BS)	1053.9'	
		250'	48'	Benwood Limestone	837.9'	
		302'	3'	SEW	830.9'	
TH-5	1093.6'	55'	Pit	Wbg	1038.6'	Plugged
TH-6	1202.6'	101'	3'	Wbg A	1098.6'	1048.9'
		156'	1'	Wbg(TS)	1045.6'	
		324'	54'	Benwood Limestone	824.6'	
		380'	---	Sewickley (Top of Coal)	822.6'	
TH-7	1165.3'	57'	7'	Wbg (TS)	1101.3'	1118.9'
		69'	1'	Wbg (BS)	1095.3'	
		235'	54'	Benwood Limestone	876.3'	
		291'	---	Sewickley (Top of Coal)	874.3'	

Legend

- Permit Boundary - 336.7 acres
- Surface Site Boundary - 87.5 acres
- Underground Mining Boundary - 252.1 acres
- 1000' Perimeter
- 23 — Property Ownership (keyed to table and module 5)
- Property Line
- Municipal Boundary
- Utility (overhead) — E-Electric (West Penn Power); T-Telephone (Marianna-Scenery Hill Telephone Co.)
- Utility (underground) — G-Gas (As Noted). W-Water (Southwestern Pennsylvania Water Authority)
- Buildings (occupied/unoccupied)
- Existing Gas Well (Gas Company Gas Well Permit No.)
- Variance Area
- Restricted Mining Zone
- Wetland - Delineated, Flagged and Surveyed
- Wetland - Visually Identified and Mapped
- Tree Line
- Module 14 Cross-sections
- Coal or Mineral Croplines
- Deep Mine Area and Portal
- Previously Surface Mined Areas
- Existing Culverts
- Proposed Culverts — RCP-Reinforced Concrete Pipe CPP-Corrugated Plastic Pipe CMP-Corrugated Metal Pipe SP-Steel Pipe
- Cemetery
- Proposed Final Highwall
- Existing Highwall
- Reclaimed Highwall (4/2021)
- 001 — NPDES Point
- Earthen Berm
- Super Filter Fabric Fence
- Collection Ditch - Grass Lined
- Collection Ditch - Rock Lined
- Diversion Ditch
- Level Lip Spreader
- Ditch Energy Dissipator
- Sedimentation Pond
- TB-1 — Treatment Basin - N/A
- Non-Prime Farmland Topsoil Storage area
- Prime Farmland Topsoil Storage Area - N/A
- Temporary Spoil Storage Area
- Perennial Stream
- Intermittent Stream
- Ephemeral Stream
- Relocated / Reconstructed UNT "E"
- Existing Pond / Impoundment
- Prime Farmland Soils - Negative Determination Requested
- Product Stockpiles
- TH-1 — Test Hole
- OB-A — Overburden Analysis Test Hole
- MW-1 — Monitoring Well - N/A
- Mining Bench Contour Line
- Mining Bench Index Contour Line
- PUBLIC — Indicates dwelling is served by public water
- Haul Road
- A—B — Geologic Cross Sections

Drill Hole	Surface Elevation	Overburden	Strata Thickness	Strata Name	Bottom Elevation	Static Water Level
BH-1	915.67'	32.9'	43.5'	Benwood Limestone	839.27'	862.87'
		81.2'	0.5'	Sewickley coal	833.97'	
BH-2	931.75'	51.5'	46.5'	Benwood Limestone	834.75'	845.95'
		101'	1.1'	Sewickley coal	829.65'	
BH-3	939.75'	58.9'	44.6'	Benwood Limestone	836.25'	845.75'
		108.3'	0.8'	Sewickley coal	830.65'	
DH-1	922.66'	33'	48'	Benwood Limestone	841.66'	900'
		83'	3'	Sewickley coal	836.66'	
DH-2	920.76'	35'	44'	Benwood Limestone	841.76'	901'
		85'	1.5'	Sewickley coal	834.26'	
DH-3	911.56'	25'	48'	Benwood Limestone	838.56'	901'
		75'	1.5'	Sewickley coal	835.06'	
DH-4	925.08'	27'	31'	Benwood Limestone	846.08'	904'
		82'	1'	Sewickley coal	842.08'	
DH-5	934.08'	33'	52'	Benwood Limestone	849.08'	923'
		87'	1'	Sewickley coal	846.08'	
DH-6	871.5'	0	29'	Benwood Limestone	842.5'	845'
		33'	1.5'	Sewickley coal	837'	
JLF-50	820'	111'	11"	Pittsburgh Rider (3)	708.1'	---
		112.3'	5"	Pittsburgh Rider (2)	707.3'	
		114'	12"	Pittsburgh Rider (1)	705'	
		116.1'	73"	Pittsburgh	697.8'	
Thompson Shaft	979'	38'	10"	Waynesburg Rider	940.2'	---
		39'8"	34"	Waynesburg	936.5'	
		205'	51"	Benwood Limestone	723'	
		259'	16"	Sewickley	718.7'	
		377'4"	77"	Pittsburgh	595.25'	
3523	1223'	52'	60"	Waynesburg	1166'	---
		235'	55'	Benwood Limestone	933'	
		290'	36"	Sewickley	930'	
		385'	48"	Pittsburgh	834'	
H-BH-1	902'	185'	MV	Pittsburgh B.O.V.	717'	745' / 757.7' (3/12/18)
H-BH-2	846.2'	136'	MV	Pittsburgh B.O.V.	710.2'	746.2'
H-BH-3	814.1'	98.1'	MV	Pittsburgh B.O.V.	716'	743'
H-BH-4	816.7'	104.7'	MV	Pittsburgh B.O.V.	712'	743'
Hole #1	875.4'	25'	25'	Benwood Limestone	825.4'	Dry
		59'	---	Top of Sewickley	816.4'	
Hole #2	872.6'	25'	2'	Benwood Limestone Mostly Absent	845.6'	854'
B-1	1023.8'	156.2'	41.2'	Benwood Limestone	826.4'	887.5'
		203.2'	12"	Sewickley Coal	819.6'	
B-2	1016.1'	161.4'	45.4'	Benwood Limestone	809.3'	873.3' (10/25/19)
		210.2'	9.6"	Sewickley Coal	805.1'	881.5' (10/30/19)

Notes:

1. The base map is comprised of topography (5' C.I.) developed from LiDAR 2' contour data obtained from the PASDA website. The locations of roads, buildings, surface water features and other cultural data were obtained from the Ellsworth & Mather, PA 7.5' USGS Quadrangle maps and supplemented/corrected by field survey and available aerial photography.
2. The property lines and property ownership shown on this map were obtained from Washington County tax assessment maps and records. This map does not represent an actual field survey of the properties shown and should not be used as such. All surface and mineral ownership information should be verified by the permittee.
3. All overburden and test hole elevations and locations were determined by field survey.
4. The location and extent of abandoned surface and deep mine workings depicted on this map are based upon available data without the benefit of a final certified mine map. Accordingly, neither GeoTech Engineering, Inc. nor the professional engineer / professional geologist signing this map certifies, warrants or guarantees the precise location or extent of abandoned, reclaimed or active workings depicted hereon. Unknown or unmapped mines may extend beyond the depicted boundaries and may contain abandoned mine pools as well as other safety hazards.
5. This map is georeferenced to the Pennsylvania State Plane South, North American Datum 1983 (NAD 83) coordinate system.
6. All units are in feet.

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PENNSYLVANIA ACT 187 (1991) REQUIRES 3 WORKING DAYS NOTICE FROM EXCAVATORS WHO ARE ABOUT TO : DIG, BLAST,AUGER,BORE,GRADE,TRENCH OR DEMOLISH ANYWHERE IN THE COMMONWEALTH.

POCS SERIAL NUMBER(S): 201725635 50

In the design phase of this project, GeoTech Engineering, Inc. performed a PA One Call inquiry for the proposed permit area. All underground utility owners that responded to the PA One Call submission were contacted and their utilities are depicted on the Exhibits, as located in the field or from mapping provided from the utility. However, in direct violation of the laws of the Commonwealth of Pennsylvania, not all underground utility owners are registered with the PA One Call System. Where evidence suggests there are additional underground utilities located in the permit area, GeoTech has contacted the utility owner to properly depict the underground utility location on the Exhibits. Current landowners are not always aware of underground utilities on their property and there may not be any visual evidence of an underground utility owned by those not registered with the PA One Call System. Accordingly, the permit operator, GeoTech Engineering, Inc. nor the professional engineer signing this map certifies that this map depicts underground utilities that are not properly registered with the PA One Call System.

Date: December, 2021

Maggie Lynn Underground Mine

Permit No. 63192001

Exhibit 9: Operations Map

Seal: COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER CARL PETERSON PE044858

Deemston Borough — Washington County

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