

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BARKEYVILLE QUADRANGLE
PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

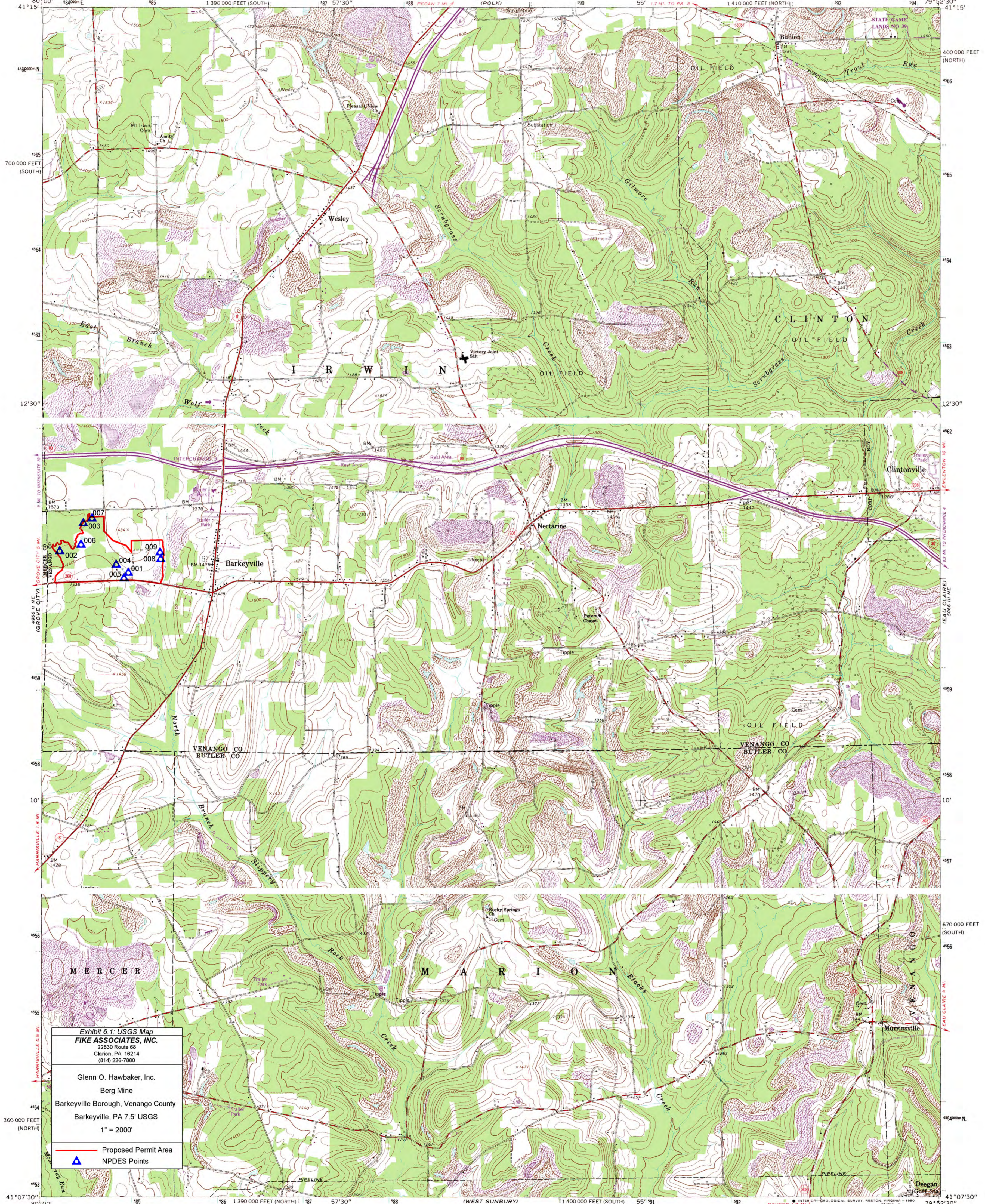


Exhibit 6.1: USGS Map
FIKE ASSOCIATES, INC.
22300 Route 60
Clarion, PA 16214
(814) 226-7880

Glenn O. Hawbaker, Inc.
Berg Mine
Barkeyville Borough, Venango County
Barkeyville, PA 7.5' USGS
1" = 2000'

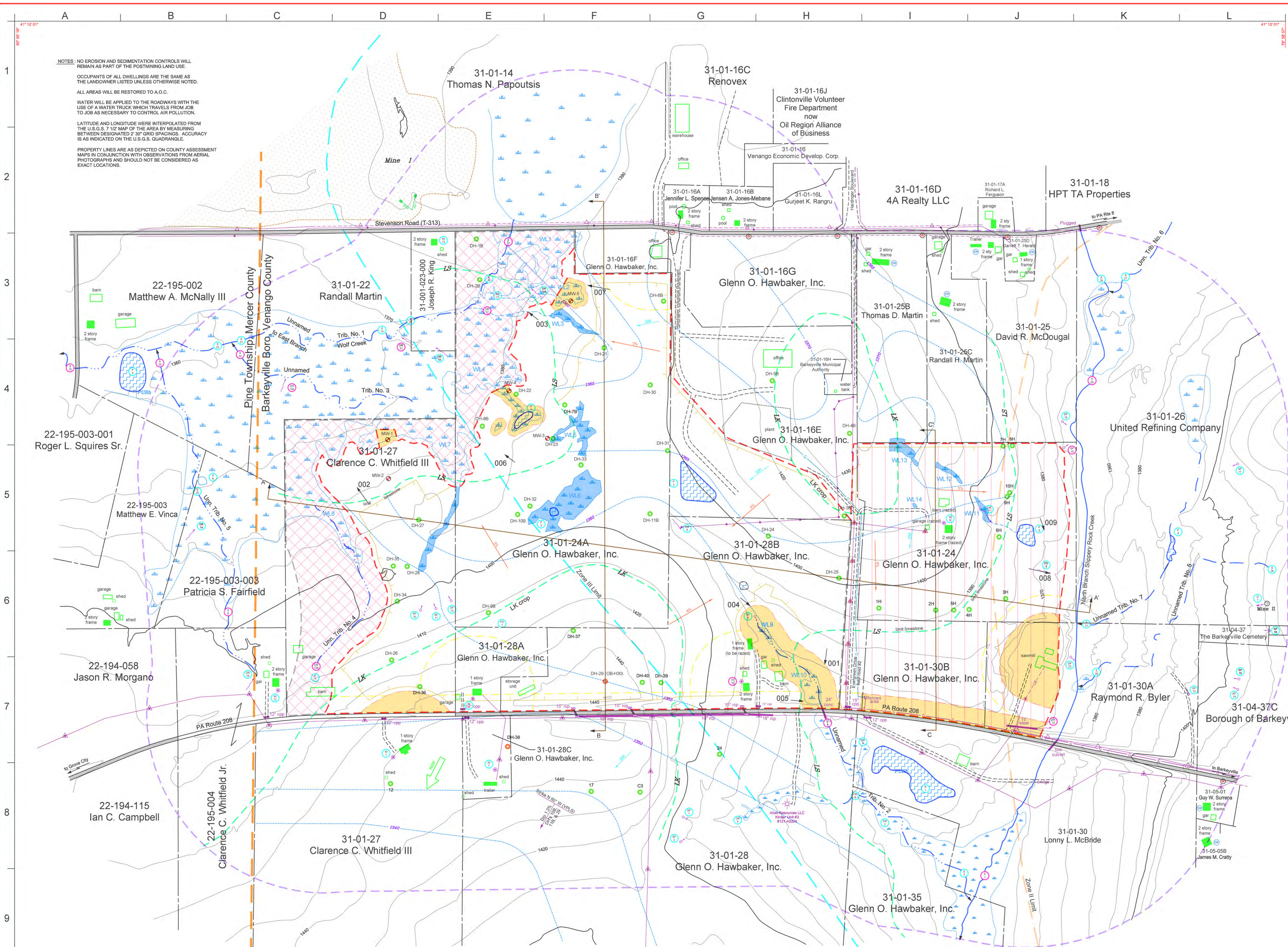
Proposed Permit Area
NPDES Points

Mapped, edited, and published by the Geological Survey
Control by USGS, NOS/NOAA, and USCE
Topography by photogrammetric methods from aerial photographs taken 1962. Field checked 1963
Polyconic projection. 10,000-foot grid based on Pennsylvania coordinate system, north and south zones
1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue. 1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 3 meters south and 18 meters west as shown by dashed corner ticks
Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is uncheckd
Revisions shown in purple compiled in cooperation with State of Pennsylvania agencies from aerial photographs taken 1977 and other source data. This information not field checked. Map printed 1983

SCALE 1:24,000
CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

ROAD CLASSIFICATION
Heavy-duty ——— Light-duty ———
Medium-duty ——— Unimproved dirt ———
Interstate Route ——— State Route ———

BARKEYVILLE, PA.
N4107.5—W7952.5/7.5
1963
PHOTOREVISED 1980
DMA 5066 III NW—SERIES V831



NOTES: NO EROSION AND SEDIMENTATION CONTROLS WILL REMAIN AS PART OF THE POSTMINING LAND USE. OCCUPANTS OF ALL DWELLINGS ARE THE SAME AS THE LANDOWNER LISTED UNLESS OTHERWISE NOTED. ALL AREAS WILL BE RESTORED TO A.D.C. WATER WILL BE APPLIED TO THE ROADWAYS WITH THE USE OF A WATER TRUCK WHICH TRAVELS FROM JOB TO JOB AS NECESSARY TO CONTROL AIR POLLUTION. LATITUDE AND LONGITUDE WERE INTERPOLATED FROM THE U.S.G.S. 7 1/2" MAP OF THE AREA BY MEASURING BETWEEN DESIGNATED 2 3/4" GRID SPACINGS. ACCURACY IS AS INDICATED ON THE U.S.G.S. QUADRANGLE. PROPERTY LINES ARE AS DEPICTED ON COUNTY ASSESSMENT MAPS IN CONJUNCTION WITH OBSERVATIONS FROM AERIAL PHOTOGRAPHS AND SHOULD NOT BE CONSIDERED AS EXACT LOCATIONS.

BACKGROUND SAMPLING POINTS (MP-PROPOSED MONITORING POINTS)

SAMPLING POINT	SOURCE	SURFACE ELEV.	SAMPLING POINT	SOURCE	SURFACE ELEV.
D1	Discharge	1437	MP S18	Stream	1397
D2	Discharge	1347	MP S17	Stream	1384
D3	Discharge	1350	MP S16	Stream	1367
D4	Discharge	1357	S21	Stream	1361
D5	Discharge	1378	MP S22	Stream	1361
D6	Discharge	1378	S23	Stream	1367
D7	Discharge	1378	MP S24	Stream	1358
D8	Discharge	1378	S25	Stream	1357
D9	Discharge	1378	S26	Stream	1357
D10	Discharge	1372	S28	Stream	1357
MP DR11	Discharge	1407	S29	Stream	1357
MP DR12	Discharge	1378	S30	Stream	1357
MP DR2A	Discharge	1407	S27	Stream	1361
MP DR13	Discharge	1378	S28	Stream	1361
MP DR3A	Discharge	1407	S29	Stream	1361
DR14	Discharge	1378	S30	Stream	1367
DR14A	Discharge	1387	S31	Stream	1347
DR16	Discharge	1407	S32	Stream	1387
DR17	Spring	1397	SP2	Spring	1394
MP DR18	Discharge	1347	SP9	Spring	1374
FD1	Field Drain	1412	SP10	Spring	1404
FD3	Discharge	1367	SP11	Spring	1404
P1	Pond	1357	SP12	Spring	1404
P2	Pond	1357	SP13	Spring	1390
P3	Pond	1397	SP14	Spring	1407
P4	Pond	1373	SP15	Spring	1407
P5	Pond	1357	SP16	Spring	1407
P6	Pond	1358	SP17	Spring	1412
P7	Pond	1408	SP18	Spring	1397
P8	Pond	1378	MP SP19	Spring	1397
P9	Pond	1387	SP20	Spring	1397
MP S1	Stream	1337	W1	Well	1447
MP S2	Stream	1337	W2	Well	1447
MP S3	Stream	1337	W3	Well	1447
MP S4	Stream	1367	W4	Well	1412
MP S5	Stream	1367	W5	Well	1382
MP S6	Stream	1371	W6	Well	1382
MP S7	Stream	1367	W7	Well	1407
MP S8	Stream	1367	W8	Well	1407
MP S9	Stream	1367	W9	Well	1407
MP S10	Stream	1367	W10	Well	1407
MP S11	Stream	1367	W11	Well	1407
MP S12	Stream	1367	W12	Well	1407
MP S13	Stream	1367	W13	Well	1407

LEGEND

- SURFACE MINING PERMIT AREA - DECEMBER 2020 - 191.0 ACRES
- BARRIER AREAS WITHIN PERMIT BOUNDARY
- VARIANCE AREAS WITHIN PERMIT BOUNDARY
- SURFACE CONTOUR ELEVATIONS (10' INTERVAL)
- APPROXIMATE TOWNSHIP J COUNTY BOUNDARY
- AREA WITHIN 1,000' OF BERG PERMIT BOUNDARY
- PROPERTY LINE
- DENOTES TAX MAP/PARCEL NUMBER AND PROPERTY OWNERSHIP
- MAIN ROADS
- DENOTES CENTER OF ROADWAY AS PROPERTY BOUNDARY
- EXISTING LAKE
- EXISTING POND
- EXISTING SPRING
- EXISTING DISCHARGE OR DRAINAGE
- OCCUPIED DWELLING WITH DESCRIPTION (OCCUPIED UNLESS OTHERWISE NOTED)
- BUILDING WITH DESCRIPTION
- EPHEMERAL CHANNEL
- INTERMITTENT STREAM
- PERENNIAL STREAM
- DESIGNATED WETLANDS FROM NATIONAL WETLAND INVENTORY MAPPING
- WETLANDS LOCATED DURING FIELD INVESTIGATION
- WETLANDS TO BE MITIGATED
- APPROXIMATE LIMIT VANPORT LIMESTONE
- APPROXIMATE LOWER KITTANNING COAL OUTCROP
- EXISTING SURFACE MINE
- ROMAN NUMERALS KEY TO MINES
- OVERHEAD CENTRAL ELECTRIC POWER LINE
- OVERHEAD VERIZON TELEPHONE LINE
- UNDERGROUND TELEPHONE LINE
- PUBLIC WATER LINE
- COLUMBIA GAS LINE
- GAS SERVICE LINE TO ASPHALT PLANT
- PROPOSED FINAL HIGHWALL
- GROUND WATER FLOW DIRECTION
- REGIONAL GROUND WATER FLOW DIRECTION
- SLOPE MEASURE (PERCENT)
- BACKGROUND SAMPLING POINTS
- PROPOSED MONITORING POINTS
- DWELLING SUPPLIED BY PUBLIC WATER
- GEOLOGIC CROSS SECTION
- PRIVATE WATER SUPPLY WELL
- DRILL HOLE LOCATION
- OVERBURDEN HOLE LOCATION
- PROPOSED WETLAND OBSERVATION WELL
- NPOSE DISCHARGE POINT
- STRIKE AND DIP
- JOINT MEASUREMENT
- VANPORT LIMESTONE STRUCTURE CONTOURS
- BARKEYVILLE BOROUGH WELLHEAD PROTECTION ZONE II LIMIT
- BARKEYVILLE BOROUGH WELLHEAD PROTECTION ZONE III LIMIT



LOCATION MAP
SCALE 1"=1 MILE
Barkeville Boro
Venango County

DRILL HOLE	SURFACE ELEVATION	LOWER KITTANNING	LIMESTONE	S.W.L.	DRILL HOLE	SURFACE ELEVATION	LOWER KITTANNING	LIMESTONE	S.W.L.
21	1380.0	---	1369.9	1367.0	28	1389.1	---	1368.1	1367.0
22	1387.9	---	1369.9	1368.0	29	1409.9	---	1368.0	1368.0
23	1393.7	---	1373.7	---	30	1403.9	1418.2	1369.9	Plugged
24	1402.9	---	---	---	31	1409.9	---	1371.5	Plugged
25	1401.1	---	1362.1	Dry	32	1405.9	---	1371.9	1368.0
26	1413.6	---	1361.6	1361.6	33	1403.9	---	1367.9	1368.0
27	1380.2	---	1360.2	Plugged	34	1389.9	---	---	1389.9
28	1384.3	---	1363.3	1363.3	35	1411.0	---	1367.0	1377.0
29 (DR-14)	1402.7	1410.7	1362.7	1362.7	36	1382.7	---	1362.7	1378.0
30	1396.3	---	---	---	37	1383.1	---	1368.1	Plugged
31	1396.9	---	1366.9	Plugged	38	1378.9	---	1362.2	Dry
32	1386.2	---	1362.2	1371.2	39	1380.2	---	1362.2	Dry
33	1396.0	---	1362.0	1370.0	40	1378.9	---	---	Dry
34	1386.3	---	1366.3	1366.3	41	1386.2	---	1366.2	Dry
35	1397.2	---	1367.2	---	42	1388.4	---	1368.4	Dry
36	1424.9	1439.9 (new)	1364.9	1423.9	43	1385.1	---	1364.1	Dry
37	1426.1	1413.6	1365.1	1414.1	44	1386.3	---	1376.3	Dry
38	1447.2	1408.2	1363.7	Plugged	45	1386.7	---	---	Dry
39	1386.9	---	1366.9	1366.1	46	1386.9	---	1366.9	1366.1
40	1405.2	---	1365.2	1415.2	47	1386.3	---	1365.1	Dry
41	1393.3	---	1369.3	1391.9	48	1386.3	---	1365.1	Dry

44.0 ACRES ADDED TO PERMIT BOUNDARY - DECEMBER 2020
27.0 ACRES DELETED FROM PERMIT BOUNDARY - DECEMBER 2020

CALL BEFORE YOU DIG
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extend to any other matters.

Fike Associates, Inc.
Surveying & Consulting
22830 Route 68, Clarion Pa. 16214

Exhibit 6.2
(Environmental Resources Map)

Surface Mining Permit
for
Glenn O. Hawbaker, Inc.

DATE: July 2011 JOB NO.: Berg Mine
SCALE: 1"=200' DRAWN BY: rcs

REVISIONS	DATE	DESCRIPTION
Additional Information	01-2020	
Permit Revision	12-2020	
Additional Information	05-2021	
Additional Information	07-2021	