

EXPLANATION

MINING GEOLOGY

- UPPER FREEPORT OR E SEAM
- LOWER FREEPORT OR D SEAM
- UPPER KITTANNING OR C SEAM
- MIDDLE KITTANNING OR C SEAM
- LOWER KITTANNING OR B SEAM
- SCRUBGRASS SEAM
- CLARION OR A SEAM
- BROOKVILLE OR A SEAM

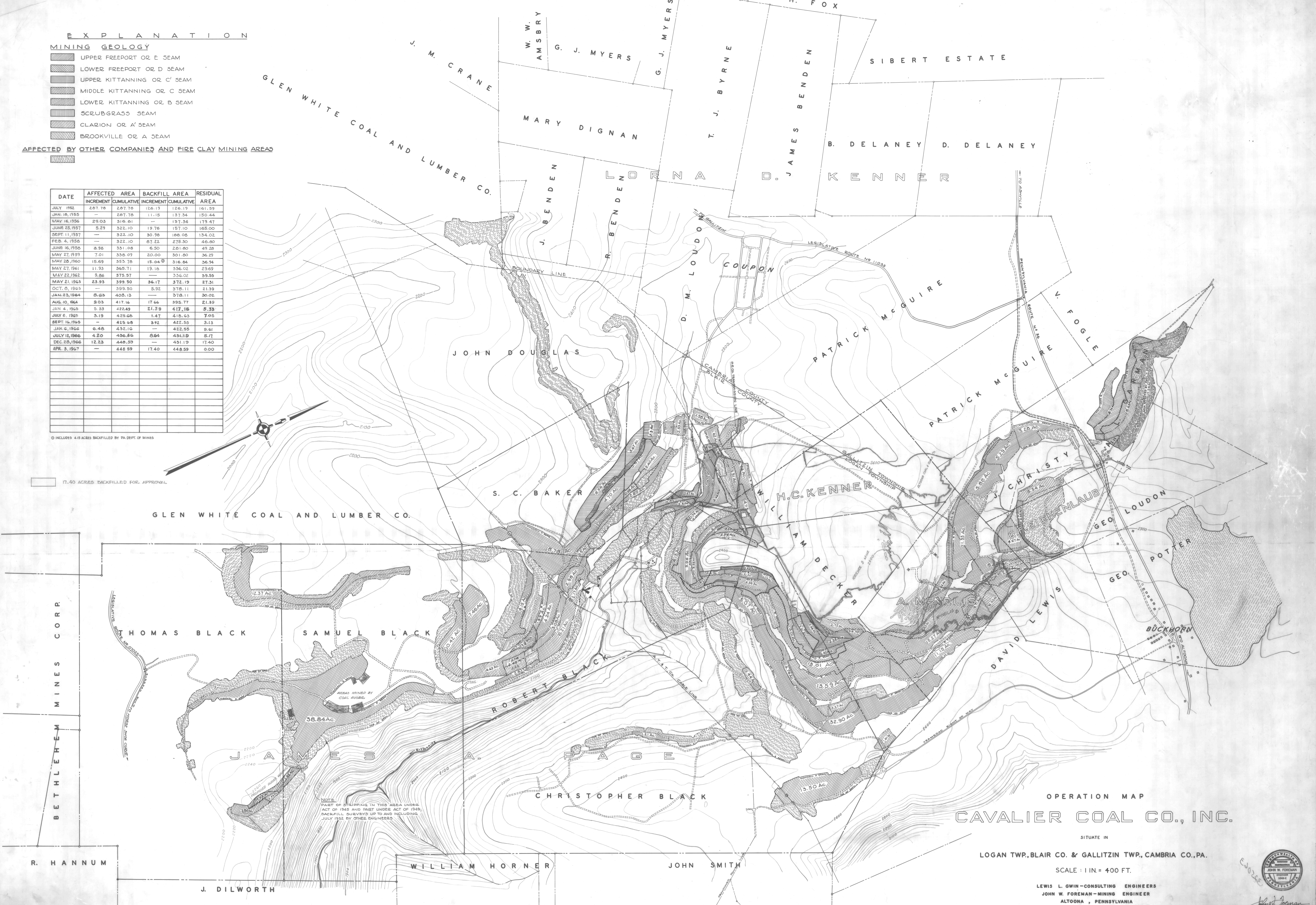
AFFECTED BY OTHER COMPANIES AND FIRE CLAY MINING AREAS

- AREAS AFFECTED BY OTHER COMPANIES AND FIRE CLAY MINING AREAS

DATE	AFFECTED AREA		BACKFILL AREA		RESIDUAL AREA
	INCREMENT	CUMULATIVE	INCREMENT	CUMULATIVE	
JULY 1952	207.70	207.70	126.19	126.19	161.59
JAN. 18, 1955	—	207.70	11.15	137.34	150.44
MAY 16, 1956	29.03	316.01	—	137.34	179.47
JUNE 25, 1957	5.29	322.10	19.76	157.10	165.00
SEPT. 11, 1957	—	322.10	30.98	188.08	134.02
FEB. 4, 1958	—	322.10	67.22	275.30	46.60
JUNE 16, 1958	6.96	331.08	6.50	281.60	49.28
MAY 27, 1959	7.01	338.09	20.00	301.60	36.29
MAY 28, 1960	15.69	353.78	15.04	316.64	36.94
MAY 27, 1961	11.93	365.71	19.18	336.02	29.69
MAY 22, 1962	3.86	375.57	—	336.02	39.55
MAY 21, 1963	23.93	399.50	36.17	372.19	27.31
OCT. 6, 1963	—	399.50	5.92	378.11	21.39
JAN. 23, 1964	8.63	408.13	—	378.11	30.02
AUG. 10, 1964	9.03	417.16	17.64	395.77	21.39
JAN. 4, 1965	5.33	422.49	21.39	417.16	5.33
JULY 8, 1965	3.19	425.68	1.47	418.63	7.05
SEPT. 16, 1965	—	425.68	3.92	422.55	3.13
JAN. 6, 1966	6.40	432.16	—	422.55	9.61
JULY 12, 1966	4.20	436.36	0.64	431.19	5.17
DEC. 28, 1966	12.23	448.59	—	431.19	17.40
APR. 3, 1967	—	448.59	17.40	448.59	0.00

© INCLUDED 415 ACRES BACKFILLED BY PA. DEPT. OF MINES

17.40 ACRES BACKFILLED FOR APPROVAL

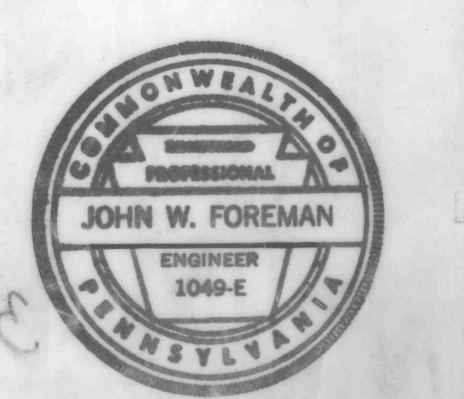


OPERATION MAP
CAVALIER COAL CO., INC.

SITUATE IN
LOGAN TWP., BLAIR CO. & GALLITZIN TWP., CAMBRIA CO., PA.

SCALE : 1 IN = 400 FT.

LEWIS L. GWIN - CONSULTING ENGINEERS
JOHN W. FOREMAN - MINING ENGINEER
ALTOONA, PENNSYLVANIA
JOB NO. 64-1-7



1-A0-118

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