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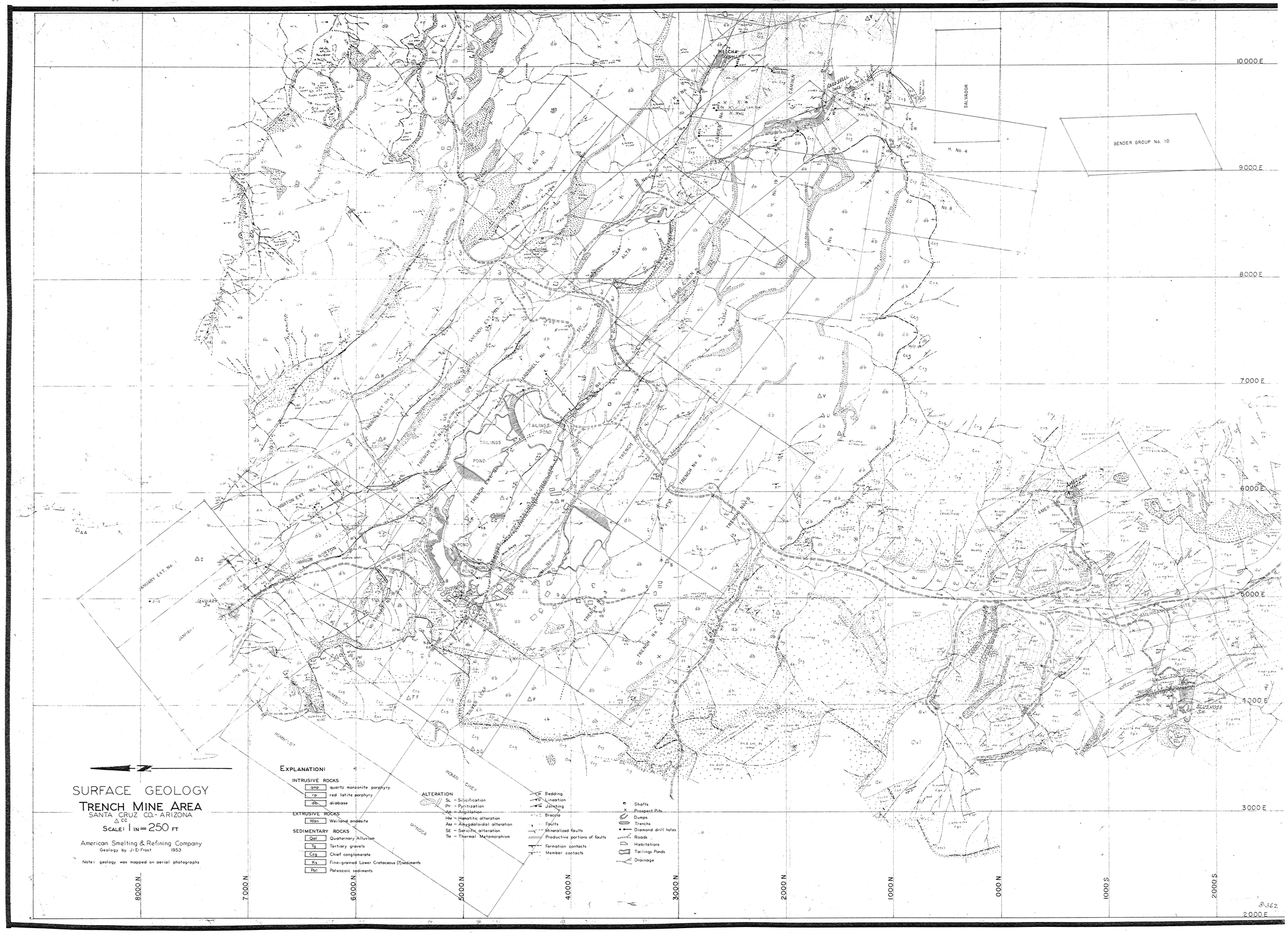
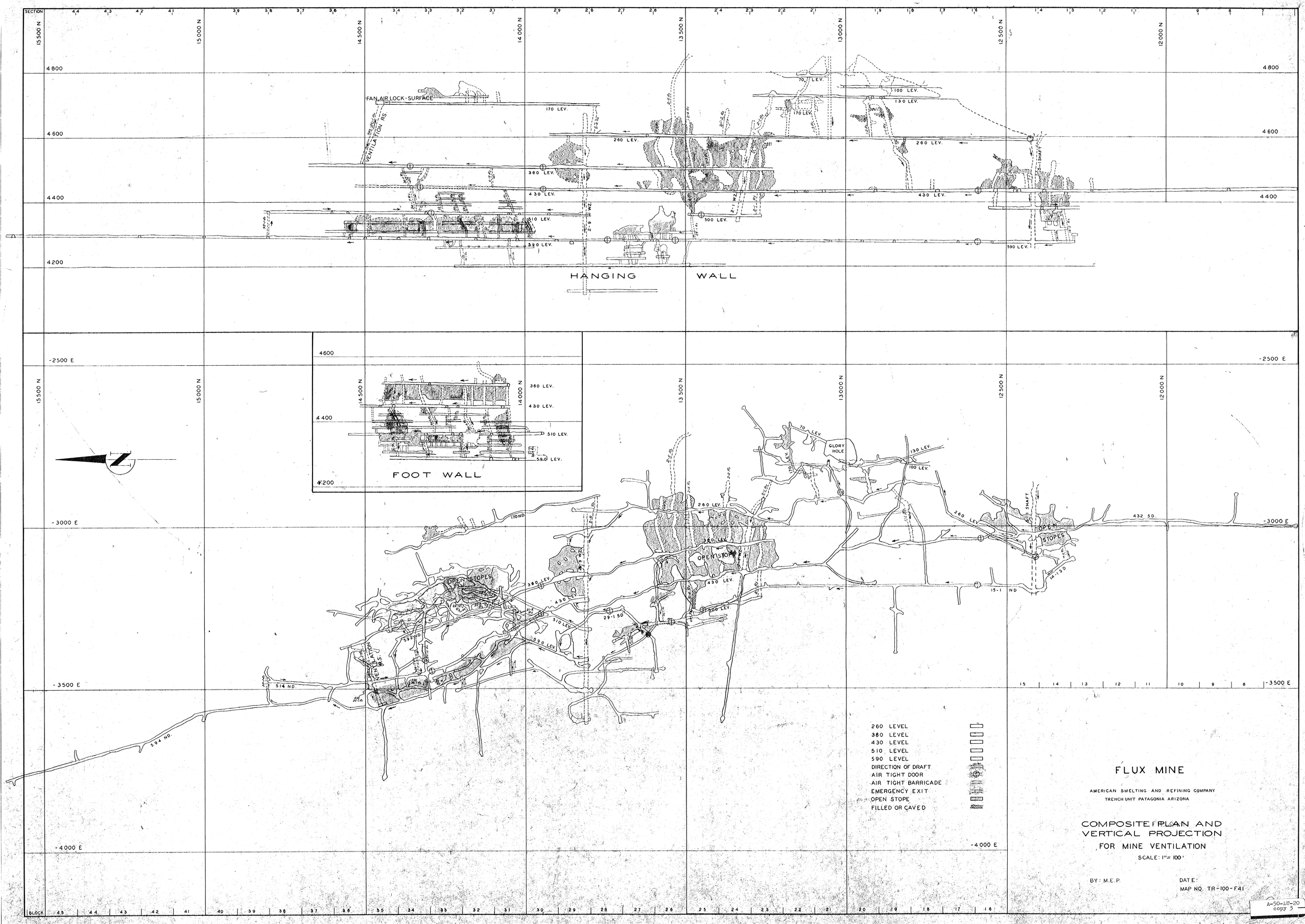


SURFACE GEOLOGY
TRENCH MINE AREA
SANTA CRUZ CO.- ARIZONA
SCALE: 1 IN = 250 FT
American Smelting & Refining Company
Geology by J·E·Frost 1953
Note: geology was mapped on aerial photographs
EXPLANATION:
INTRUSIVE ROCKS
qmp quartz monzonite porphyry
rp red latite porphyry
db diabase
EXTRUSIVE ROCKS
Wan Weiland andesite
SEDIMENTARY ROCKS
Qal Quaternary Alluvium
Tg Tertiary gravels
Ccg Chief conglomerate
Ks Fine-grained Lower Cretaceous (?) sediments
Pal Paleozoic sediments
ALTERATION
SL - Silicification
Py - Pyritization
AB - Argillation
Hm - Hematitic alteration
Am - Amygdaloidal alteration
SE - Sericitic alteration
Tm - Thermal Metamorphism
Bedding
Lineation
Jointing
Breccia
Faults
Mineralized faults
Productive portions of faults
Formation contacts
Member contacts
Shafts
Prospect Pits
Dumps
Trenches
Diamond drill holes
Roads
Habitations
Tailings Ponds
Drainage
10000 E
9000 E
8000 E
7000 E
6000 E
5000 E
4000 E
3000 E
2000 E
8000 N
7000 N
6000 N
5000 N
4000 N
3000 N
2000 N
1000 N
000 N
1000 S
2000 S
SALVADOR
BENDER GROUP No. 10
TAILINGS POND
TRENCH
MILL
8-362




260 LEVEL
360 LEVEL
430 LEVEL
510 LEVEL
590 LEVEL
DIRECTION OF DRAFT
AIR TIGHT DOOR
AIR TIGHT BARRICADE
EMERGENCY EXIT
OPEN STOPE
FILLED OR CAVED

# FLUX MINE

AMERICAN SMELTING AND REFINING COMPANY
TRENCH UNIT PATAGONIA ARIZONA

## COMPOSITE PLAN AND VERTICAL PROJECTION FOR MINE VENTILATION

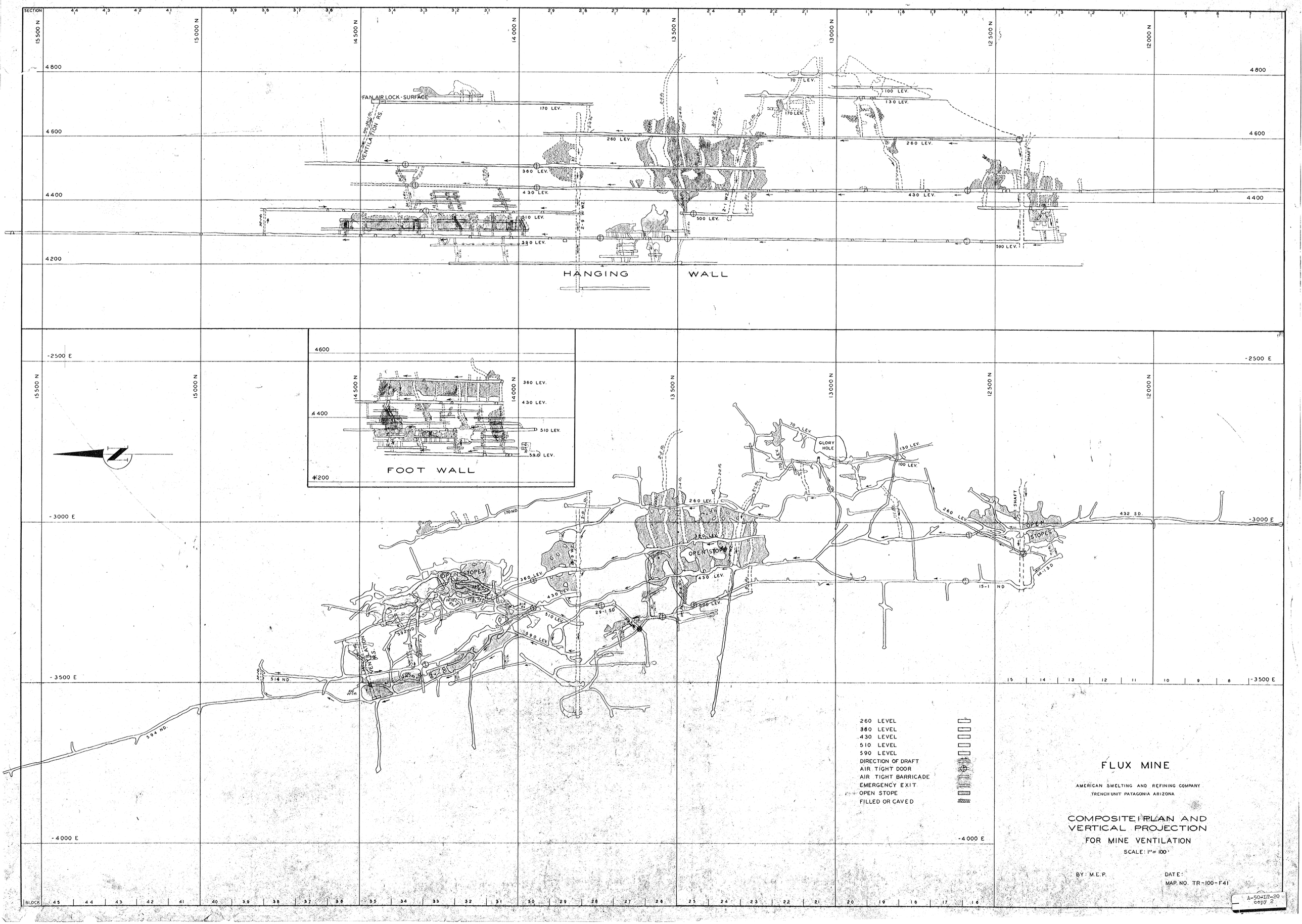
SCALE: 1" = 100'

BY: M.E.P.

DATE:

MAP NO. TR-100-F41

A-50-1/0-20
copy 3




# FLUX MINE

AMERICAN SMELTING AND REFINING COMPANY
TRENCH UNIT PATAGONIA ARIZONA

## COMPOSITE PLAN AND VERTICAL PROJECTION FOR MINE VENTILATION

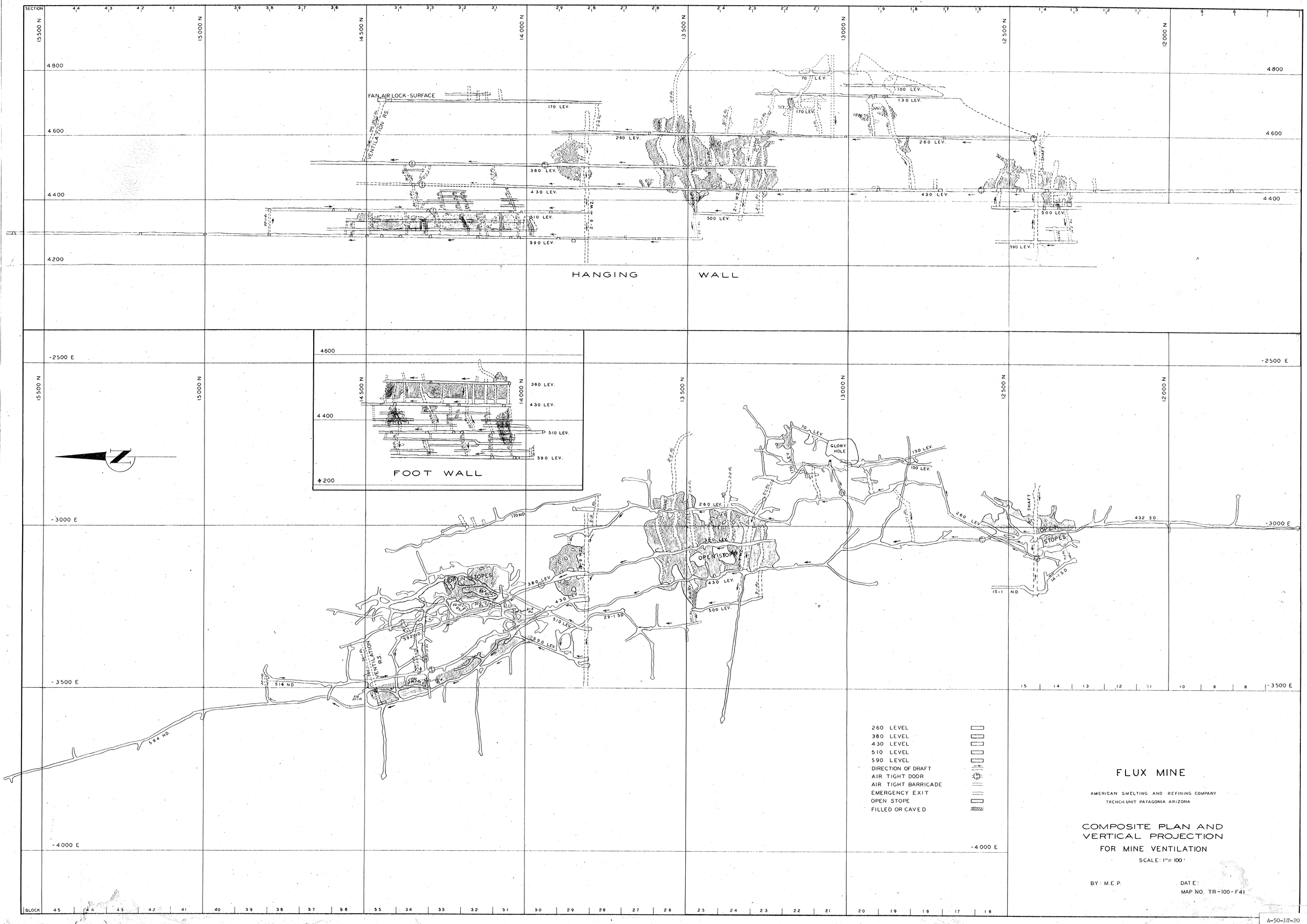
SCALE: 1" = 100'

BY: M.E.P.

DATE:

MAP NO. TR-100-F41

A-50-UR-20
copy 2




# FLUX MINE

AMERICAN SMELTING AND REFINING COMPANY
TRENCH UNIT PATAGONIA ARIZONA

## COMPOSITE PLAN AND VERTICAL PROJECTION FOR MINE VENTILATION

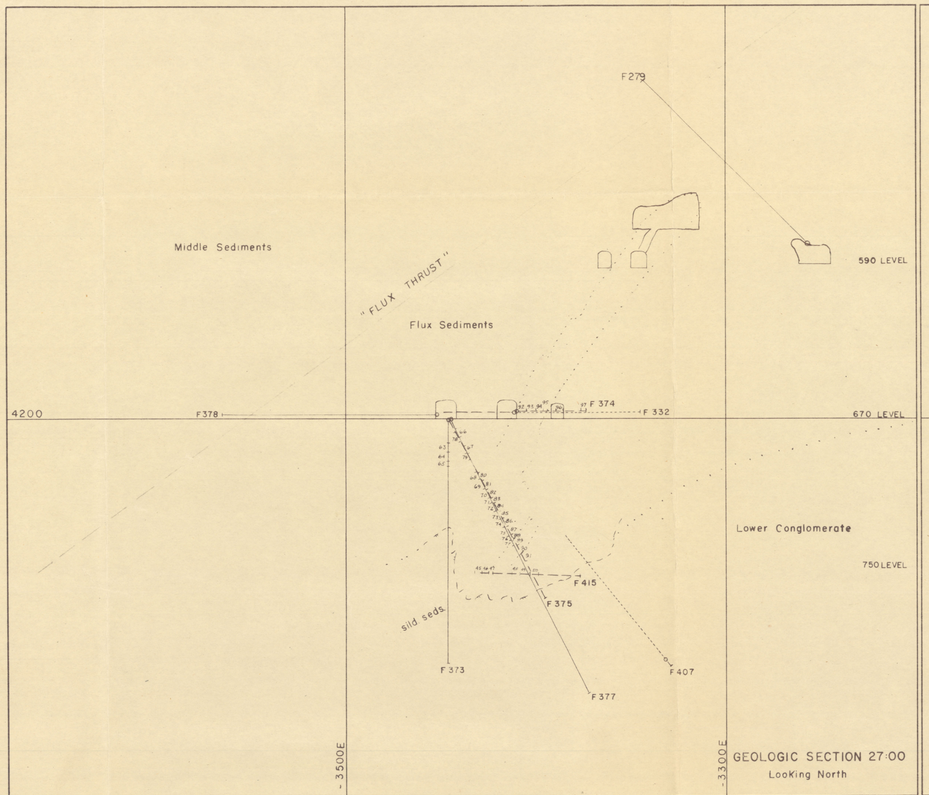
SCALE: 1" = 100'

BY: M.E.P.

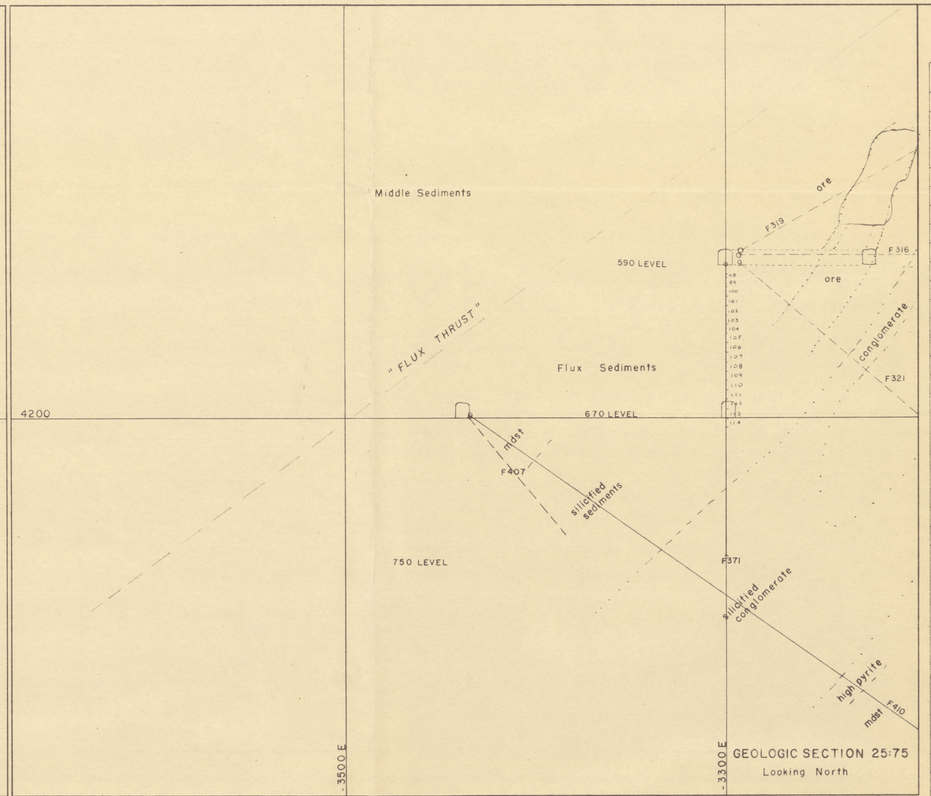
DATE:

MAP NO. TR-100-F41

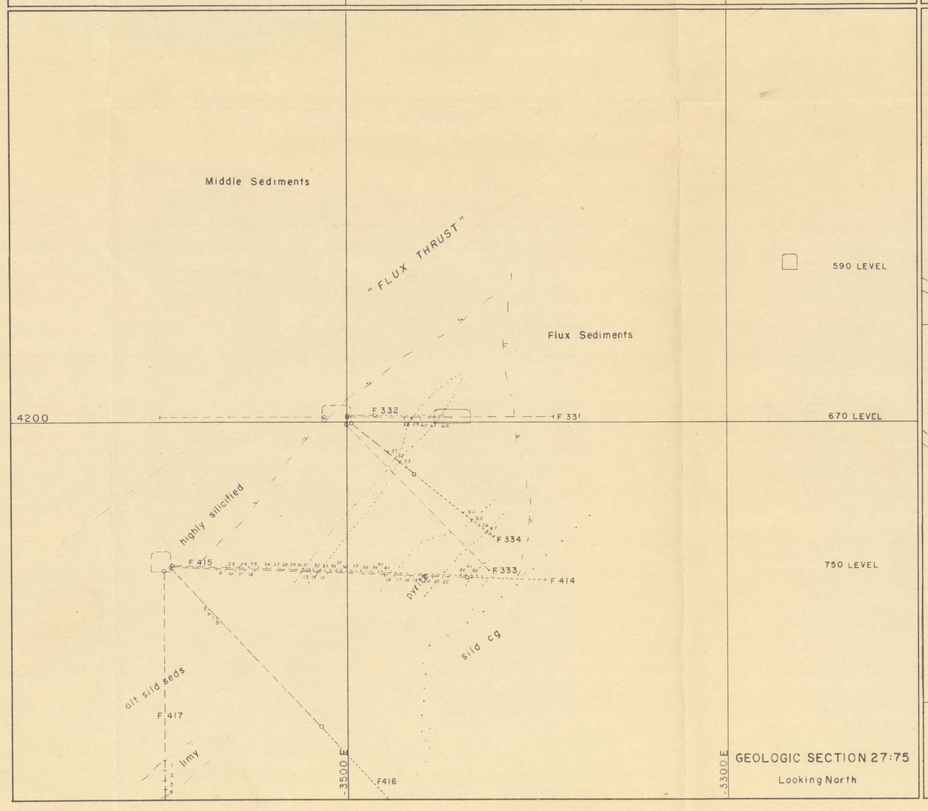
A-50-III-20



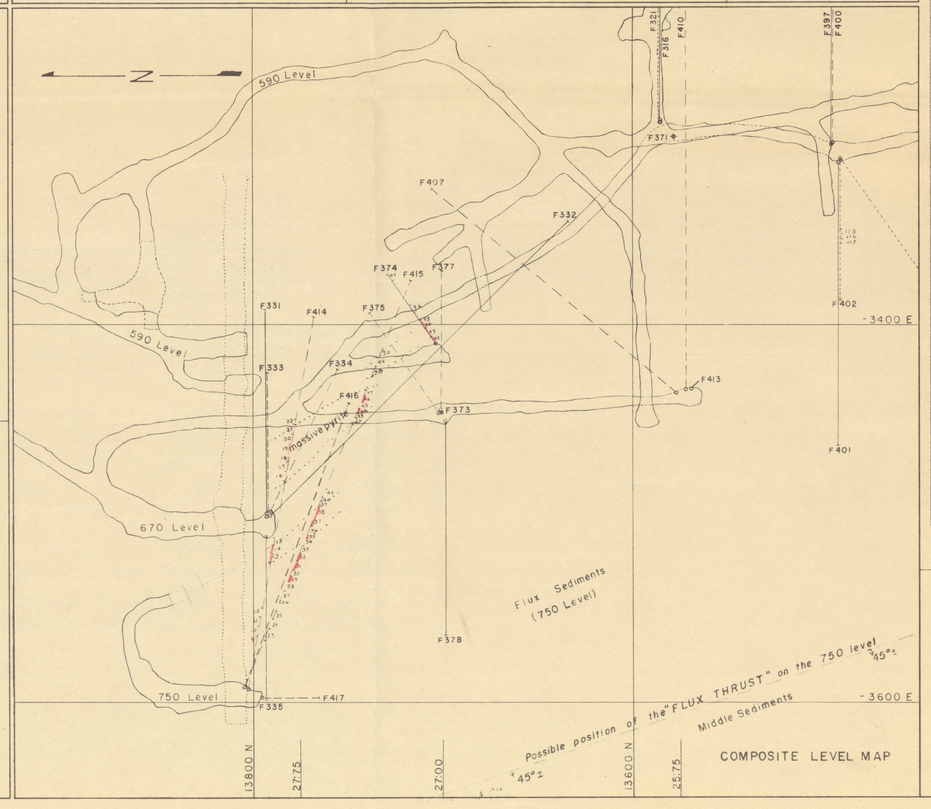

GEOLOGIC SECTION 27:00
Looking North




GEOLOGIC SECTION 25:75
Looking North




GEOLOGIC SECTION 27:75
Looking North




COMPOSITE LEVEL MAP

## ASSAYS

| RUN | HOLE | Run | Ft core | Rec.% | Ag | Pb | Zn |
|---|---|---|---|---|---|---|---|
| 1 | F 417 | 100 - 105 | 1.1 | 22 | 0.32 | 1.40 | 2.15 |
| 2 | | 105 - 110 | 2.7 | 54 | 0.64 | 2.60 | 1.50 |
| 3 | | 110 - 115 | 3.8 | 76 | 0.60 | 0.25 | 2.95 |
| 4 | | 115 - 117 | 1.0 | 50 | 0.16 | 0.20 | 0.75 |
| 5 | F 416 | 26.5 - 29 | 1.6 | 64 | 0.16 | 0.05 | 0.20 |
| 6 | | 29 - 32.5 | 3.5 | 100 | 1.12 | 0.10 | 4.35 |
| 7 | | 32.5 - 35.5 | 3.0 | 100 | 1.96 | 1.50 | 7.05 |
| 8 | | 35.5 - 38 | 2.5 | 100 | 0.92 | 0.40 | 2.30 |
| 9 | F 414 | 24 - 29 | 4.7 | 94 | 1.64 | 0.31 | 7.15 |
| 10 | | 29 - 34 | 4.9 | 98 | 1.00 | 0.26 | 2.75 |
| 11 | | 34 - 39 | 4.8 | 96 | 1.64 | 0.21 | 5.70 |
| 12 | | 39 - 44 | 4.7 | 94 | 0.24 | 0.26 | 0.40 |
| 13 | | 69 - 74 | 5.0 | 100 | 2.84 | 4.38 | 9.15 |
| 14 | | 74 - 77 | 4.6 | 92 | 1.60 | 4.91 | 7.80 |
| 15 | | 77 - 82 | 4.8 | 96 | 1.16 | 0.31 | 0.40 |
| 16 | | 112 - 117 | 3.4 | 68 | 0.76 | 1.17 | 3.30 |
| 17 | | 117 - 122 | 5.0 | 100 | 0.60 | 0.77 | 3.25 |
| * | | 117 - 122 | | | 1.60 | 2.14 | 3.20 |
| 18 | | 122 - 125 | 3.0 | 100 | 0.64 | 0.36 | 3.25 |
| 19 | | 125 - 132 | 1.3 | 17 | 0.56 | 0.41 | 5.35 |
| * | | 125 - 132 | | | 1.00 | 1.38 | 7.90 |
| 20 | | 132 - 137 | 0.5 | 10 | 1.16 | 0.97 | 4.50 |
| * | | 132 - 137 | | | 1.44 | 1.43 | 6.35 |
| 21 | | 137 - 142 | 4.2 | 84 | 1.00 | 1.12 | 3.40 |
| * | | 137 - 142 | | | 1.40 | 1.48 | 5.05 |
| 22 | | 142 - 145 | 1.7 | 56 | 0.56 | 0.74 | 1.60 |
| * | | 142 - 145 | | | 1.72 | 1.84 | 6.15 |
| 23 | F 415 | 27 - 34 | 4.9 | 70 | 2.04 | 0.15 | 0.25 |
| 24 | | 34 - 39 | 4.5 | 90 | 1.80 | 0.30 | 5.10 |
| 25 | | 39 - 44 | 3.4 | 68 | 2.84 | 0.25 | 7.60 |
| 26 | | 45.5 - 50.5 | 2.0 | 100 | 1.92 | 0.95 | 4.15 |
| 27 | | 50.5 - 55.5 | 5.0 | 100 | 1.80 | 0.15 | 3.75 |
| 28 | | 55.5 - 60.5 | 2.7 | 54 | 2.08 | 1.02 | 3.55 |
| 29 | | 60.5 - 64 | 3.5 | 100 | 1.44 | 1.20 | 12.45 |
| 30 | | 64 - 67.5 | 3.0 | 85 | 0.08 | 0.20 | 0.85 |
| 31 | | 67.5 - 73 | 4.8 | 74 | 2.08 | 1.40 | 10.75 |
| * | | 68 - 73 | | | 2.60 | 2.14 | 10.45 |
| 32 | | 73 - 77 | 3.2 | 80 | 1.96 | 1.85 | 9.85 |
| * | | 73 - 78 | | | 2.84 | 2.09 | 4.95 |
| 33 | | 77 - 82 | 4.7 | 94 | 0.36 | 0.65 | 0.45 |
| 34 | | 82 - 85.5 | 2.0 | 58 | nil | 0.15 | 1.70 |
| 35 | | 85.5 - 87.5 | 1.5 | 75 | 2.88 | 0.20 | 21.40 |
| 36 | | 87.5 - 92.5 | 2.8 | 56 | 1.72 | 0.30 | 6.05 |
| * | | 89 - 92.5 | | | 0.76 | 0.30 | 8.20 |
| 37 | | 92.5 - 98 | 1.4 | 25 | 0.80 | 0.20 | 26.00 |
| * | | 92.5 - 98 | | | 0.32 | 0.20 | 13.35 |
| 38 | | 98 - 103.5 | 4.2 | 76 | 1.76 | 0.80 | 16.20 |
| * | | 98 - 103.5 | | | 3.32 | 3.52 | 12.80 |
| 39 | | 103.5 - 107 | 3.0 | 85 | 0.48 | 0.85 | 1.65 |
| * | | 103.5 - 106 | | | 1.72 | 2.44 | 7.75 |
| 40 | | 107 - 109 | 1.4 | 70 | 0.60 | 0.75 | 2.10 |
| 41 | | 109 - 114 | 4.8 | 96 | 0.92 | 0.70 | 5.50 |
| 42 | | 151 - 153 | 1.8 | 90 | 0.72 | 0.10 | 3.90 |
| 43 | | 153 - 156 | 2.7 | 90 | 0.76 | 0.25 | 2.60 |
| 44 | | 156 - 159 | 2.4 | 80 | 4.44 | 1.45 | 22.05 |
| 45 | | 159 - 163.5 | 4.0 | 88 | 0.28 | 0.25 | 2.35 |
| 46 | | 163.5 - 166 | 2.2 | 88 | 4.96 | 0.85 | 12.50 |
| 47 | | 166 - 168.5 | 2.5 | 100 | nil | 0.20 | 0.50 |
| 48 | | 179 - 184 | 5.0 | 100 | 0.52 | 0.25 | 3.85 |
| 49 | | 184 - 189.5 | 5.5 | 100 | 0.16 | 0.25 | 1.90 |
| 50 | | 189.5 - 193.5 | 3.4 | 85 | 0.24 | 0.15 | 1.10 |
| 51 | F 334 | 26 - 30 | 4.0 | 100 | 0.12 | nil | 0.35 |
| 52 | | 30 - 34 | 4.0 | 100 | 5.64 | 3.30 | 17.80 |
| 53 | | 34 - 38 | 4.0 | 100 | 0.24 | 0.15 | 0.60 |
| 54 | | 75.5 - 80.5 | 5.0 | 100 | fr. | 0.10 | 0.20 |

| RUN | HOLE | Run | Ft core | Rec.% | Ag | Pb | Zn |
|---|---|---|---|---|---|---|---|
| 55 | F 334 | 80.5 - 85.5 | 5.0 | 100 | 1.80 | 3.50 | 8.20 |
| 56 | | 85.5 - 90.5 | 5.0 | 100 | 0.80 | 1.20 | 4.95 |
| 57 | | 90.5 - 92.5 | 2.0 | 100 | 0.28 | 0.60 | 2.35 |
| 58 | F 331 | 30.5 - 34 | 2.6 | 74 | tr. | nil | 0.10 |
| 59 | | 34 - 39 | 5.0 | 100 | 2.00 | 1.40 | 7.80 |
| 60 | | 39 - 44 | 5.0 | 100 | 1.80 | 1.60 | 10.75 |
| 61 | | 44 - 49 | 5.0 | 100 | 10.32 | 4.75 | 11.55 |
| 62 | | 49 - 54 | 5.0 | 100 | 7.32 | nil | 0.50 |
| 63 | F 373 | 12 - 17 | | | 2.36 | 2.50 | 3.95 |
| 64 | | 17 - 22 | | | 3.36 | 2.05 | 3.65 |
| 65 | | 22 - 25 | | | 1.60 | 0.45 | 4.00 |
| 66 | F 377 | 5 - 10 | 5.0 | 100 | 2.24 | 1.70 | 3.60 |
| 67 | | 15 - 20 | 4.4 | 88 | 1.24 | 0.55 | 3.70 |
| 68 | | 30 - 35 | 5.0 | 100 | 1.68 | 0.30 | 3.15 |
| 69 | | 35 - 40 | 4.6 | 92 | 2.80 | 0.55 | 4.30 |
| 70 | | 40 - 45 | 5.0 | 100 | 1.08 | 0.05 | 2.55 |
| 71 | | 45 - 48 | 5.0 | 100 | 1.52 | 0.10 | 0.40 |
| 72 | | 48 - 53 | 5.0 | 100 | 5.04 | 0.35 | 2.75 |
| 73 | | 53 - 58 | 4.9 | 98 | 3.16 | 0.30 | 5.35 |
| 74 | | 58 - 63 | 4.8 | 96 | 2.04 | 0.10 | 3.40 |
| 75 | | 63 - 68 | 5.0 | 100 | 2.32 | 0.65 | 6.65 |
| 76 | | 68 - 70 | 5.0 | 100 | 1.04 | 0.15 | 4.45 |
| 77 | | 70 - 73.5 | 3.0 | 86 | tr. | 0.10 | 0.30 |
| 78 | F 375 | 8 - 13 | 5.0 | 100 | 1.40 | 1.50 | 2.75 |
| 79 | | 19 - 24 | 4.8 | 96 | 1.08 | 0.25 | 2.60 |
| 80 | | 33 - 38 | 5.0 | 100 | 0.44 | 0.30 | 0.45 |
| 81 | | 38 - 43 | 5.0 | 100 | 4.28 | 2.70 | 7.70 |
| 82 | | 43 - 48 | 4.5 | 90 | 3.88 | 1.35 | 11.40 |
| 83 | | 48 - 51 | 3.8 | 95 | 2.48 | 1.20 | 5.80 |
| 84 | | 51 - 56 | 4.9 | 98 | 6.24 | 1.85 | 8.90 |
| 85 | | 56 - 60 | 4.2 | 84 | 3.44 | 1.40 | 8.40 |
| 86 | | 60 - 65 | 5.0 | 100 | 2.08 | 0.35 | 2.65 |
| 87 | | 65 - 70 | 5.0 | 100 | 0.36 | 0.40 | 0.10 |
| 88 | | 70 - 72 | 2.0 | 100 | 1.72 | 0.50 | 2.25 |
| 89 | | 72 - 77 | 4.8 | 96 | 6.16 | 8.55 | 16.75 |
| 90 | | 77 - 82 | 4.7 | 94 | 3.12 | 3.35 | 12.05 |
| 91 | | 82 - 87 | 4.8 | 96 | 0.64 | 0.75 | 1.70 |
| 92 | F 374 | 0 - 5 | 5.0 | 100 | 0.48 | 2.15 | 6.95 |
| 93 | | 5 - 10 | 5.0 | 100 | 4.56 | 2.40 | 9.70 |
| 94 | | 10 - 13.5 | 3.5 | 100 | 8.36 | 4.45 | 13.20 |
| 95 | | 13.5 - 15 | 1.5 | 100 | tr. | 0.10 | 0.55 |
| 96 | | 20 - 25 | 5.0 | 100 | 0.96 | 0.85 | 5.70 |
| 97 | | 38 - 42 | 4.0 | 100 | 3.48 | 2.00 | 12.25 |
| 98 | F 371 | 5 - 7 | 1.9 | 95 | 0.60 | 3.25 | 8.25 |
| 99 | | 7 - 12 | 5.0 | 100 | 1.64 | 5.50 | 7.00 |
| 100 | | 12 - 17 | 4.9 | 98 | 1.24 | 4.25 | 5.90 |
| 101 | | 17 - 22 | 4.8 | 96 | 1.96 | 3.05 | 4.60 |
| 102 | | 22 - 27 | 5.0 | 100 | 1.68 | 3.85 | 4.25 |
| 103 | | 27 - 32 | 5.0 | 100 | 1.96 | 5.30 | 3.20 |
| 104 | | 32 - 37 | 5.0 | 100 | 0.48 | 0.50 | 0.55 |
| 105 | | 37 - 42 | 5.0 | 100 | 0.52 | 1.72 | 2.40 |
| 106 | | 42 - 47 | 5.0 | 100 | 1.28 | 1.65 | 2.60 |
| 107 | | 47 - 52 | 5.0 | 100 | 1.04 | 2.10 | 3.85 |
| 108 | | 52 - 57 | 4.3 | 86 | 1.56 | 1.15 | 2.35 |
| 109 | | 57 - 62 | 5.0 | 100 | 0.56 | 1.30 | 1.85 |
| 110 | | 62 - 67 | 5.0 | 100 | 1.20 | 1.75 | 3.25 |
| 111 | | 67 - 72 | 5.0 | 100 | 1.52 | 1.35 | 4.15 |
| 112 | | 72 - 77 | 5.0 | 100 | 1.12 | 0.35 | 1.90 |
| 113 | | 77 - 82 | 4.8 | 96 | 0.20 | 0.05 | 1.10 |
| 114 | | 82 - 87 | 4.2 | 84 | 0.76 | 0.25 | 0.55 |
| 115 | F 402 | 49 - 54 | 5.0 | 100 | 0.20 | 1.29 | 0.65 |
| 116 | | 54 - 59 | 5.0 | 100 | 1.08 | 4.15 | 3.60 |
| 117 | | 59 - 61 | 1.8 | 90 | 1.72 | 6.00 | 6.80 |

* Sludge assay

Horizontal Hole
Hole Inclined down
Hole Inclined up
Hole in front of section
Hole behind section

AMERICAN SMELTING AND REFINING COMPANY
TRENCH UNIT — PATAGONIA, ARIZONA

# 670 & 750 STATIONS
# DIAMOND DRILLING AND GEOLOGY

Scale: 1" = 40' — Sept. 1953
By: P.I.E. - M.B.J. — TR-150-E 267

A-48-IT-20