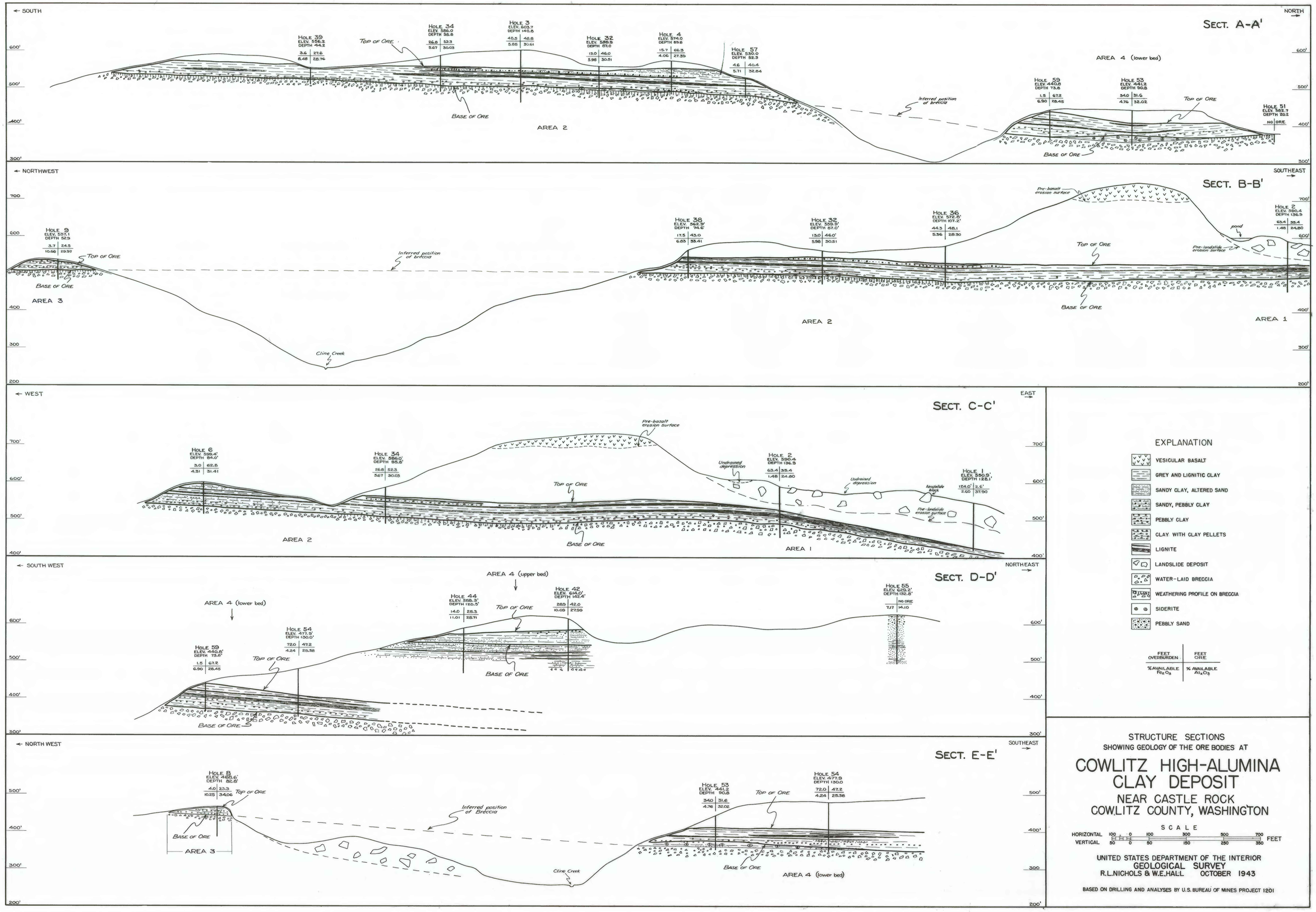
45-12
FIG. 3


SECT. A-A'
← SOUTH
NORTH
HOLE 39 ELEV. 556.2 DEPTH 44.2
HOLE 34 ELEV. 586.0 DEPTH 35.8
HOLE 3 ELEV. 603.7 DEPTH 140.8
HOLE 32 ELEV. 588.3 DEPTH 87.0
HOLE 4 ELEV. 574.0 DEPTH 89.8
HOLE 57 ELEV. 530.0 DEPTH 52.3
HOLE 59 ELEV. 440.8 DEPTH 73.8
HOLE 53 ELEV. 441.2 DEPTH 90.8
HOLE 51 ELEV. 582.7 DEPTH 20.2
TOP OF ORE
BASE OF ORE
AREA 2
AREA 4 (lower bed)
Inferred position of breccia
SECT. B-B'
← NORTHWEST
SOUTHEAST
HOLE 9 ELEV. 537.1 DEPTH 52.9
HOLE 38 ELEV. 562.9' DEPTH 74.6'
HOLE 32 ELEV. 559.3' DEPTH 87.0'
HOLE 36 ELEV. 572.8' DEPTH 107.2'
HOLE 2 ELEV. 580.4 DEPTH 136.9
Pre-basalt erosion surface
Pre-landslide erosion surface
pond
Cline Creek
AREA 3
AREA 2
AREA 1
SECT. C-C'
← WEST
EAST
HOLE 6 ELEV. 598.4' DEPTH 84.0'
HOLE 34 ELEV. 586.0' DEPTH 35.8'
HOLE 2 ELEV. 580.4 DEPTH 136.9
HOLE 1 ELEV. 550.9' DEPTH 128.1'
Undrained depression
landslide block
SECT. D-D'
← SOUTH WEST
NORTHEAST
AREA 4 (upper bed)
AREA 4 (lower bed)
HOLE 44 ELEV. 558.3' DEPTH 120.5'
HOLE 42 ELEV. 614.0' DEPTH 142.4'
HOLE 55 ELEV. 629.2' DEPTH 132.8'
HOLE 54 ELEV. 477.9' DEPTH 130.0'
NO ORE
SECT. E-E'
← NORTH WEST
SOUTHEAST
HOLE 8 ELEV. 488.6' DEPTH 82.8'
HOLE 53 ELEV. 441.2 DEPTH 90.8
HOLE 54 ELEV. 477.9 DEPTH 130.0
Inferred position of Breccia
EXPLANATION
VESICULAR BASALT
GREY AND LIGNITIC CLAY
SANDY CLAY, ALTERED SAND
SANDY, PEBBLY CLAY
PEBBLY CLAY
CLAY WITH CLAY PELLETS
LIGNITE
LANDSLIDE DEPOSIT
WATER-LAID BRECCIA
WEATHERING PROFILE ON BRECCIA
SIDERITE
PEBBLY SAND
FEET OVERBURDEN
FEET ORE
% AVAILABLE Fe_2O_3
% AVAILABLE Al_2O_3
STRUCTURE SECTIONS
SHOWING GEOLOGY OF THE ORE BODIES AT
COWLITZ HIGH-ALUMINA CLAY DEPOSIT
NEAR CASTLE ROCK
COWLITZ COUNTY, WASHINGTON
SCALE
HORIZONTAL 100 0 100 300 500 700 FEET
VERTICAL 50 0 50 150 250 350
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
R.L.NICHOLS & W.E.HALL OCTOBER 1943
BASED ON DRILLING AND ANALYSES BY U.S. BUREAU OF MINES PROJECT 1201