

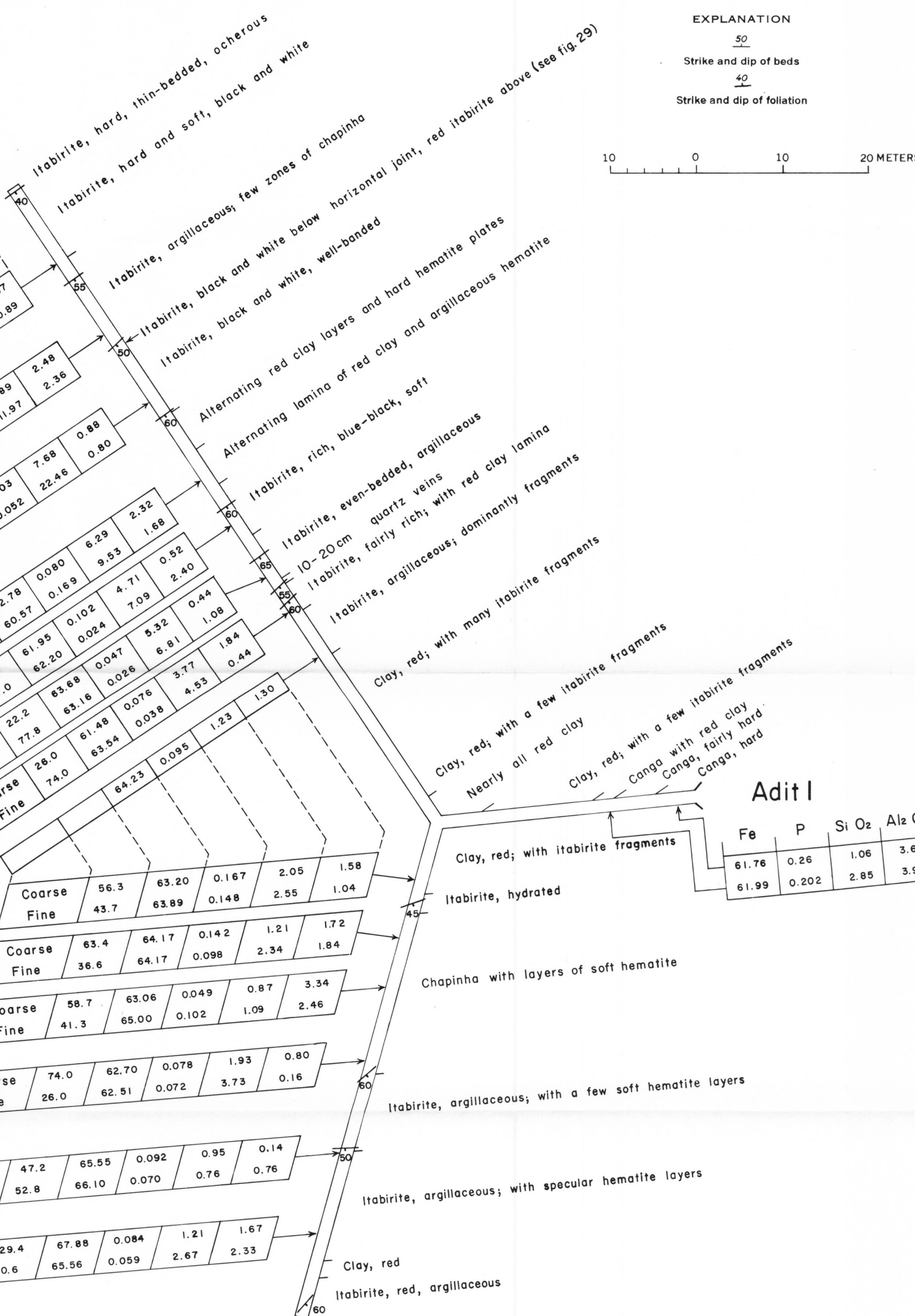
INDEX MAP SHOWING LOCATION OF
MANNESMANN ADITS 1 AND 2

0 100 200 300 400 500 meters

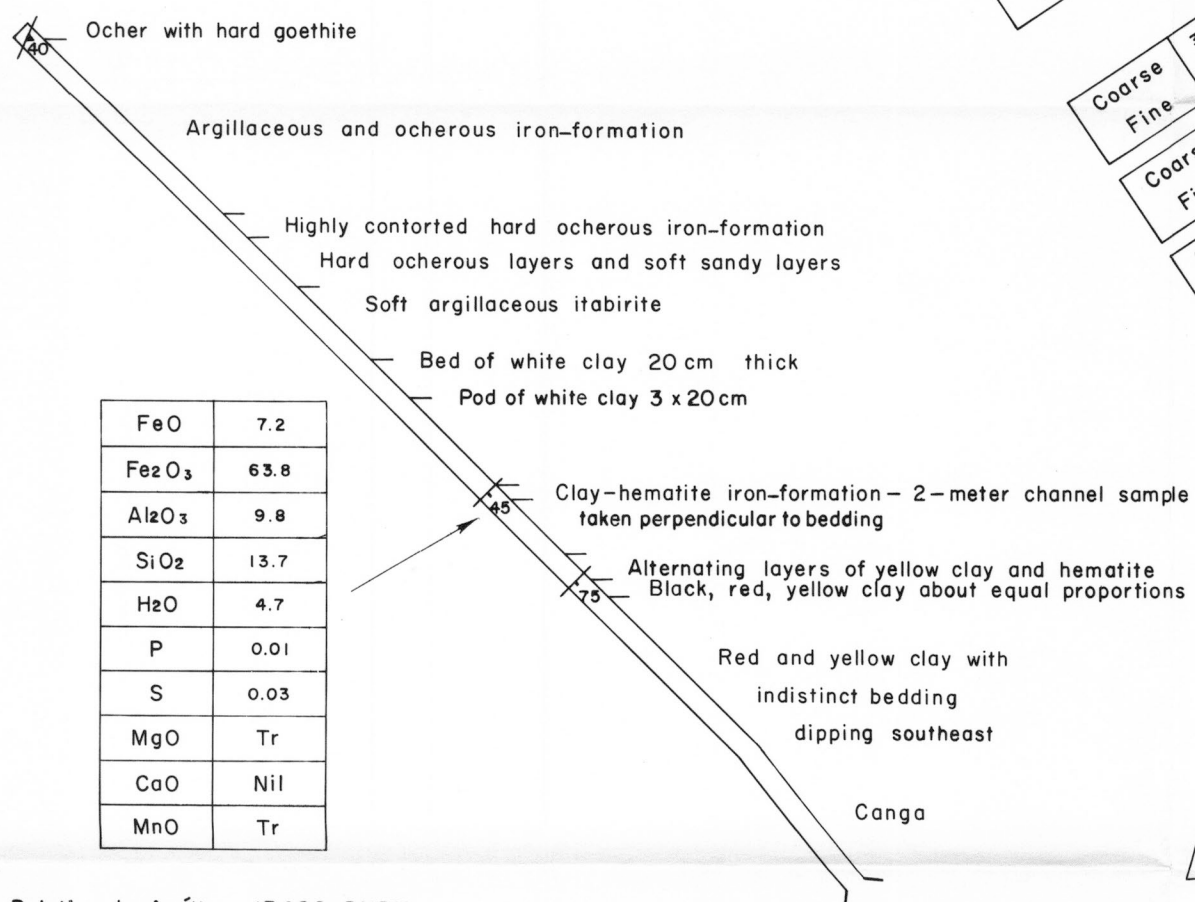
Contour interval 10 meters
Datum is mean sea level

Coarse = more than 10mm
Fine = less than 10mm

Fraction sized fraction	Wt. percent			
	Fe	P	Si O ₂	Al ₂ O ₃
Coarse	61.0	51.30	0.07	24.31
Fine	39.0	36.75	0.033	45.70
Coarse	48.4	61.68	0.065	5.89
Fine	51.6	59.33	0.041	11.97
Coarse	17.3	56.47	0.103	7.68
Fine	82.7	57.80	0.052	22.46
Coarse	33.8	62.78	0.080	6.29
Fine	66.2	60.57	0.169	9.53
Coarse	23.0	61.95	0.102	4.71
Fine	77.0	62.20	0.024	7.09
Coarse	22.2	63.68	0.047	5.32
Fine	77.8	63.16	0.026	6.81
Coarse	28.0	61.48	0.076	3.77
Fine	74.0	63.54	0.038	4.53
Coarse	64.23	0.095	1.23	1.30
Fine	35.77	0.005	0.77	0.70



EXPLANATION
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Strike and dip of beds
40
Strike and dip of foliation



FeO	7.2
Fe ₂ O ₃	63.8
Al ₂ O ₃	9.8
SiO ₂	13.7
H ₂ O	4.7
P	0.01
S	0.03
MgO	Tr
CaO	Nil
MnO	Tr

Boletim do Análise 13486 DNPM
Rio de Janeiro, Brasil
Analyzed by Aida Espinola

Adit 2

Adit 1

	Fe	P	Si O ₂	Al ₂ O ₃
Clay, red; with itabirite fragments	61.76	0.26	1.06	3.62
Itabirite, hydrated	61.99	0.202	2.85	3.96

Mine surveys, and analyses adit 1, courtesy of Mannesmann Mineração, 1955

MAPS OF MANNESMANN ADIT WITH ANALYSES OF ORE, SERRA DA MUTUCA,
MACACOS QUADRANGLE, MINAS GERAIS, BRAZIL

Geology by Joel B. Pomerene, 1956