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A-103

236/2 (109)

ROXBURGH, W.H., 1960, Potential Ore Reserve Calculations Can. Jav. Ltd.

X

Memorandum Re

Julian Iron Ore Deposit

236/2 (109).

In respect to the Julian orebody the following basic information is submitted.

There is a minimum of 500 million tons of raw iron available for open pit mining from which some 200 million tons of high quality iron ore concentrates, having an average grade lying between 66% - 68.5% iron, can be recovered in a commercial plant.

The following grade of iron can be expected in mining this ore deposit as feed for a concentrating plant:-

Iron	34.2 %
Manganese	0.32%
Silica	54.5 %
Sulfur, Phosphorus)	Less than
& Titania)	0.05% each

This raw ore when processed in a commercial plant using

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simple gravity methods of concentration will give concentrates having the following average analysis:-

Iron	66.0 %	
Silica	4.0 %	
Phosphorus	0.02 %	maximum
Sulfur	0.02 %	"
Manganese	0.5 %	"
Lime, Alumina) Magnesia & Titania)	0.05 %	" each

Through the use of an additional stage of concentration a concentrate in which the silica can be reduced to less than 2% with a corresponding increase in average iron content which could exceed 68.5% might be produced, should such a "super concentrate" iron ore product be desired.

The selling price of such a super concentrate would necessarily reflect an increase over the selling price of the gravity concentrates necessary to cover the additional processing costs involved.

W. H. Roxburgh,
Vice-President, Engineering.

15 October, 1965

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HEAD OFFICE
BOARD OF TRADE BUILDING
ST. JOHN'S, NEWFOUNDLAND
CANADA

NEW YORK TELEPHONE.
CIRCLE 5-2910

Canadian Javelin Limited

EXECUTIVE OFFICE

680 Fifth Avenue
New York 19, New York

August 3, 1960

Mr. John C. Doyle
680 Fifth Avenue
New York 19, New York

Re: Julian Iron Corporation
Reserve Ore Estimate

Dear Sir:

The attached report presents a preliminary estimate of the reasonable assured raw ore tonnages which may be expected in the Julian Peninsula orebody of the Julian Iron Corporation.

As you are aware, this work has been carried only to the point where major development expenditures would start. The work completed is sufficient, when examined by competent engineers and geologists to show that we have a major orebody on the Julian property ready for development and production.

For purposes of discussion in general terms of the results of our exploration to date, the following is summarized.

Exploration on the Julian orebody to date has indicated a minimum tonnage of 380,000,000 tons of raw ore containing before treatment about34.5% iron. Recovery of about 150,000,000 tons of iron ore concentrates containing about 64%

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iron 1.2% manganese and less than 5.5% silica with all other impurities well below acceptable limits, can be expected from treatment of this ore using simple gravity concentration processes.

Yours very truly,

WHR/ma

W. H. Roxburgh
Chief Engineer

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JULIAN IRON CORPORATION

PRELIMINARY ORE ESTIMATE

Working under the policy laid down by Management, exploration of the Julian orebody has been carried only to the point where the presence of a major orebody has been clearly indicated. The detailed geological studies, magnetometer surveys, and diamond drilling have been combined with the geological knowledge of the Canadian Javelin staff in the Wabush-Julienne area to arrive at this preliminary estimate of the ore reserve in the Julian deposit.

The following qualifications are presented covering the preparation of this estimate:

1. The outline of the orebody has been arrived at by interpretation from the magnetic survey. This interpretation has been checked with reasonable accuracy along the south contact by outcrops and by hole J 5 drilled to eheck the position of the north contact.

Experience under almost identical conditions on the Wabush deposit which has been drilled in detail has shown this method of locating the rock surface ore waste contact to be accurate within acceptable limits..

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2. As it was necessary to obtain the most information from a strictly limited expenditure, drill holes were spaced to give the most necessary information while still using locations which fitted into the overall pattern of drilling laid out for the full development drill program.

3. Metallurgical tests carried out on the 1957 drill samples were considered sufficient to show that the metallurgical studies made on the Wabush deposit, which appeared to be physically and mineralogically similar to the Julian deposit, were fully applicable to the Julian deposit. The 1958 drill samples were saved and similar metallurgical tests can be made at any time.

It is felt that results of large scale metallurgical tests on a carefully chosen representative bulk sample would give more information than further tests on drill samples. These tests have most value when done in cooperation with interested financial and consumer groups and are planned for the initial stages of discussion with these groups.

4. Surface sampling of outcrops together with the relatively uniform results of the drill samples, combined with a detailed knowledge of the geological and mineralogical characteristics of the orebody have made it possible to estimate the

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grade of the orebody with reasonable accuracy.

The average of surface sampling weighted by cross section shows 35.9% iron. The average of 2614 feet of drill samples gives an average of 35.1% Fe. Based on these figures and experience at Wabush, the grade on completion of exploration can be expected to be about 34.5%.iron.

5. Recovery of concentrates from the ore, based on metallurgical tests on drill core and results of Wabush Lake bulk sampling can be expected to be about 40% or 2.5 tons of raw ore will produce on ton of concentrates containing about 64% iron.

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CANADIAN JAVELIN LIMITED

JULIENNE LAKE DEPOSIT

POTENTIAL ORE RESERVES CALCULATIONS

POTENTIAL ORE

SECTION	AREA		TONS
13000E	4.62	X 200 X 200 X 300 ÷12	4,620,000
12500E	7.60	X200 X 200 X 500 ÷12	12,650,000
12000E	11.35	"	13,950,000
11500E	21.49	"	35,300,000
11000E	33.14	"	55,100,000
10500E	40.79	"	68,000,000
10000E	42.31	"	70,600,000
9500E	27.61	"	46,000,000
9000E	16.00	"	26,700,000
8500E	13.21	"	22,000,000
8000E	9.25	"	16,600,000
7500E	2.52	"	4,200,000
		Factor: 12 cubic feet per ton	381,220,000 TONS

LOW GRADE MATERIAL

11500E	1.16	X 400 X 400 X 500 ÷12	1,930,000 TONS

OVERBURDEN

			YARDS
13000E	5.34	X 200 X 200 X 300÷27	2,370,000
12500E	6.65	X 200 X 200 X 500÷27	4,930,000
12000E	7.19	"	5,330,000
11500E	2.13	"	1,570,000
11000E	.34	"	250,000
10500E	.17	"	125,000
10000E	1.06	"	735,000
9500E			
9000E			
8500E			
8500E	0.5	"	370,000
7500E	1.4	"	1,040,000
			16,770,000 CUBIC YARDS

W. H. Roxburgh

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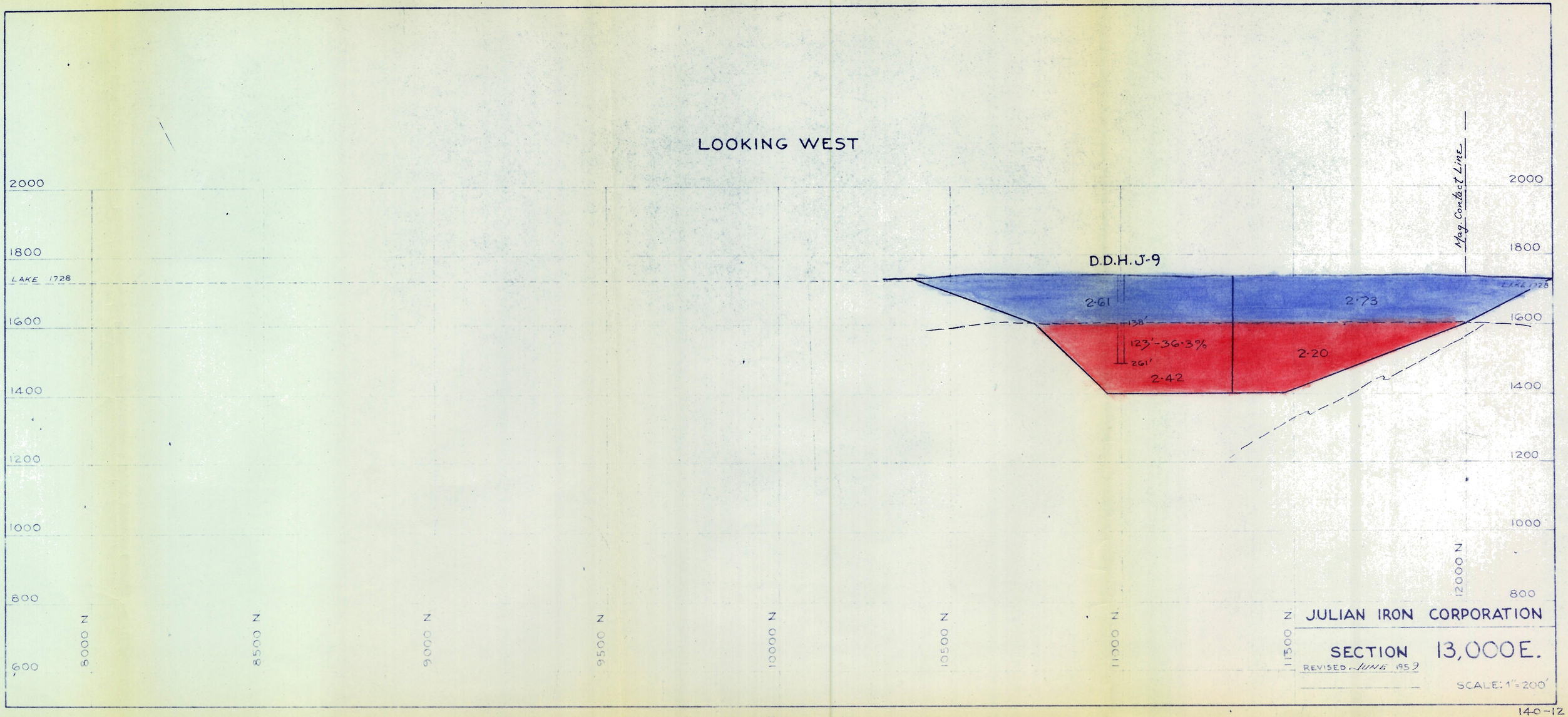


JULIAN IRON CORPORATION

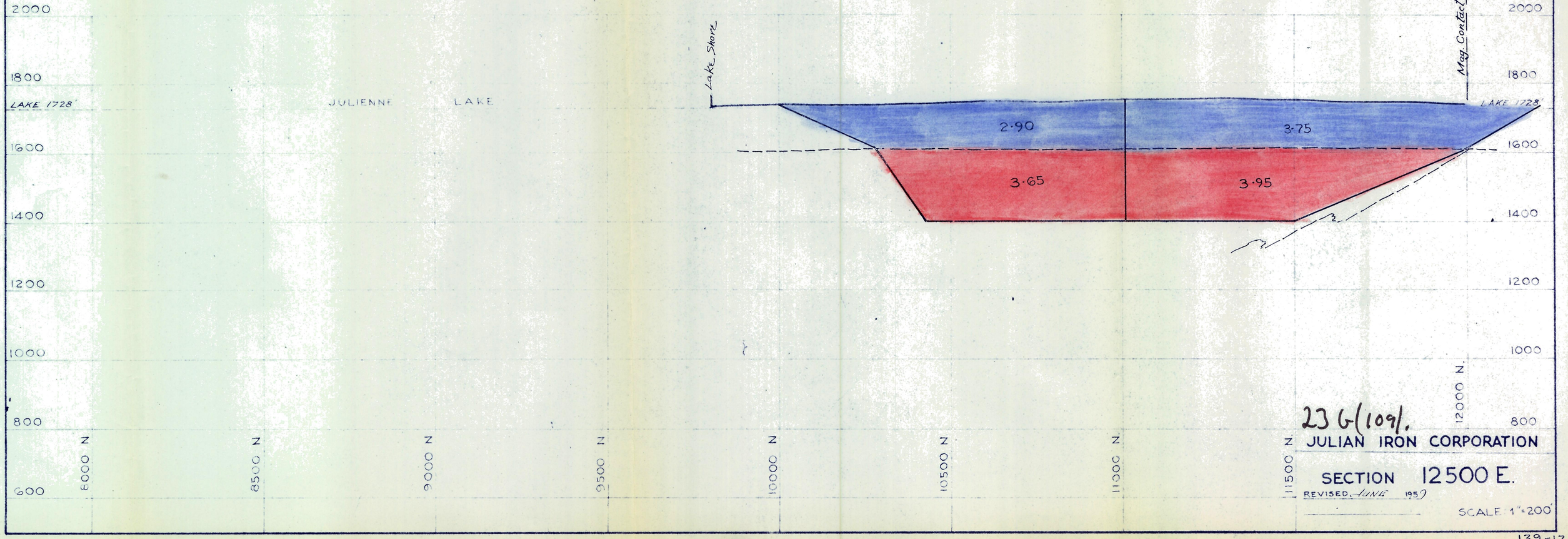
SECTION 13,000E.

REVISED. JUNE 1952

SCALE: 1"=200'

140-12

LOOKING WEST



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JULIAN IRON CORPORATION

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REVISED JUNE 1959

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139-12

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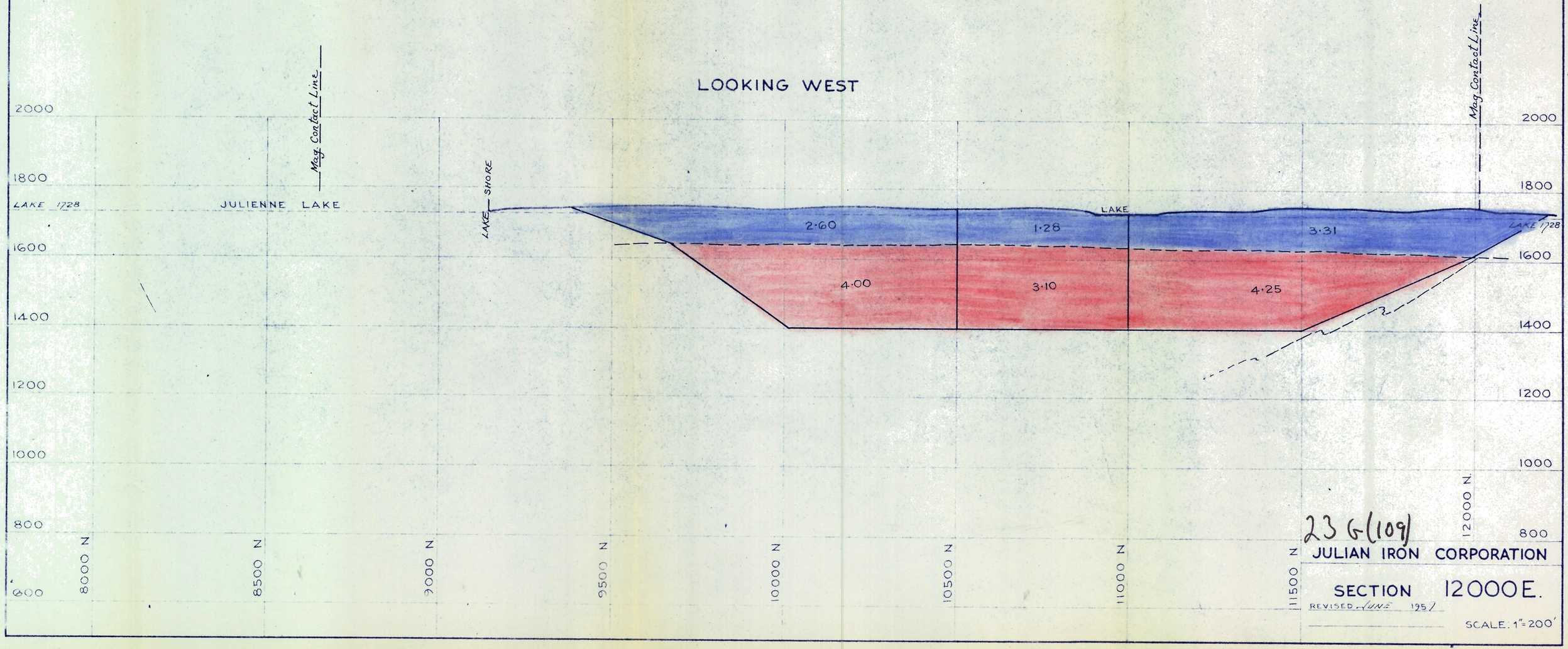

23 G (109)

JULIAN IRON CORPORATION

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REVISED JUNE 1951

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138-12

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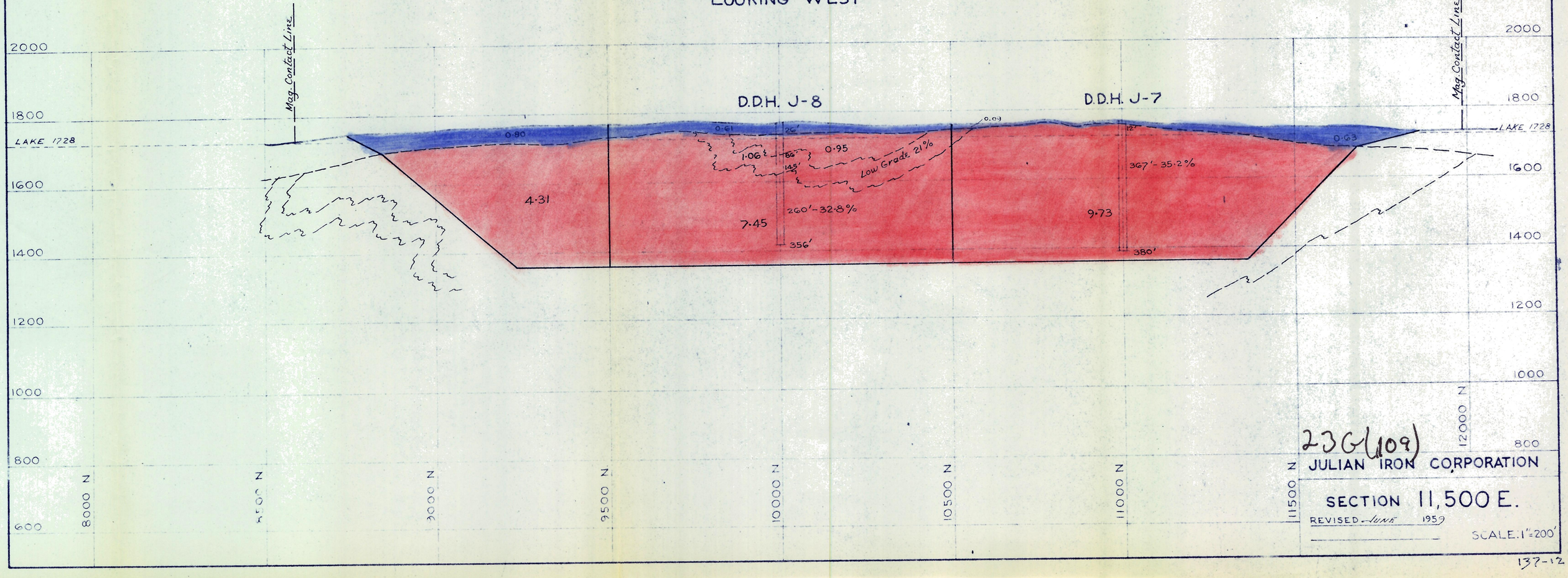

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JULIAN IRON CORPORATION

SECTION 11,500 E.

REVISED - JUNE 1959

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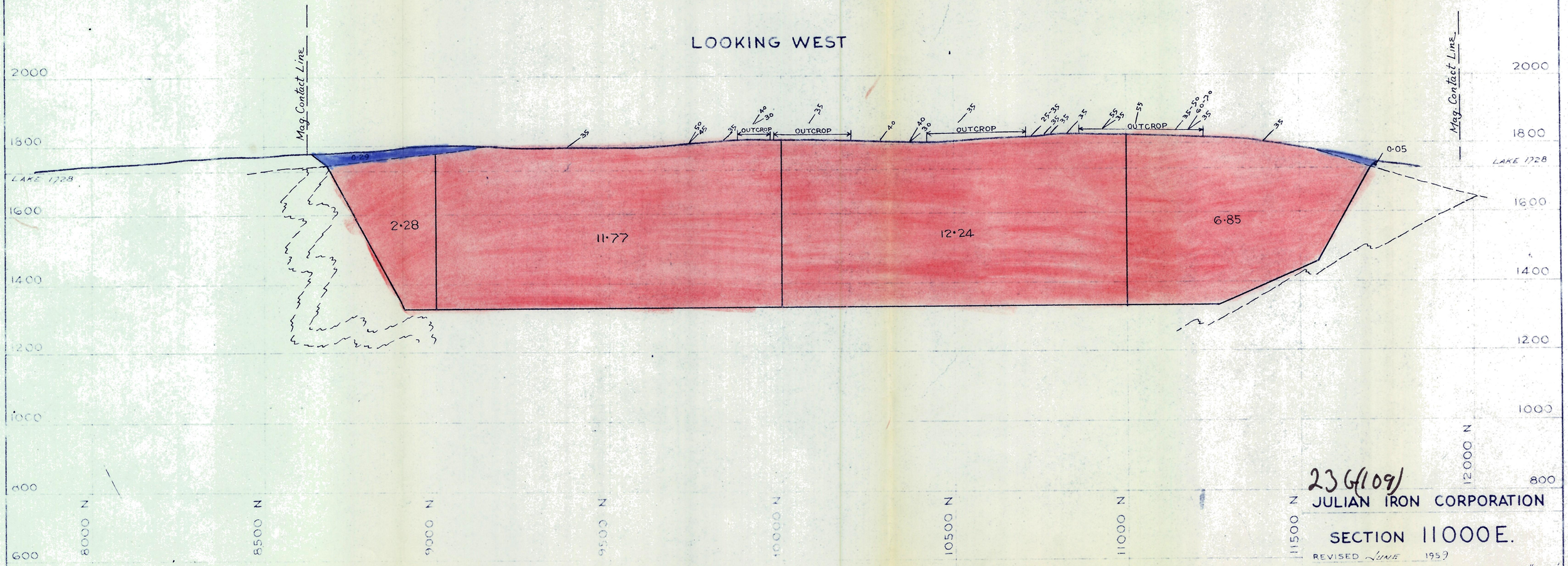
137-12



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JULIAN IRON CORPORATION

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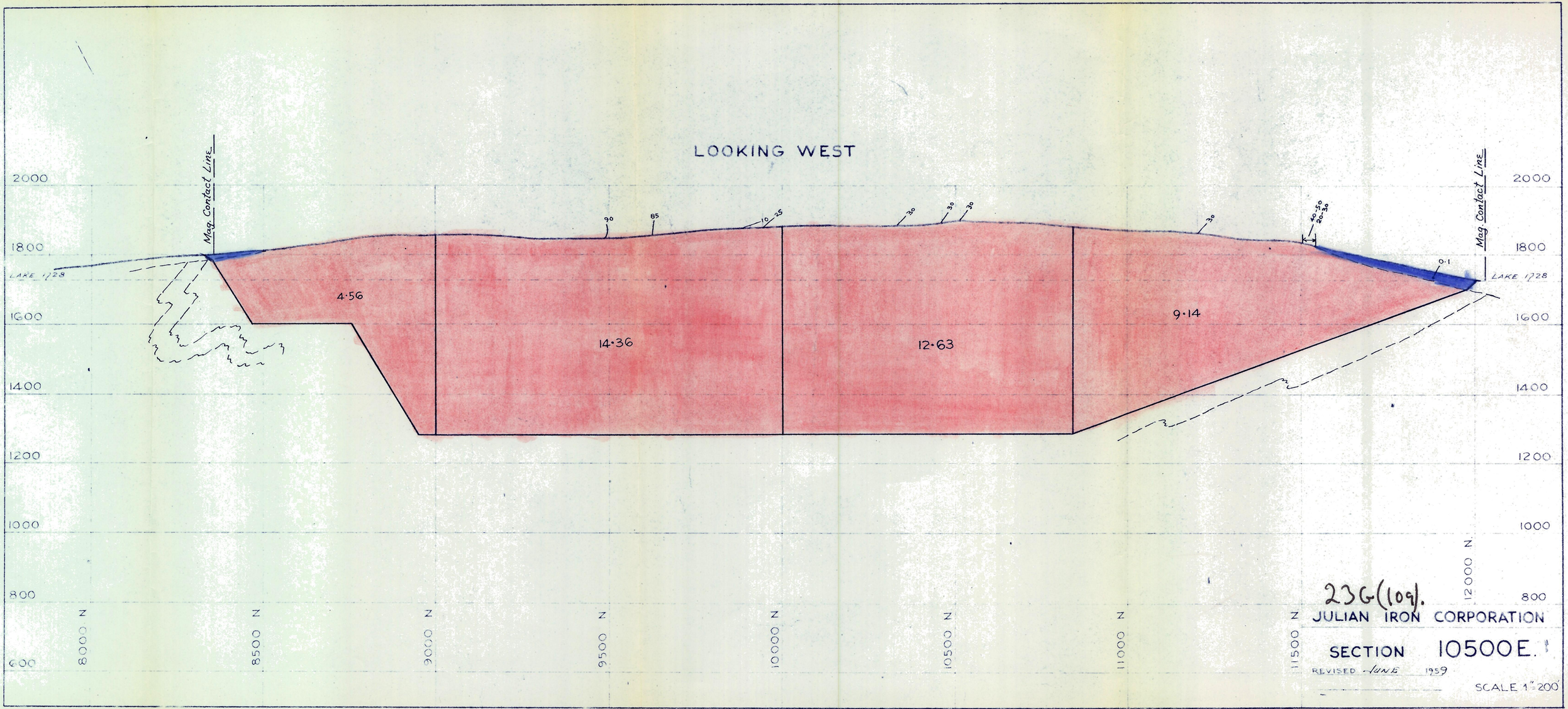

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JULIAN IRON CORPORATION

SECTION 10500E.

REVISED JUNE 1959

SCALE 1"=200'

135-1R

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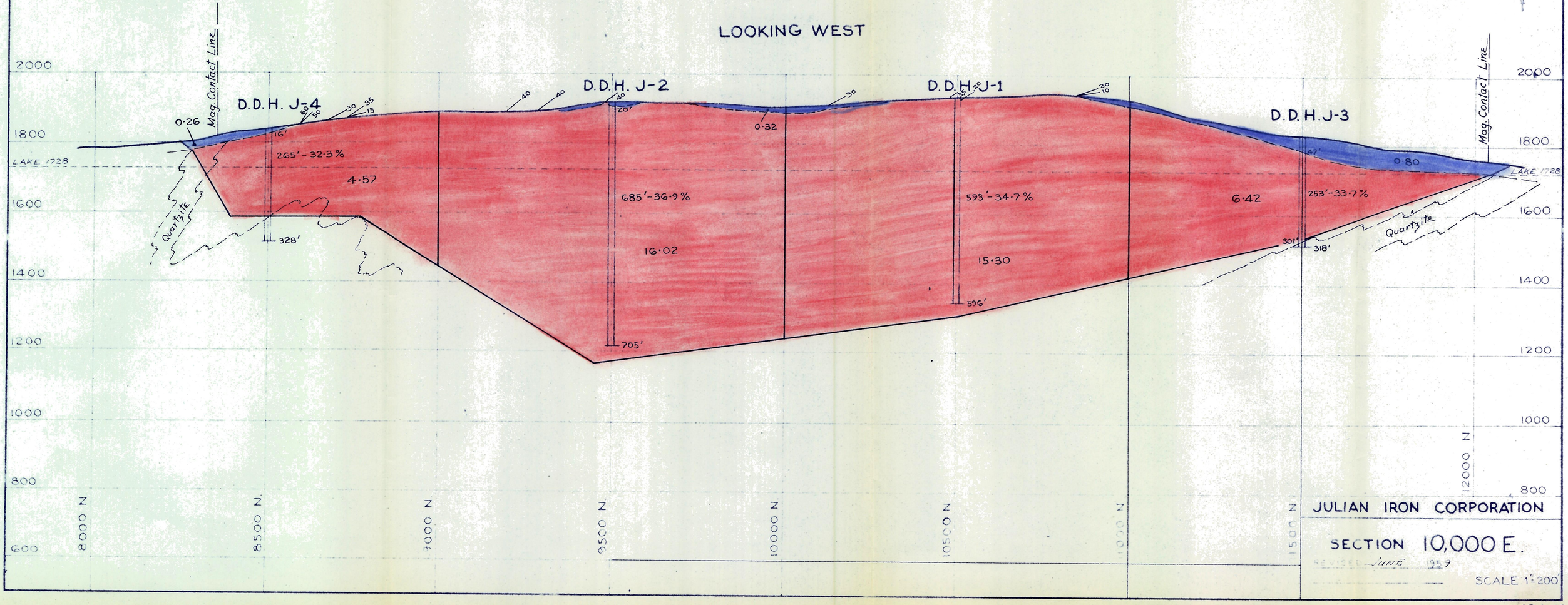

JULIAN IRON CORPORATION

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REVISED - JUNE 1959

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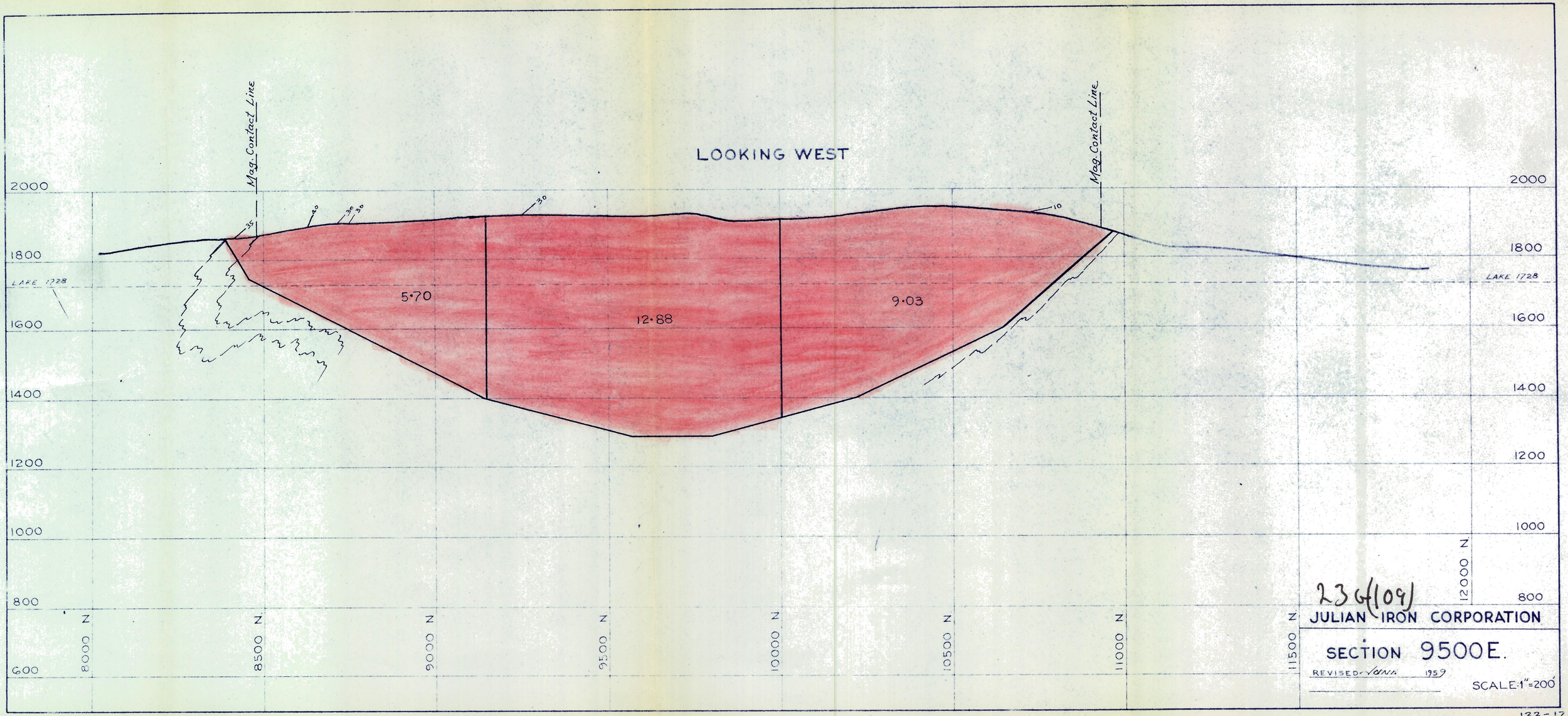
134-12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Mag. Contact Line
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30
30
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LAKE 1728
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JULIAN IRON CORPORATION
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REVISED- JUNE 1959
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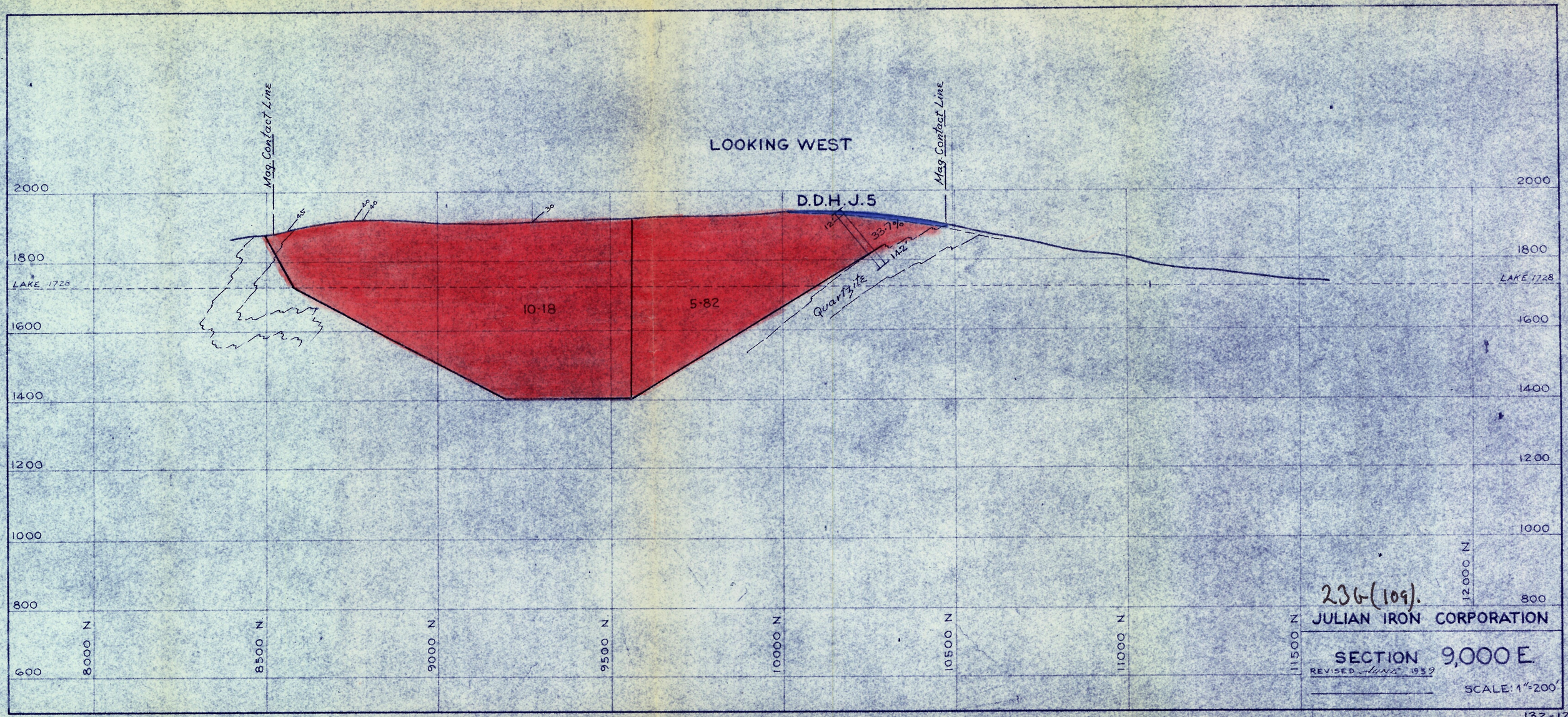
133-12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12'
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10-18
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JULIAN IRON CORPORATION
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REVISED JUNE 1959
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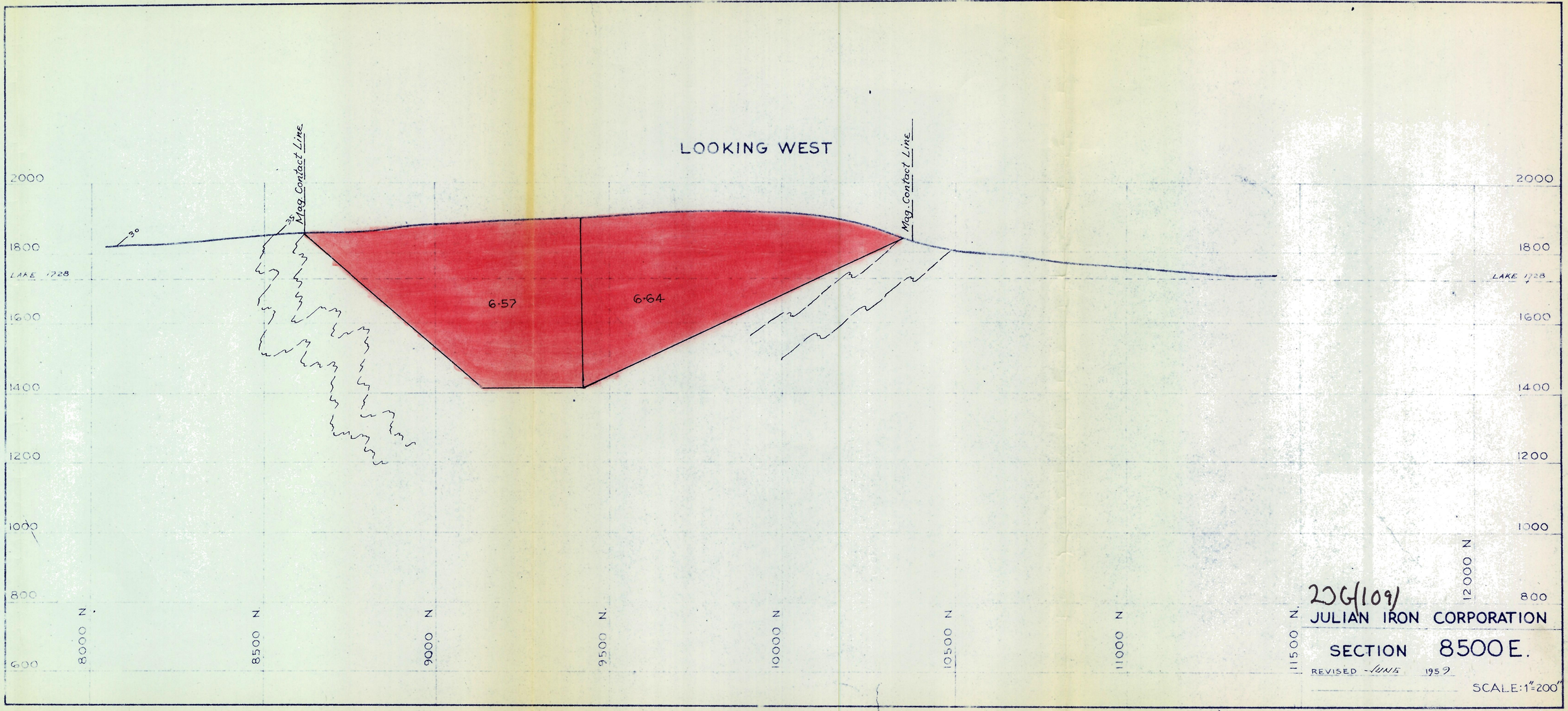
132-12



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JULIAN IRON CORPORATION

SECTION 8500 E.

REVISED - JUNE 1959

SCALE: 1" = 200'

131-17

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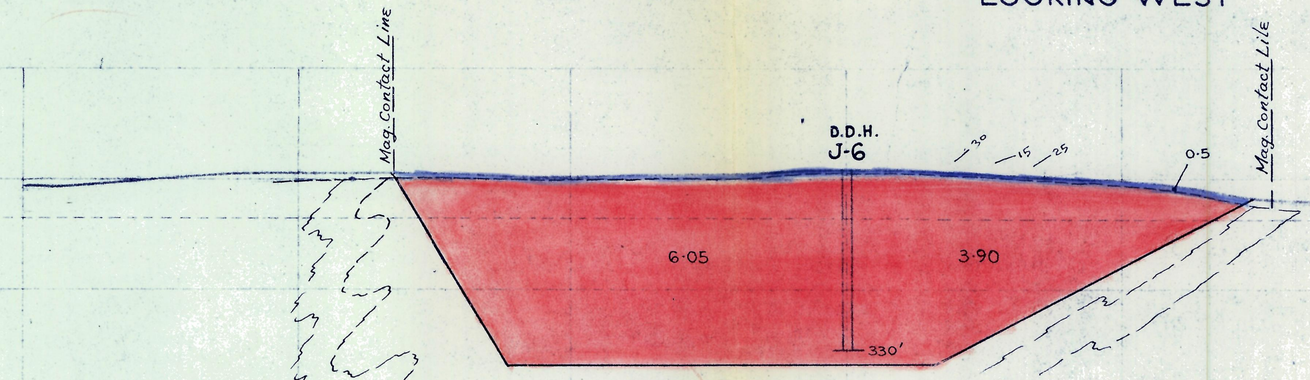

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JULIAN IRON CORPORATION

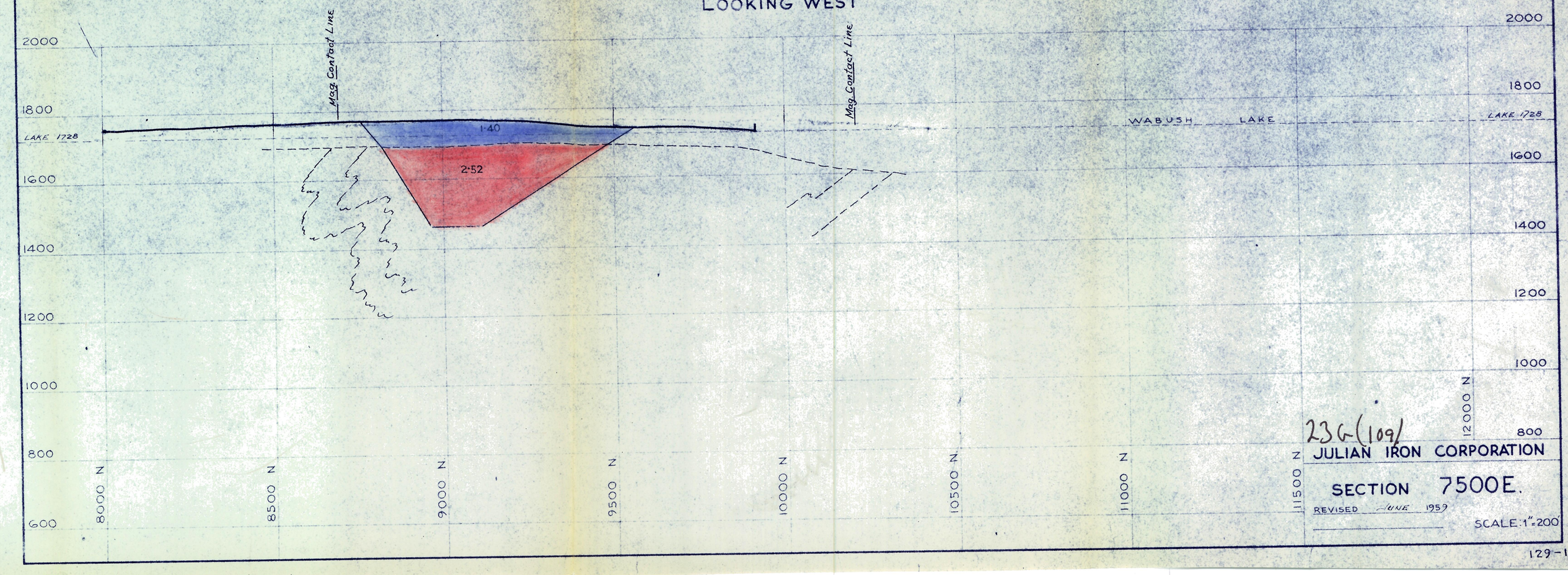
SECTION 8,000E.

REVISED - JUNE 1957

SCALE 1" = 200'

130-12

LOOKING WEST



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JULIAN IRON CORPORATION

SECTION 7500E.

REVISED JUNE 1959

SCALE 1"=200'

129-12