

RIO TINTO AUSTRALIAN EXPLORATION PTY LTD

EXAMINATION OF
FARRELL MINING COMPANY'S
PROPERTIES
AT TULLAH, TASMANIA

by

H E Jensen

24 November 1959

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Note: Plates Nos. 1 to 9 bound in with Report.
Longitudinal and Transverse Sections under
separate cover.

PLANS AND SECTIONS LOCATED IN CARTOGRAPHY SECTION
(WORKING COPIES ARE ALSO STORED)

N.B.

Plans & Sections numbered and filed in ~~Main Drafting~~
Office cartography

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LIST OF PLANS

PLAN

PLAN REF

REFERENCE NO

LEVEL PLANS OF NEW NORTH FARREL & NORTH FARRELL MINES, SCALE:100' to 1"

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NB: available from the Department Cartography section

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I N T R O D U C T I O N

The Tullah field was discovered in 1899 and since that time until the present 640,084 tons of ore has been milled to yield 81,596 tons of lead and 8,751,192 oz. of silver.

This production has been obtained from the North Farrell and the New North Farrell Mines whose main shafts are some 2,500 feet apart.

The North Farrell Mine was closed in 1933 and now is inaccessible with water filling the mine workings up to the No. 6 level.

Stoping carried out on three lodes, Nos. 1, 2 and 3, down to the No. 10 level (R.L. 878 feet below collar New North Farrell Shaft) produced the following :-

<u>Tons</u> <u>Milled.</u>	<u>Tons Lead</u> <u>Recovered</u>	<u>Oz. Silver</u> <u>Recovered</u>	<u>Averages per Ton</u>	
			<u>% Pb</u>	<u>Oz. Ag.</u>
425,000	48,563	4,994,338	11.43	11.75

Outcropping ore was discovered in 1933 some 2,500 feet north of the North Farrell Mine and as this lode yielded outstanding results, work was concentrated on the new discovery and subsequently the North Farrell Mine closed down.

It is authentically stated that as greater profits could be made by producing richer ore from the new discovery, North Farrell Mine was closed down despite the fact that the ore shoots had not diminished in size or tenor at depth.

At the No. 10 level, 650 feet of driving is shown on the level plan, and it is stated that the greater part of this length has been stoped but there is no longitudinal section to show specifically the amount of work done.

Even since 1933 the New North Farrell Mine has been worked continuously and to date has produced 215,084 tons of ore yielding 33,033 tons of lead and 3,756,854 oz. silver; the recovered values per ton being 15.36% lead, and 17.47 oz. of silver.

The present production amounts to some 5,000 tons per year and this is being obtained from stoping operations carried out between the Nos. 7 and 9 levels.

For the nine months ended 30th September, 1959, the mill has treated 3,775 tons of ore and recoveries per ton have been 13.72% lead and 15.27 oz. silver.

These average values are slightly lower than the overall averages but would indicate no marked decrease in grade with the increasing depth.

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The mine employs 45 men and under present conditions with the mill working five eight-hour shifts per week, output is somewhere near the maximum.

Freight rates charged by the Emu Bay Railway Company Ltd. are extremely high; e.g. the cost of carting concentrates from Farrell Siding to Burnie is 89/- per ton.

The only transport available between Farrell Siding and Tullah is by the Farrell Mining Company's own two-foot gauge railway. This railway costs the Company £12,000 per annum to operate, equivalent to £2. 8/- per ton of ore treated.

With a limited production and conditions most unfavourable, the costs of mining and treatment are extremely high.

During the three months ended 30th August, 1959, working costs to deliver the concentrates on board ship at Burnie amounted to £12. 8/- per ton of crude ore.

Concentrates are sold in America and costs of freight, and smelting and refining are not available. Mr. Turner, the Managing Director, has promised to supply this information.

At present, the mine is being operated at a small loss which is offset by reserve funds which were accumulated when profits were made.

Mr. Turner, who, as Managing Director, represents the private owners, has intimated that they would be prepared to surrender a large interest in the property to a Company prepared to carry out work which may prove sufficient ore to warrant a re-organisation of operations.

Production must be increased if this mine is to continue to operate, but under present conditions this cannot be done as there is insufficient ore developed. Further, the mill will have to be reconditioned with some additional equipment to be installed to provide for increased production.

The object of this recent examination of the mine workings by the writer and Mr. D. McKenna was in the endeavour of gaining a better appreciation of the incidence of the various ore shoots and to assess the possibilities of finding more ore.

The nine levels on the New North Farrell Mine were geologically mapped in detail; the examination did not disclose any positive sources of new ore, but indicated possibilities if further testing were carried out along the strike and dip of some of the stronger shear zones.

It is pointed out that Mr. B. Drew made an examination

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of this mine in January, 1957, and his report No.2/1957 contains relevant data which are not repeated in this report.

This report deals only with the investigational work undertaken and the interpretation of structural controls which are considered to be sufficiently attractive to warrant the undertaking of a development programme.

This development programme, together with the estimates of costs, is submitted for consideration.

The report with the plans and sections and contained data could serve as the basis of arrangements with the mine owners, if negotiations are proceeded with.

MINE WORKINGS

The North Farrell is inaccessible and filled with water between the No. 6 and the No. 10 levels.

The old plans were copied and the work done is shown on plates Nos. 1 to 9. It is possible that the surveys are not up to date and more work has been done than is shown.

There are nine levels on the New North Farrell Mine, and except for those places where levels have collapsed, these workings were mapped geologically.

Plan outlines are shown on Plates Nos. 1 to 9 which also show the North Farrell Mine workings on the nearest corresponding reduced level.

A three-compartment shaft, 12'0" x 4'6" inside timbers, serves the mine to the No. 7 level. This shaft has two cage compartments, and a manway pipe compartment and is equipped with a double drum electric winch.

At the No. 7 level an internal shaft, equipped with a single drum electric winch, has been sunk to the No. 9 level. All ore and underground stores from and to the Nos. 8 and 9 levels have to be double handled.

This shaft is offset some 220 feet west of the main shaft.

Pumping stations have been installed at the Nos. 4, 7 and 9 levels. The Aldrich Welsh and Perron three-plunger type pumps installed can handle up to 4,000 gallons of water per hour.

G E O L O G Y

The sequence of rock formations from west to east is :-

- (a) Massive pyroclastics
- (b) Slates and Tuffs
- (c) Owen Conglomerate.

The host rocks are the slates and tuffs. On the Nos. 1 and 2 levels north of the main shaft, the tuff was the host rock where the best ore shoot was found and which in places over restricted lengths averaged 30 feet in width.

From the Nos. 3 to 9 levels, the slate was the host rock of all the known ore shoots.

The country has been subjected to severe stress and the strains can be seen in the contorted slate beds which, in places, are crushed and sheared.

The fissure type veins occur in these shear zones and have irregular widths varying from three feet to several inches.

The principal mineral is galena, with smaller quantities of sphalerite, chalcopyrite, pyrite, tetrahedrite and siderite.

In most places the galena is almost pure and contains up to 90 oz. of silver per ton. It is on account of the narrow and variable widths that the ore is diluted with excessive waste to give a mill feed product averaging approximately 14% lead and 15 oz. silver per ton.

On the upper levels, the main shears strike on courses varying from $N20^{\circ} W$ to $N20^{\circ} E$ with dips west of 65 to 85 degrees. On the lower levels, the strikes vary from north and south to $N20^{\circ} E$ and dips of 60 to 85° west.

The best mineralization is found near intersecting shears, and in some places the pitch of intersecting shears forms the boundaries of ore shoots.

E C O N O M I C G E O L O G Y

It has not been necessary to carry out underground sampling as a visual inspection suffices to set out stoping limits.

The stoped lengths, together with the approximate dips of timbered passes were noted when examining the nine workings.

These data were used in making appropriate longitudinal and transverse sections as these maps had not been kept up to date.

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While these will by no means give accurate outlines, they do show concentrations of mineralization and give approximate dips of the various ore bodies.

These sections, together with plans, have been of value in correlation, to give a clearer picture of structural control.

Fifteen lode shears on the New North Farrell Mine have been recognized and longitudinal sections have been prepared to show the development and stoping done on these main and branch lode shears.

The following tables give data related to the driving completed on the Nos. 1 to 9 levels on the various lodes.

No. 1 ~~Lode~~ Level

Lode	Driving Feet	Length Stopped Feet	Tons per Vertical Foot	% of Total Driving in Ore	Strike Degrees	Dip Degrees
No. 1	1,060	535	195	50.5	N20° E N 50 W	70-80
No. 2	110	110	40	100.0	N10° W	85
No. 3	90	80	29	88.9	N - S	75
Not Named	700	-	-	-	-	-
Totals:	1,960	725	264	37.0	-	-

No. 2 Level

No. 1	1,045	567	206	54.3	N20° E to N-S	75-80
No. 2	235	150	55	63.8	N 10 W	85
No. 3	220	150	55	68.2	N - S	75
No.15	140	60	22	42.9	N 20 E	75
Not Named	160	-	-	-	-	-
Totals:	1,800	927	338	51.5	-	-

No. 3 Level

No. 1	970	860	313	88.7	N 10 E	70-80
No. 2	58	-	-	-	N 10 W	85
No. 4	210	140	51	66.7	N 28 E	50
No. 5	65	-	-	-	N 20 E	65
No. 6	186	-	-	-	N 10 E) N - S)	50
No.14	110	110	40	100	N 20 W	80
Not Named	230	55	20	23.9	-	-
Totals:	1,829	1,165	424	63.7	-	-

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No. 4 Level

Lode	Driving Feet	Length Stopped Feet	Tons per Vertical Foot	% of Total Driving in Ore	Strike Degrees	Dip Degrees
No. 1	990	437	159	44.1	N 10 E	70
No. 4	350	350	127	100.0	N - S	50-55
No. 5	60	-	-	-	N 10 E	60
No. 6	95	-	-	-	N 2 W	50
No. 7	160	70	25	43.8	N 10 E	80
No. 10	95	-	-	-	N 8 E	60
Not Named	65	-	-	-	-	-
Totals:	1,815	857	311	47.2	-	-

No. 5 Level.

No. 1	922	382	139	41.4	N - S	60
No. 6	203	60	22	29.6	N 10 E	50-60
No. 7	495	225	82	45.5	N 7 W	85
No. 10	45	-	-	-	N 15 E	65
Not Named	436	-	-	-	N 5 E	-
Totals:	2,101	667	243	31.7	-	-

No. 6 Level

No. 1	655	305	110	46.6	N 5 W	62
No. 6	115	115	42	100	N 10 E	50
No. 7	195	150	55	76.9	N 13 W	75
No. 8	240	-	-	-	N 25 E	63
No. 9	55	-	-	-	N 20 E	63
No. 11	150	35	13	23.3	N 10 W	57
No. 12	240	175	64	72.9	N - S	63
Not Named	658	-	-	-	N 10 E	-
Totals:	2,308	780	284	33.8	-	-

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No. 7 Level

Lode	Driving Feet	Length Stopped Feet	Tons per Vertical Feet	% of Total Driving in Ore	Strike Degrees	Dip Degrees
No. 1	398	340	124	85.4	N - S N 10 E	60
No. 6	295	115	42	39.0	N - S	53
No. 8	75	-	-	-	N 20 E	60
No. 9	118	88	32	74.6	N 10 W	65
No.11	25	25	9	100.0	N 8 E	57
No.12	125	-	-	-	N 5 E	63
No.13	180	90	32	50.0	N 5 E	85
Not Named	295	-	-	-	-	-
Totals:	1,511	658	239	43.5	-	-

No. 8 Level

No. 1	763	435	158	57.0	N - S) N 10 E)	60
No.12	120	36	13	30.0	N 5 E	60
Not Named	55	-	-	-	-	-
Totals:	938	471	171	50.2	-	-

No. 9 Level

No. 1	470	216	79	46.0	N - S) N 10 E)	60
No. 8	120	120	44	100.0	N 20 E	70
No.12	170	-	-	-	N 10 E	62
Not Named	100	35	13	35.0	-	-
Totals:	860	371	136	43.1	-	-

Summary

Level	Driving Feet	Length Stopped Feet	Tons per Vertical Foot	% of Total Driving in Ore
No. 1	1,960	725	264	37.0
No. 2	1,800	927	338	51.5
No. 3	1,829	1,165	424	63.7
No. 4	1,815	857	311	47.2
No. 5	2,101	667	243	31.7
No. 6	2,308	780	284	33.8
No. 7	1,511	658	239	43.5
No. 8	938	471	171	50.2
No. 9	860	371	136	43.1
Totals:	15,122	6,621	-	43.8

No records were kept of the average widths of the various lodes and to compute the tonnage per vertical foot, an average width of 4 feet was taken. A factor of 11 cubic feet in situ for one ton of ore was used.

The summation of products of tons per vertical foot by the respective depths in feet between levels gives 232,418 tons compared with a production of 215,084 tons.

The figures agree closely indicating that an average width of 4 feet is somewhere near correct.

The significant figures shown in the tables and the summary are -

- (a) of the 15,122 feet of driving 6,621 feet was in ore being 43.8% of the total. This is a good figure.
- (b) The greatest amount of work was done at the No. 6 level where 780 feet of the 2,308 feet of driving was in ore.
- (c) The best results were obtained from the No. 3 level where driving indicated 424 tons per vertical foot.
- (d) The greatest amount of work has been done on the No. 1 Lode.
- (e) The least amount of work has been done on the No. 9 Level where 860 feet of driving was done, and of which 371 feet was in ore equivalent to 136 tons per vertical foot.
- (f) The driving at the No. 7, 8 and 9 Levels yielded percentages of payability of 44, 50 and 43 per cent respectively. These figures are good and, if maintained, on undertaking further development work, these lower levels could become of greater importance.

A close study of plans and sections together with statistical data indicates possibilities of finding more ore, and in sufficient quantities that production could be increased.

An exploration programme could be planned to test the following :-

- (1) The downward extensions of ore shoots on the known lodes, at the New North Farrell as well as the North Farrell Mines.
- (2) Lateral extensions of the shear zones of the known lodes in search of new ore shoots.
- (3) The slate and tuff beds extending from the New North Farrell Mine in the north to the Murchison in the south.

The level plans of the North Farrell and New North Farrell Mines (Plates Nos. 1 to 9) show a relatively large area

of untested ground between these two mines. It is also pointed out that the driving done at various horizons on these two mines does not line up on strike.

This could be accounted for by -

- (a) A change in strike of the shear zones.
- (b) Mines being developed on different shears, e.g. the driving on the North Farrell if continued north on strike would be west of the workings at the New North Farrell.
- (c) Displacement of shears by faults.
- (d) The fading of shear zones.

At this stage, a number of hypotheses could be advanced but none carry much weight on account of lack of factual data. However, the evidence that has been collected, both geological and statistical indicates possibilities of finding more ore, and it is on this evidence that a proposed development programme has been planned and is submitted for consideration.

DEVELOPMENT PROGRAMME

Before any thought can be given to a re-organization of this mine, an adequate ore reserve has to be established.

The development programme that is submitted for consideration is divided into three phases -

- (1) Diamond Drilling
- (2) Underground development in the form of driving and crosscutting.
- (3) Picking up collapsed timber and dewatering to make working accessible for further examination.

Diamond Drilling:

The lenticular nature of the ore occurrences makes the hazards of diamond drilling high and for this reason the drilling outlined on the No. 6 level is spaced at relatively close intervals.

The No. 6 level was chosen on account of giving the best drilling sites to prospect the slate beds over the maximum length.

The work is listed on the following schedule giving particulars of depths of drilling as well as the target objectives.

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No. 6 LevelProposed Diamond Drilling Programme.

Co-ordinates		Course Degrees	Dist. Feet	Target
N	E			
118	352	90	150	Scout hole
118	331	270	300	To be drilled to pyroclastics
410	380	90	60	Continuation No. 12 Lode
431	346	270	250	To be drilled to pyroclastics
480	360	100	70	No. 12 Lode
481	372	280	30	Lode shear in West Wall
633	428	90	60	No. 12 Lode
670	404	285	70	Lode shear in West Wall
795	424	270	260	To be drilled to pyroclastics
802	438	Dep 55-90	70	No. 12 Lode
947	445	280	250	No. 8 Lode & pyroclastics
1013	506	288	140	Nos. 1 & 8 Lodes
1044	519	90	50	No. 12 Lode
1150	545	90	40	No. 12 Lode
1150	530	270	50	No. 1 Lode
1150	530	Elev 40-270	120	Nos. 1 & 8 Lodes
1162	415	280	170	To be drilled to pyroclastics
1239	478	270	50	No. 8 Lode
1240	486	90	120	No. 12 Lode
1280	477	270	30	No. 8 Lode
1397	500	90	60	No. 4 Lode
<u>Total: (21 holes)</u>			<u>2400'</u>	

(These holes are shown on Plate No. 6).

Underground Development:

The following schedule sets out the development work recommended on the Nos. 8 & 9 levels.

Level	Lode	Work	Distance	Remarks
No. 8	No. 1	N.Drive	+ 200 ft.	Should intersect No. 8 Lode
No. 8	No. 1	S.Drive	+ 100 ft.	
No. 8	450N, 280E	N.Drive	+ 50 ft.	
No. 9	No. 8	N.Drive	+ 100 ft.	
No. 9	No. 8	S.Drive	+ 100 ft.	
No. 9	No. 1	S.Drive	+ 100 ft.	
No. 9	905N, 290E	W x cut	20 ft.	To intersect No. 1 Lode
<u>Total Footage:</u>			<u>670 ft.</u>	

Air and water pipe are installed on the Nos. 8 & 9 levels adjacent to working places.

Both of these levels are in good condition and work could be undertaken without any obstacles.

At the No. 8 level, any mullock encountered could be used for filling a stope at the No. 9 level.

The proposed work is shown on Plates Nos. 8 & 9.

Making Workings Accessible:

At the No. 7 level, the timber has collapsed at a position of 1,200 feet north and 425 feet east.

It is recommended that this timber is picked up and repaired to make the workings in the north end accessible.

The workings at the North Farrell Mine are filled with water from the Nos. 6 to 10 levels.

The dewatering of this mine would present no problems; a panona pump was installed in 1952 and this keeps the water down to 380 feet below the collar of the main shaft.

It is recommended that the water be removed from the North Farrell workings and the ladder-ways in both shafts be put in good condition so as to provide access to carry out detailed geological mapping.

Estimated Costs:

The schedule below gives estimates of costs to carry out diamond drilling (EX size) driving and crosscutting. No estimates are made for reconditioning levels and ladder-ways to make the workings accessible.

	<u>£.</u>
Diamond Drilling 2400 ft. @ 27/6d.	= 3,300
Driving & Crosscutting 670 ft. @ £12/-/-.	= <u>8,040</u>
<u>Total:</u>	= <u><u>£11,340</u></u>

P L A N S A N D S E C T I O N S

The level plans accompanying this report were copied from the maps at the mine and reduced to a scale of 100 feet to an inch.

There could be some inaccuracies in relative positions of mine workings and shafts between the North Farrell and New North Farrell Mines.

There was no survey available to show a traverse from one mine to the other and scaling from a map on a scale of 400 ft. to an inch had to be accepted to orient the plans of both mines.

The longitudinal and transverse sections were drafted from the information noted when mapping underground workings together with some data preserved on old maps at the mine.

It should be noted that the reduced levels of drives showing on longitudinal and transverse sections have been plotted as if all headings were driven on a level grade.

No underground levelling has been done and most levels have been driven on grades in the order of 1%. By plotting the drives on horizontal grades the relative vertical distances between levels will be somewhere near correct.

Geological features are shown on a set of plans, on a scale of 30 ft. to an inch. These are not included with the report but are filed at Melbourne Office.

CONCLUSIONS & RECOMMENDATIONS.

Mining and Milling costs at Tullah are exceedingly high due principally to the small annual production and the high freight rates charged by the Emu Bay Railway Coy. Ltd. In addition, the Company has to run its own private railway at present costing £12,000 per year.

The Tasmanian Government is going to construct a road between Rosebery and Tullah and when this is completed the Company will gain some advantage in being able to substantially reduce transport costs from Tullah to the Farrell Siding.

It is certain that this mine cannot continue to operate successfully under present conditions. The mine may survive by increasing production and thereby reducing the working costs per ton of ore.

Such a policy cannot be considered unless more ore is developed; if more ore were found further studies would have to be made to assess capital and working costs, in addition to the expenditure, to provide housing for additional employees.

It is not intended to assess capital and working costs in this report but to study the results of the investigations to appraise the potential of the mine in the terms of tonnage and grade.

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The investigations have indicated that the New North Farrell Mine has prospects which can be assessed only by doing more development work.

If this development is undertaken and can prove 300 to 350 tons of ore, averaging 14% lead and 15 oz. silver, per vertical foot, this section of the mine could yield attractive profits. If this work is successful, then consideration could be given to dewatering the North Farrell Mine to make further detailed examinations of the old workings.

It is recommended that the development work outlined in this report be undertaken, provided satisfactory arrangements can be made with the mine owners.

The mine owners prefer to retain some interest in their property but would be prepared to surrender a substantial share to a company willing to risk the costs of a development programme, which, if successful, would be followed by a reconstruction involving further expense.

This preliminary report with its maps and statistical data is presented for consideration and to serve as a guide for the course of negotiations with the present mine owners.

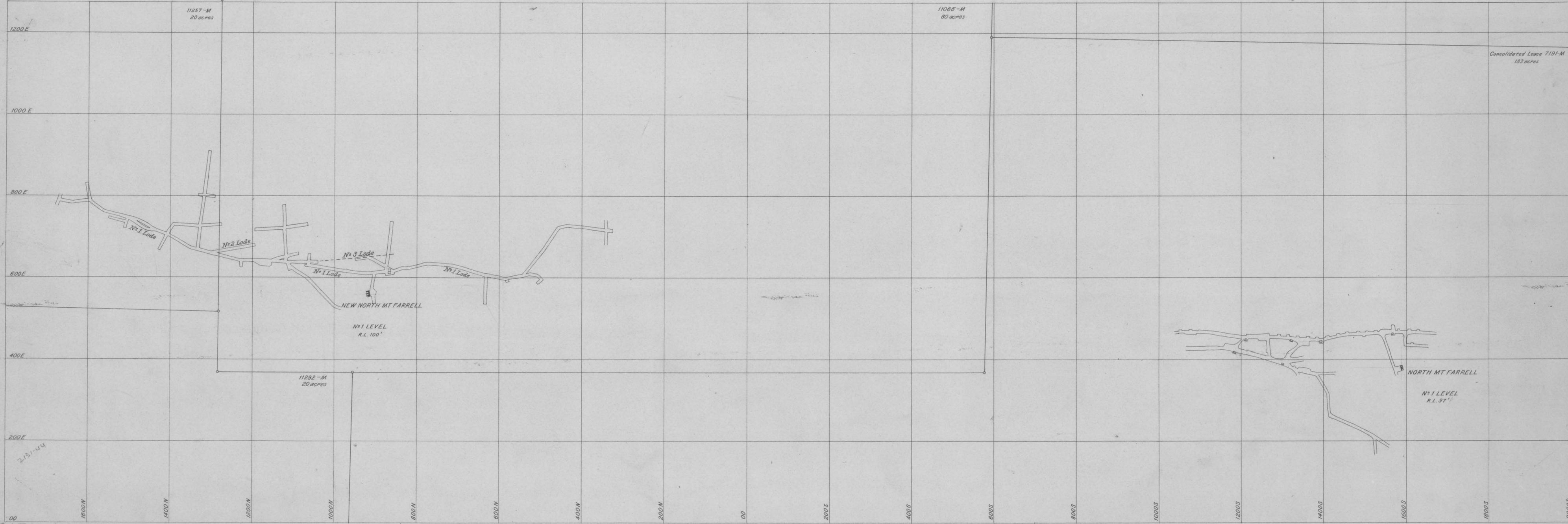
Melbourne,
24/11/1959.

H. E. JENSEN.
Asst. Exploration Manager.

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5 cm



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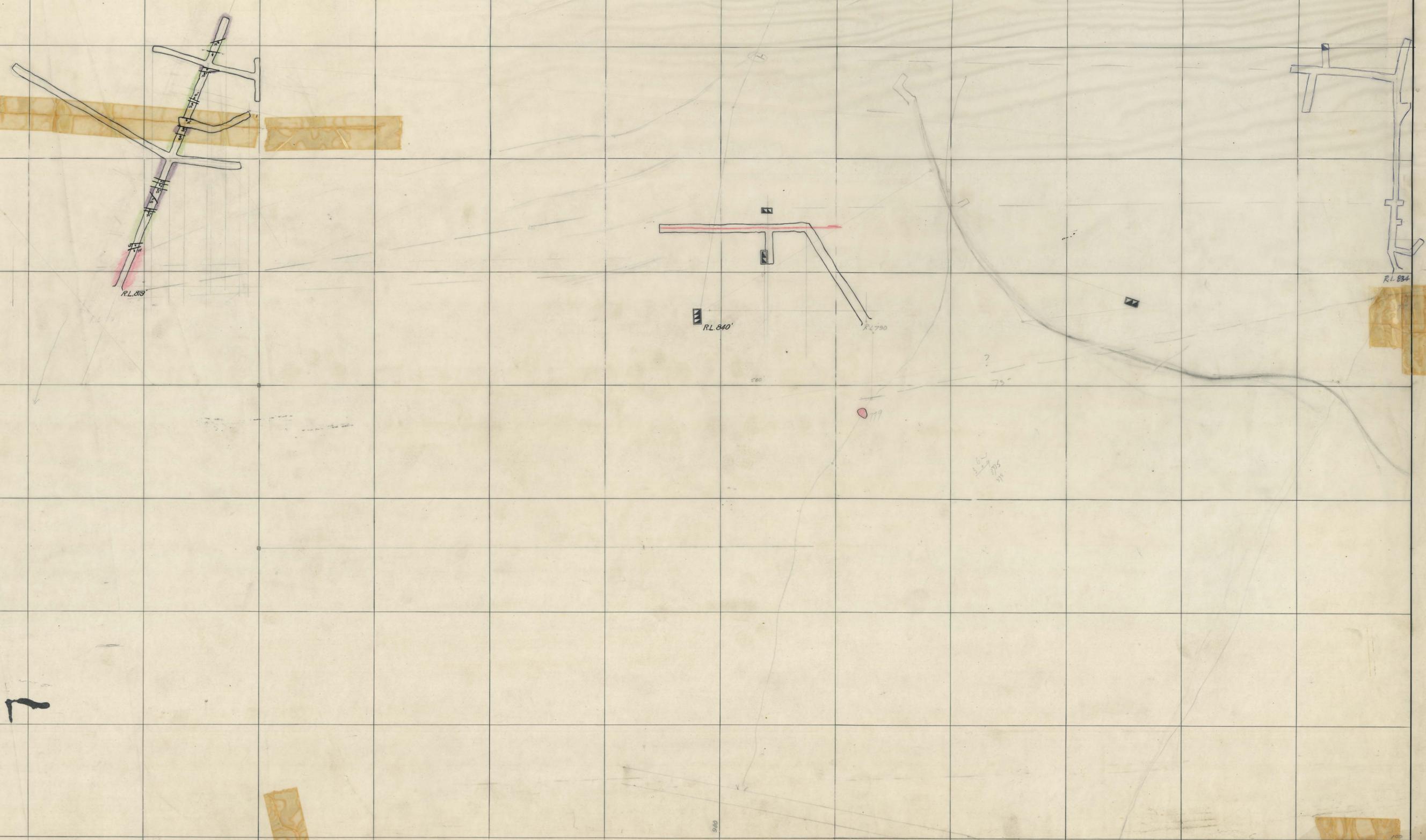
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5.0m

OVERSIZE
* VERTIPLAN *

2131B

NEW NTH MT FARRELL MINE

SURFACE & ADIT LEVEL



2131C

6.98

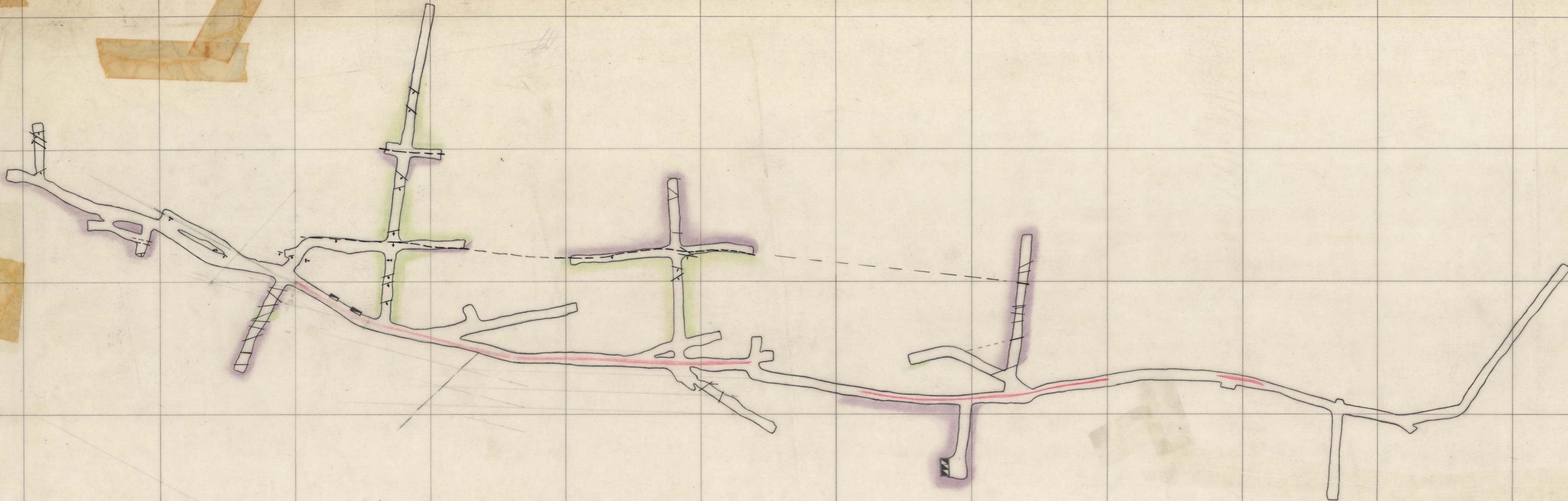
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NEW NEW. MT FARRELL MINE - SURFACE PLAN & ADITS



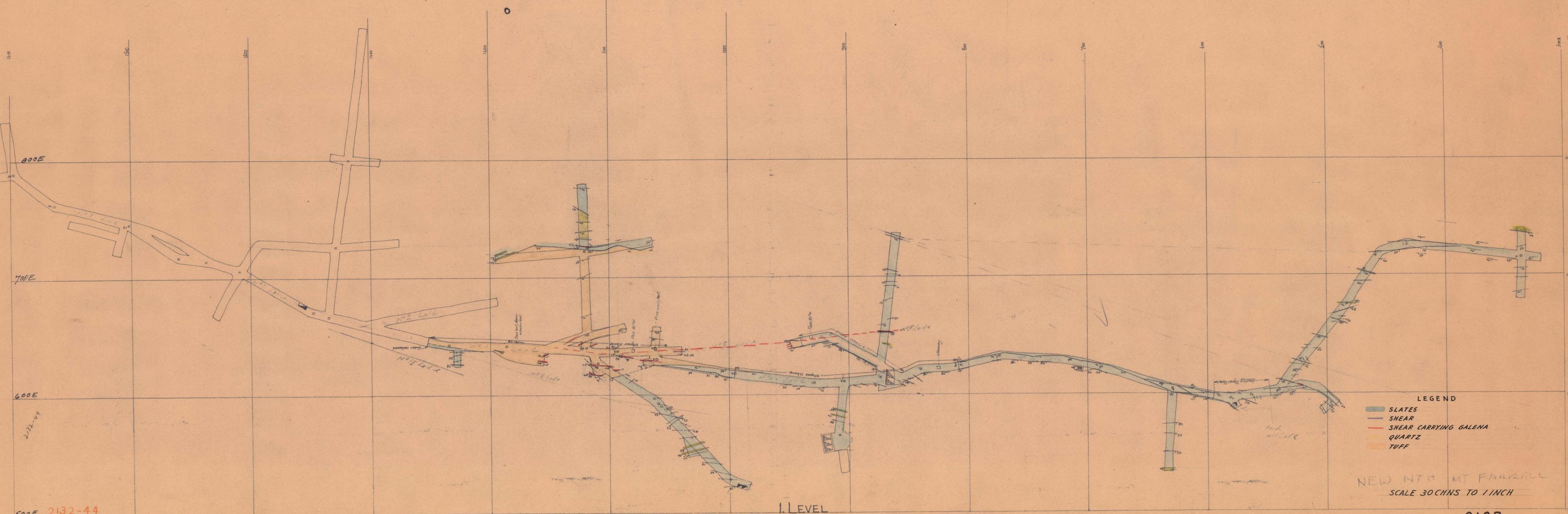


NEW NTH MT FARRELL MINE
LEVEL No 7

Plan No 2132 A

5 cm

2132 A
190



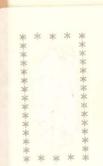
- LEGEND
- SLATES
 - SHEAR
 - SHEAR CARRYING GALENA
 - QUARTZ
 - TUFF

NEW NTH MT FARRELL
SCALE 30 CHNS TO 1 INCH

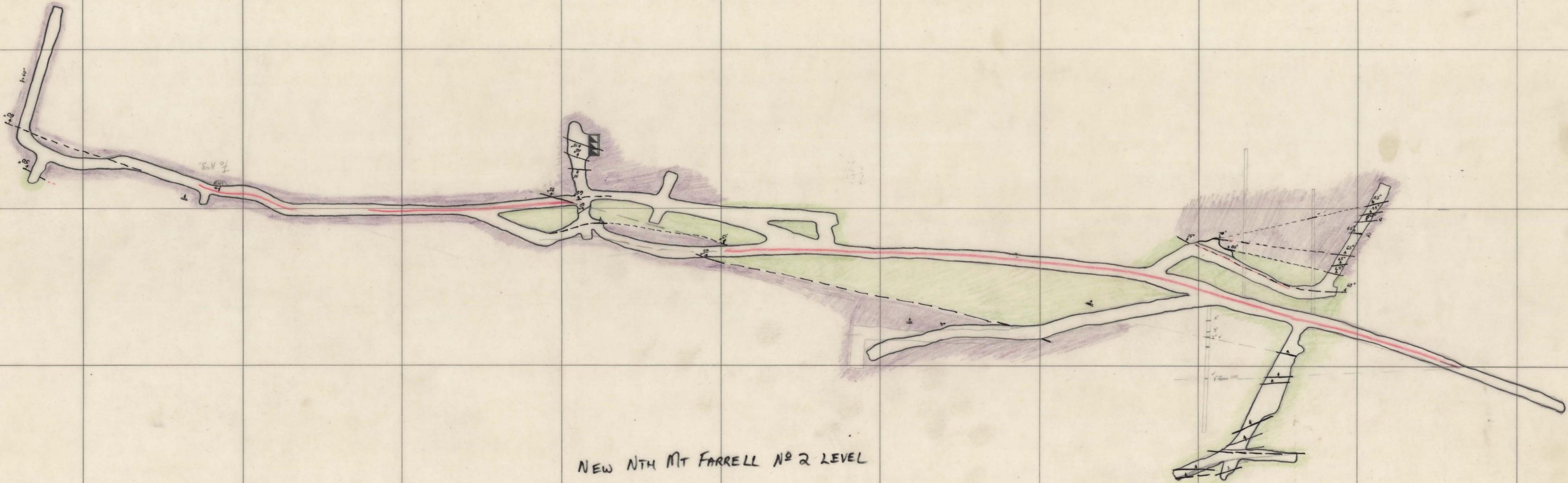
500E 2132-44

2132

2132
B



17

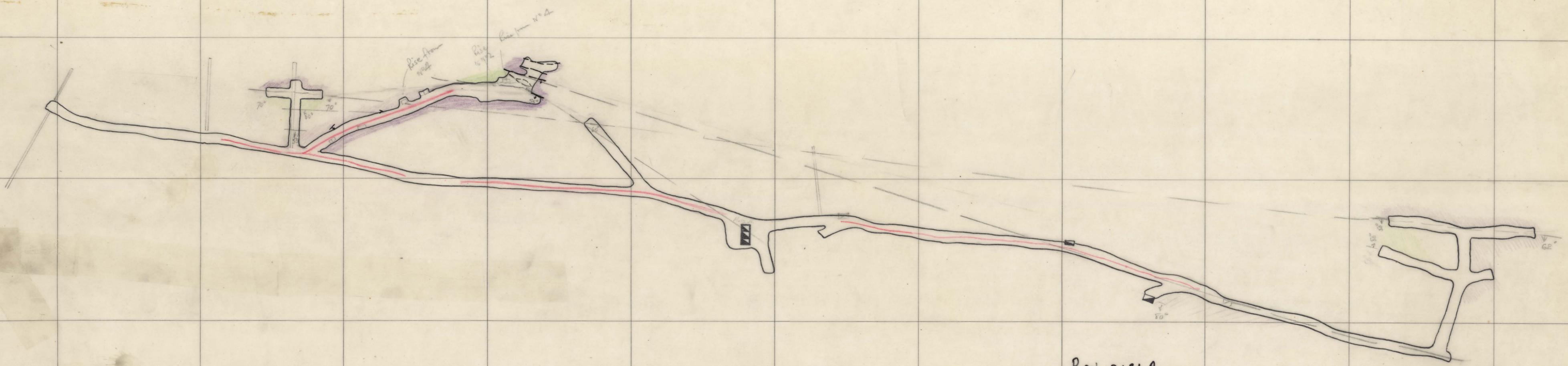


NEW NTH MT FARRELL NO 2 LEVEL

2133A

5 cm

2133A



NEW NTH MT FARRELL MINE N^o 3 Level

PLAN 2134 A

5 cm

2134 A
193

2134 B

1944

700E

600E

500E

2134-44

2134-44

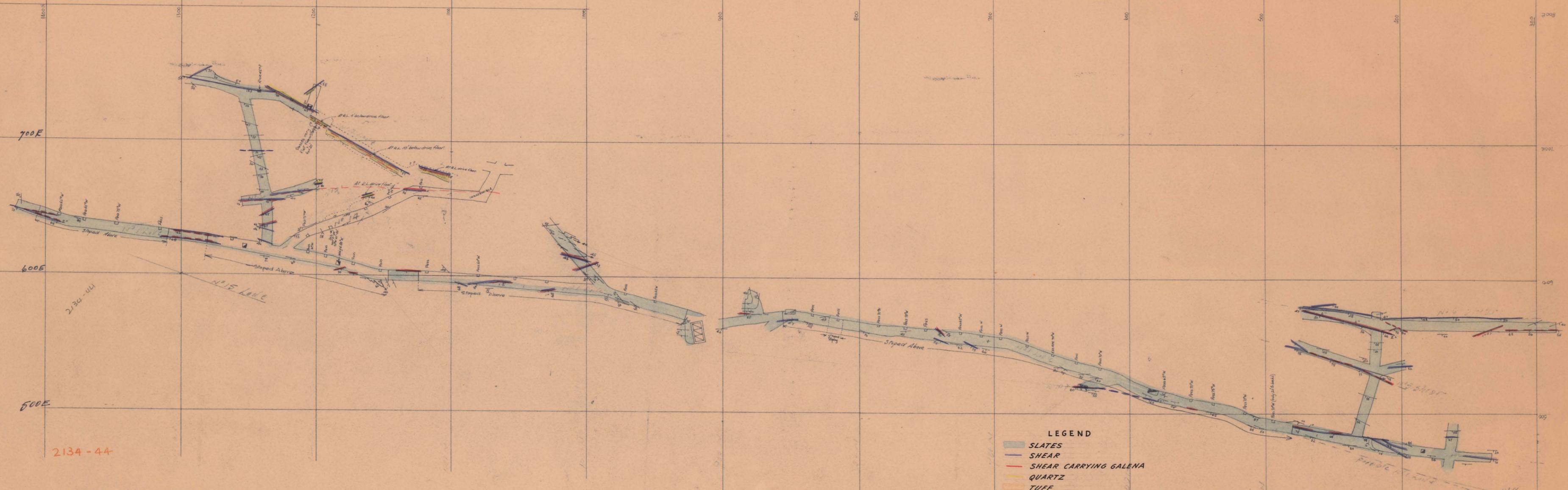
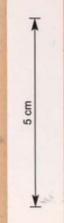
N 15° W

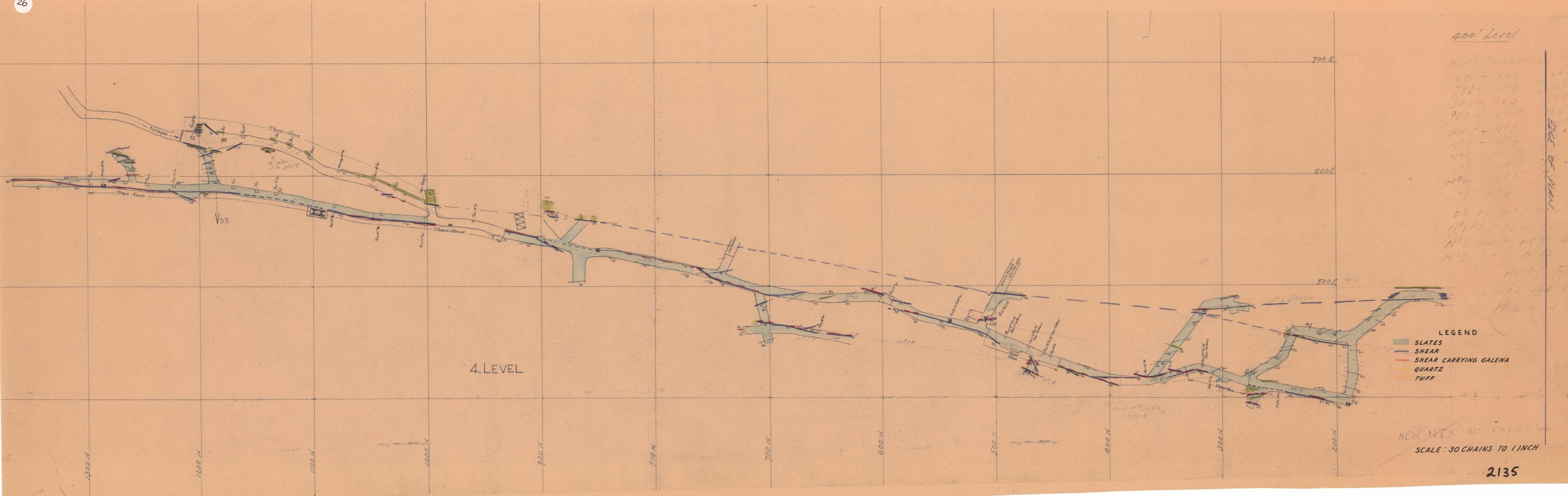
3. LEVEL

- LEGEND
- SLATES
 - SHEAR
 - SHEAR CARRYING GALENA
 - QUARTZ
 - TUFF

NEW NTH MT. FARRELL
SCALE: 30 CHAINS TO 1 INCH

2134





400' Level

600-700
 700-800
 800-900
 900-1000
 1100-1200
 1200-1300
 1300-1400
 1400-1500
 1500-1600
 1600-1700
 1700-1800
 1800-1900
 1900-2000

EDGE OF PLAN. ONE SHOT ONLY



2135



NEW WITH MIT FALLS

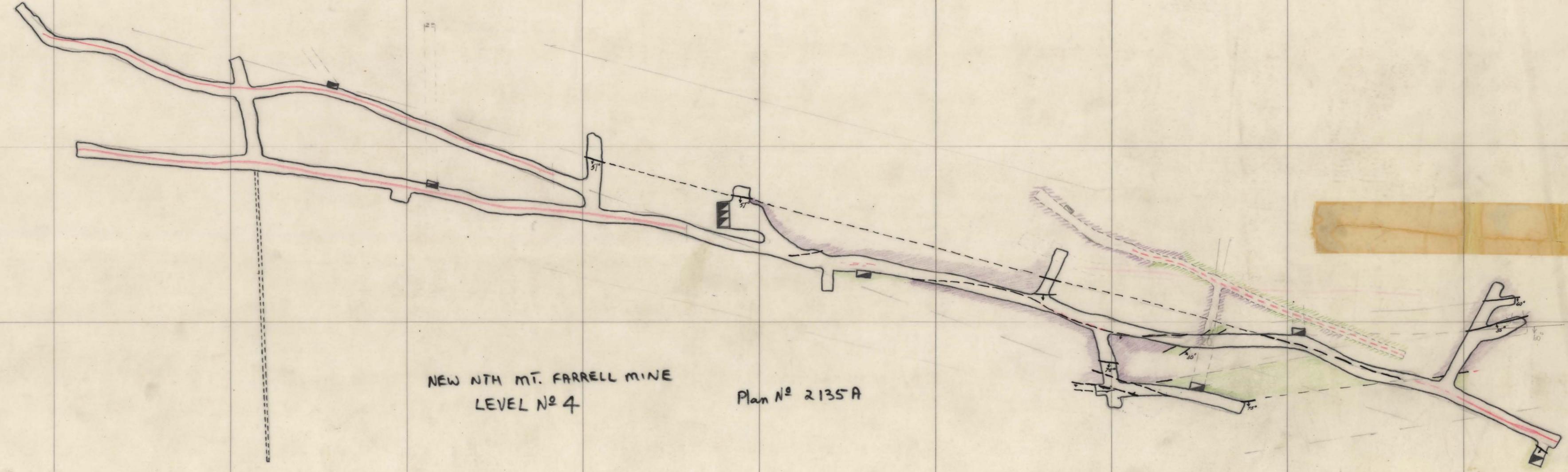
2135

D

2135A

195

5 cm



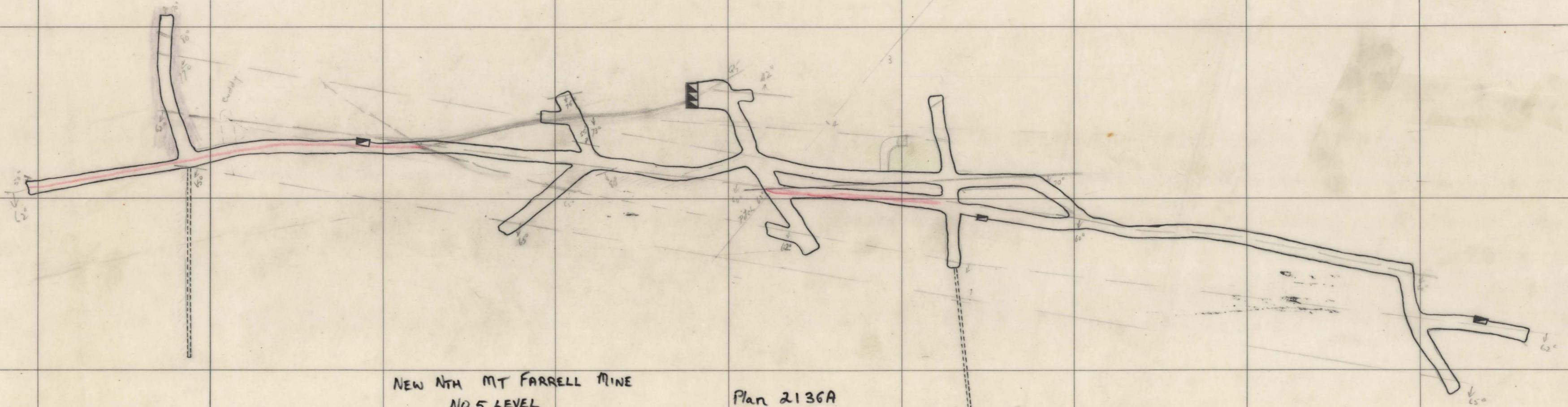
NEW NTH MT. FARRELL MINE
LEVEL NO 4

Plan No 2135A

2136A

196

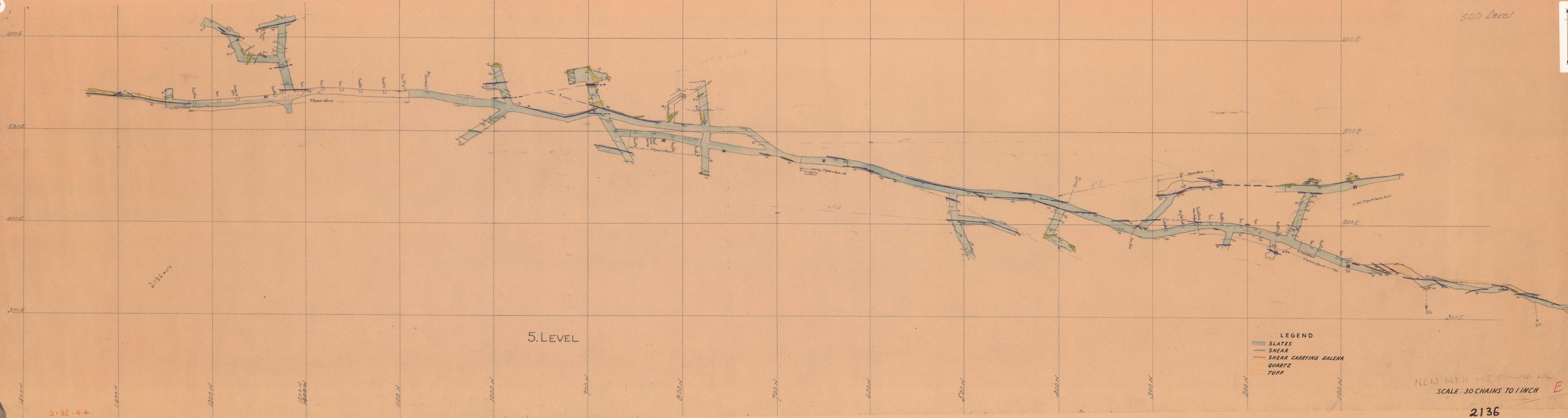
5 cm



NEW NTH MT FARRELL MINE
NO. 5 LEVEL

Plan 2136A

500 Level



2136-244

5. LEVEL

- LEGEND
- SLATES
 - SHEAR
 - SHEAR CARRYING GALENA
 - QUARTZ
 - TUFF

NEW NTH MT PHASE II
SCALE: 30 CHAINS TO 1 INCH

2136

2136-44

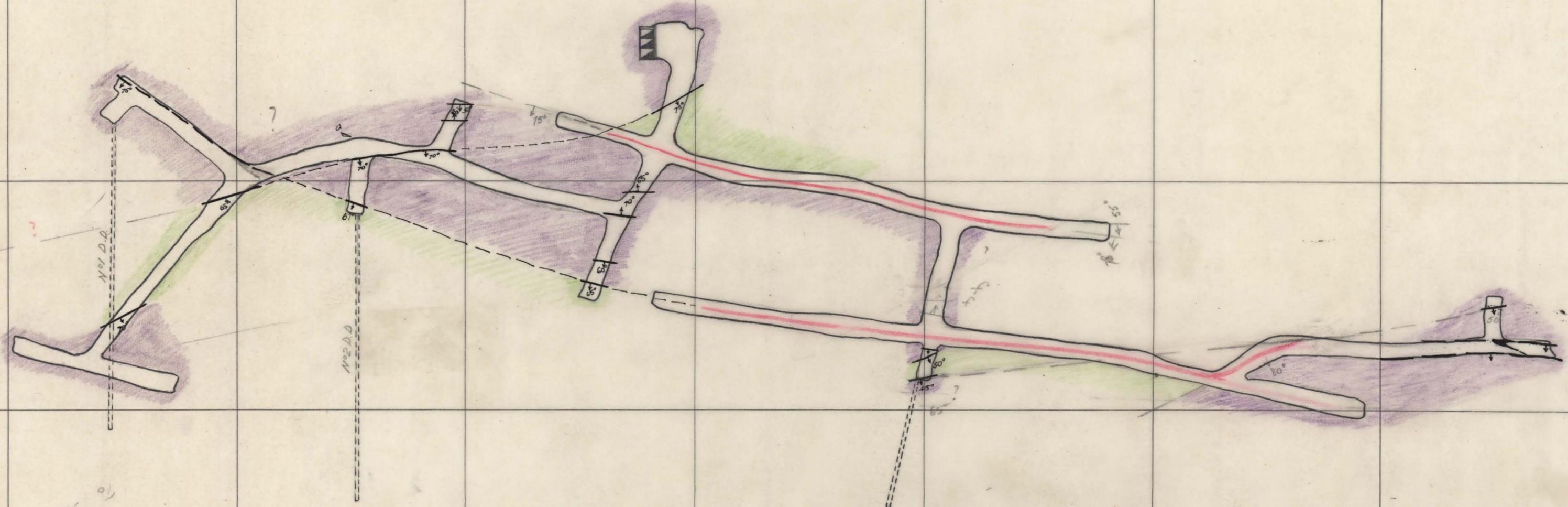
2136
B

OVERSIZE

VERTICAL

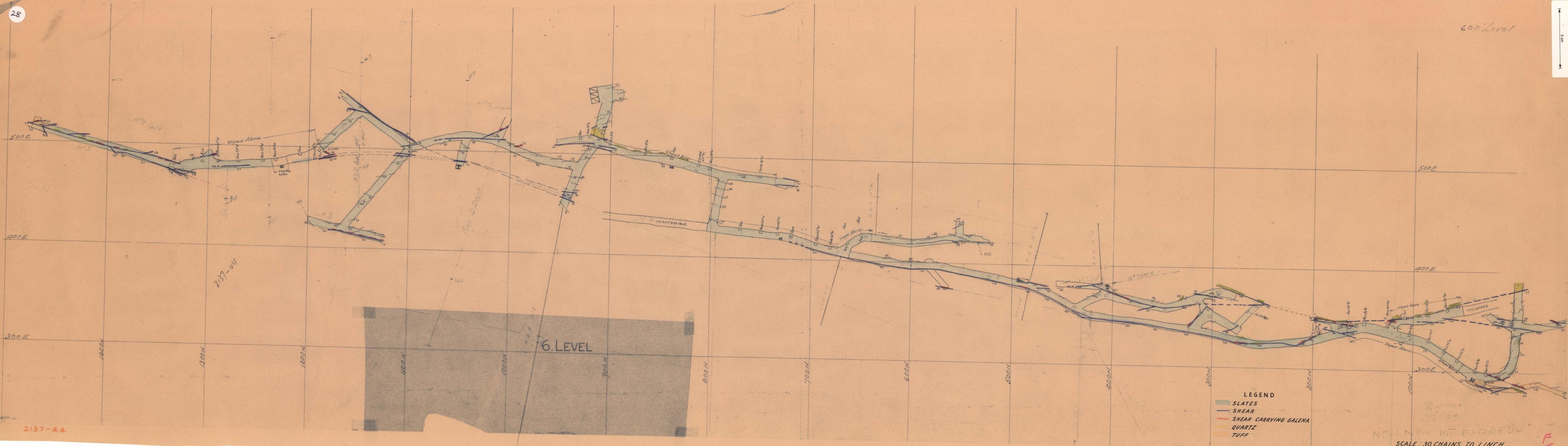
2137A
197

5 cm



NEW NTH MT FARRELL MINE
Nº 6 LEVEL

Plan Nº 2137 A



- LEGEND**
- SLATES
 - SHEAR
 - SHEAR CARRYING GALENA
 - QUARTZ
 - TUFF

NEW MT. MADRID
 SCALE: 30 CHAINS TO 1 INCH

2137 B

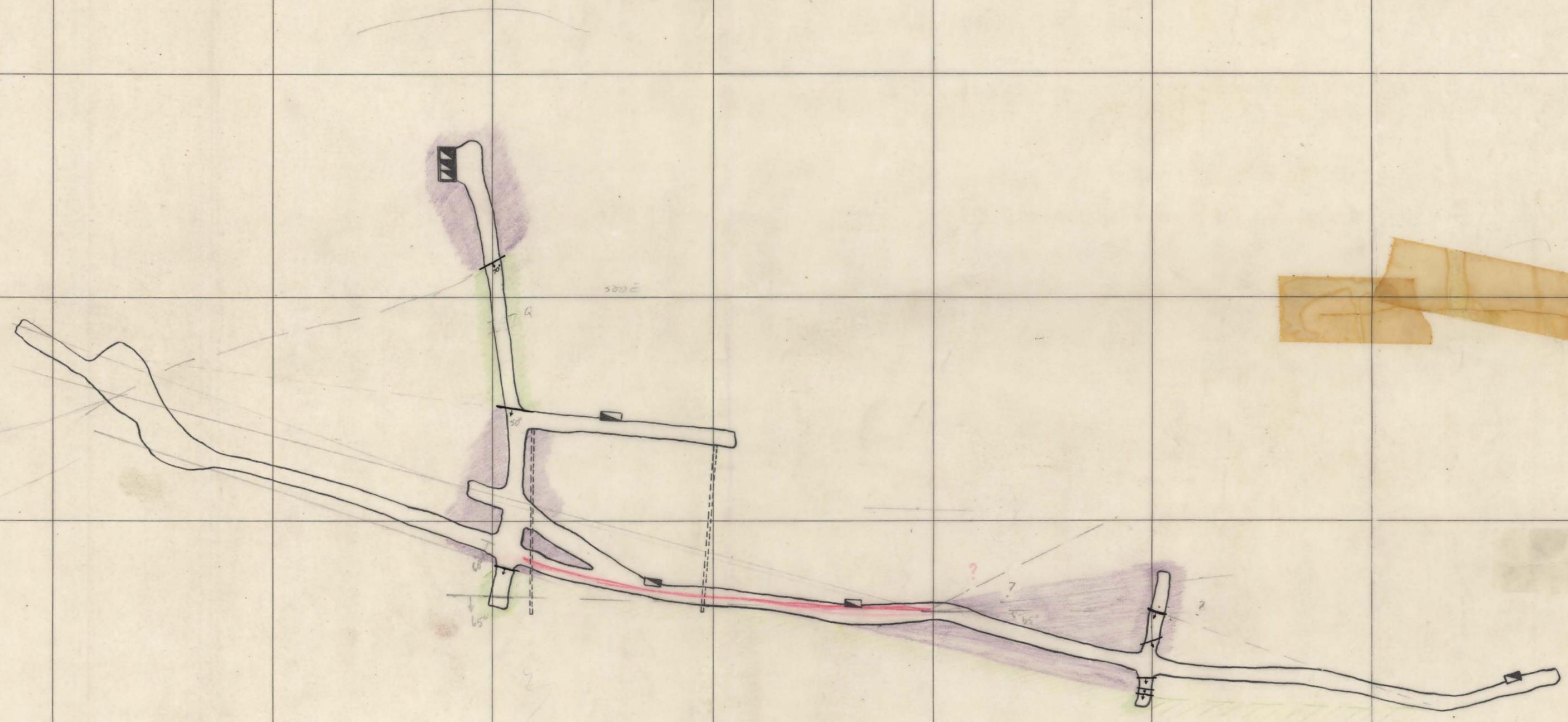
 OVERSIZE
 VERTIFILAN
 No. 1

2137-44

2137-44

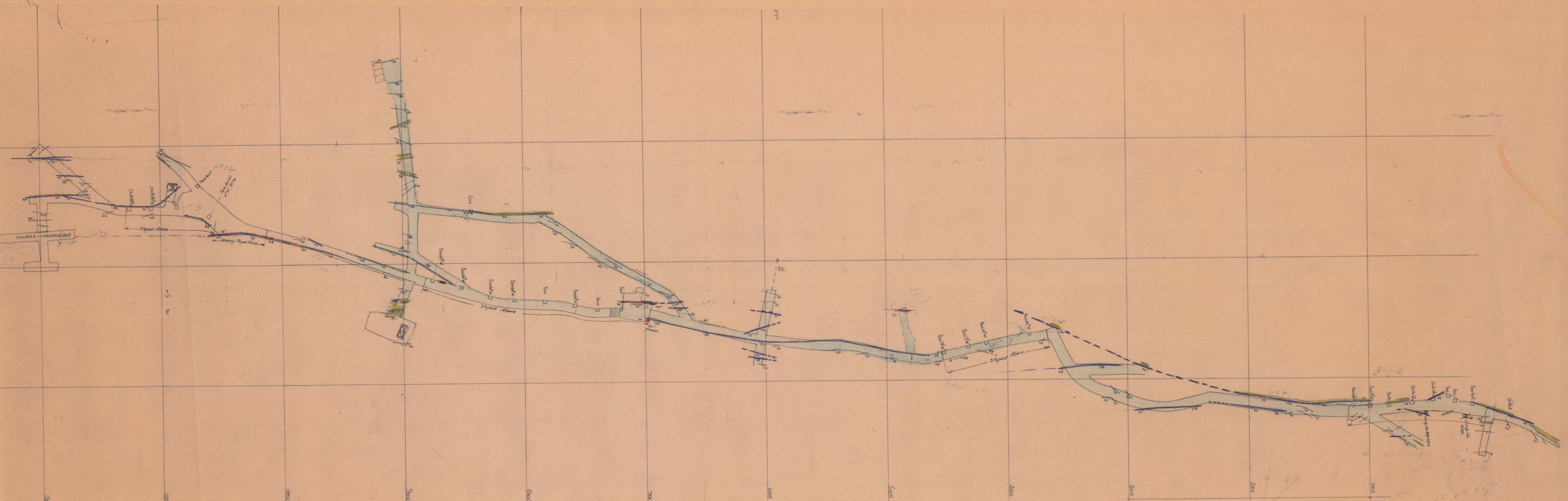
2138A
198

5 cm



NEW NTH MT FARRELL MINE - No 7 LEVEL

PLAN 2138 A



7. LEVEL

- LEGEND
- SLATES
 - SHEAR
 - SHEAR CARRYING GALENA
 - QUARTZ
 - TUFF

NEW NTH MT FERRILL
SCALE: 30 CHAINS TO 1 INCH

2138

G

600E

400E

300E

200E

1400N

1300N

1200N

1100N

1000N

900N

800N

700N

600N

500N

300E

300E

8. LEVEL.

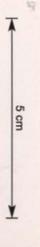
LEGEND

- SLATES
- SHEAR
- SHEAR CARRYING GALENA
- QUARTZ
- TUFF

NEW NTH MT FARRELL
 SCALE: 30 CHAINS TO 1 INCH

2139

H

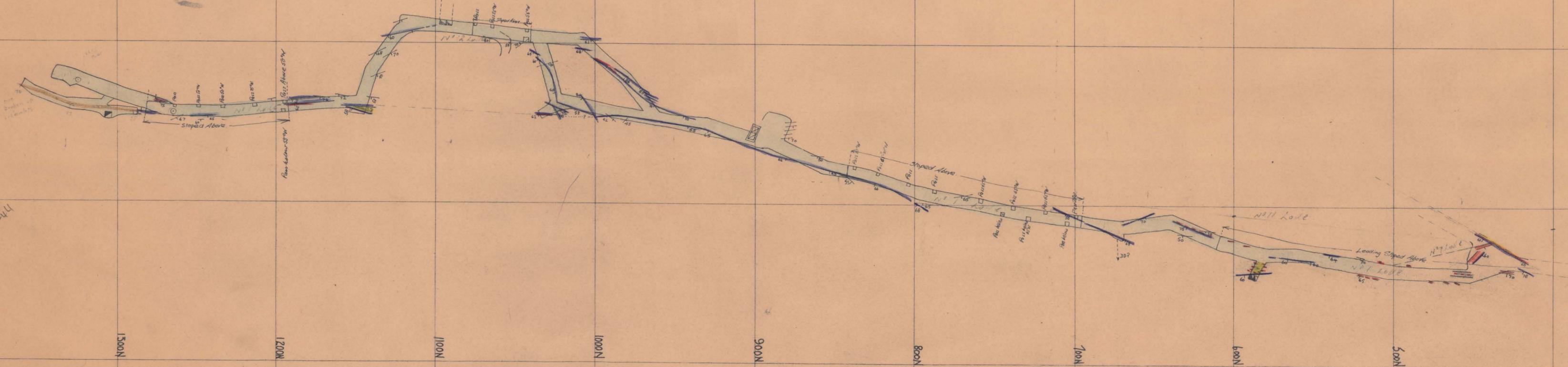


2139
100

2139-44

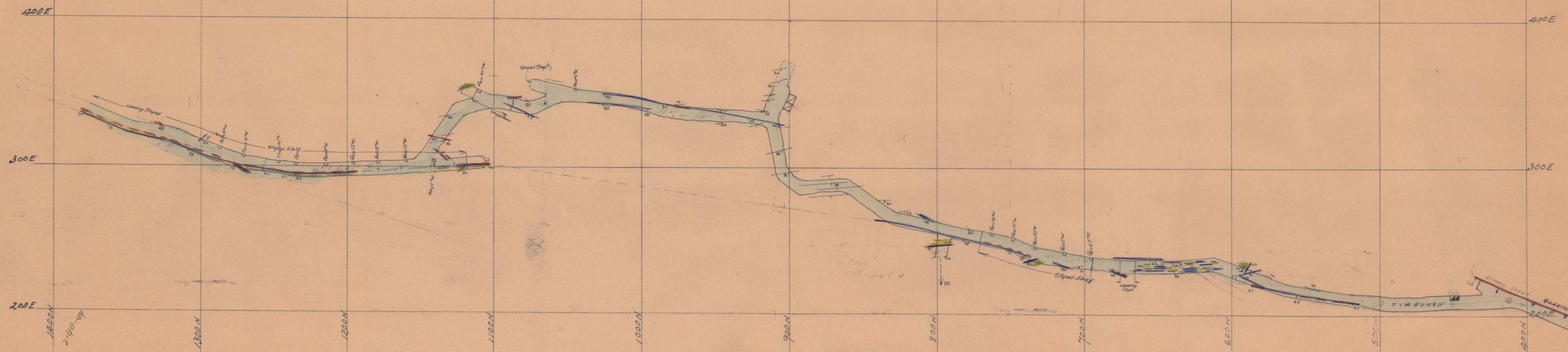
2139-44

560
200
625



2140

900' Level



9. LEVEL.

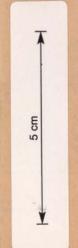
- LEGEND**
- SLATE
 - SHEAR
 - SHEAR CARRYING GALENA
 - QUARTZ
 - TUFF

NEW NEPT WT FARRER

SCALE: 30 CHAINS TO 1 INCH

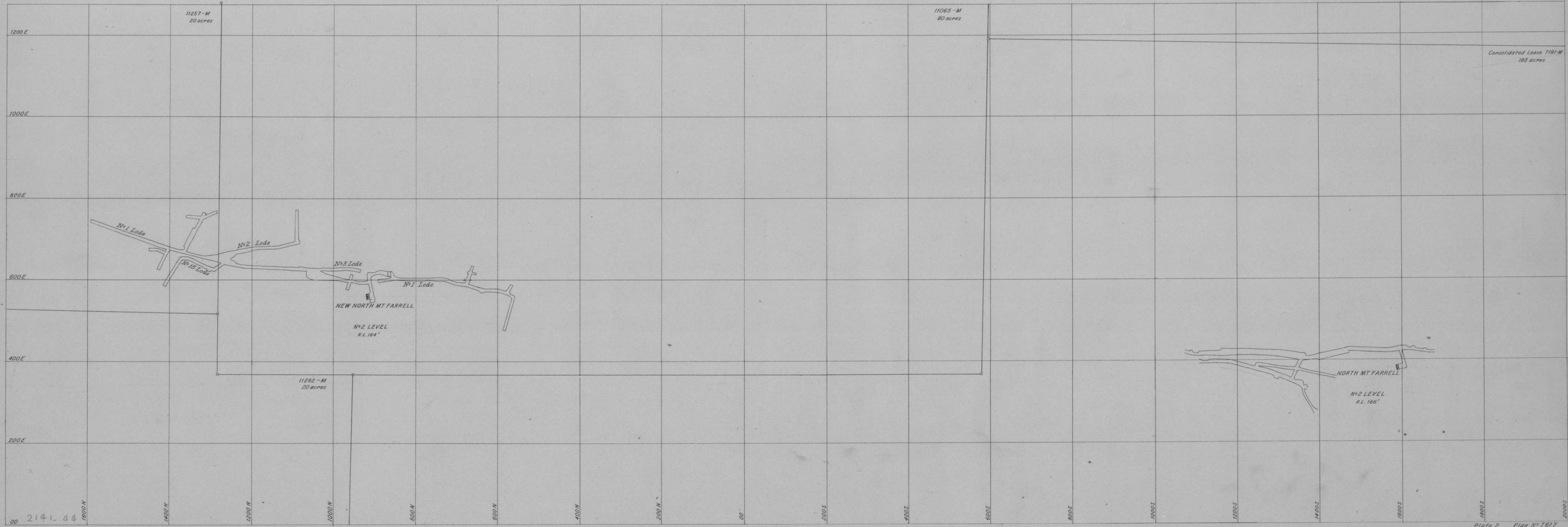
J

2140-44



2141 202

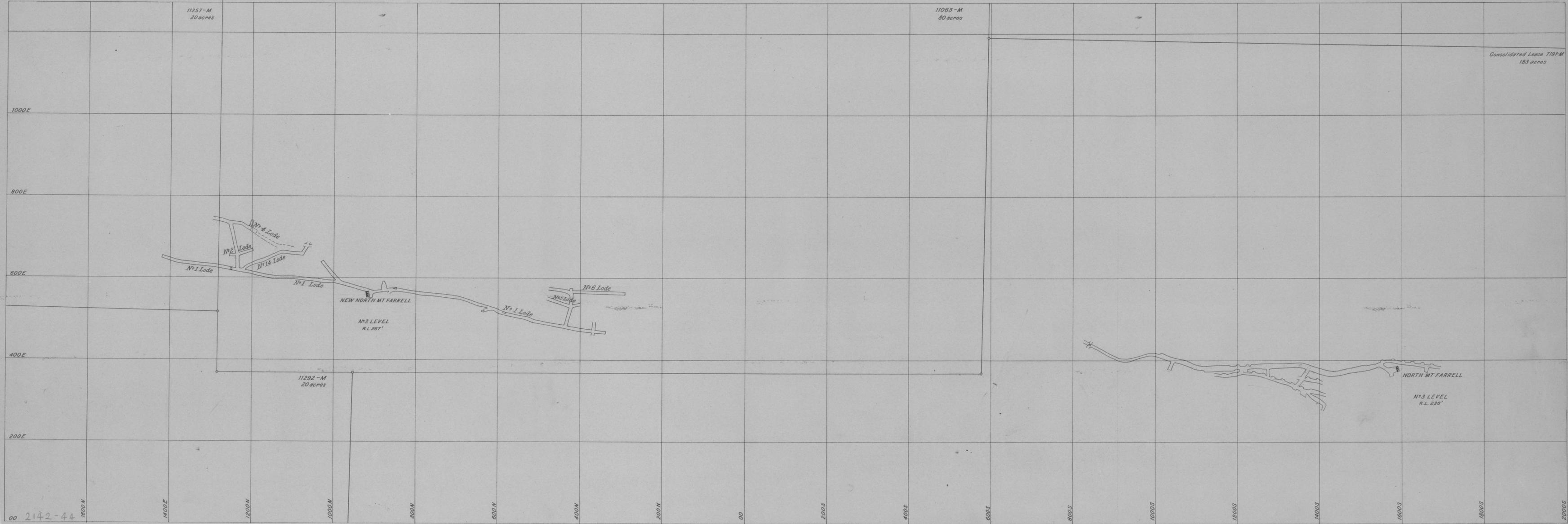
5 cm



2142

203

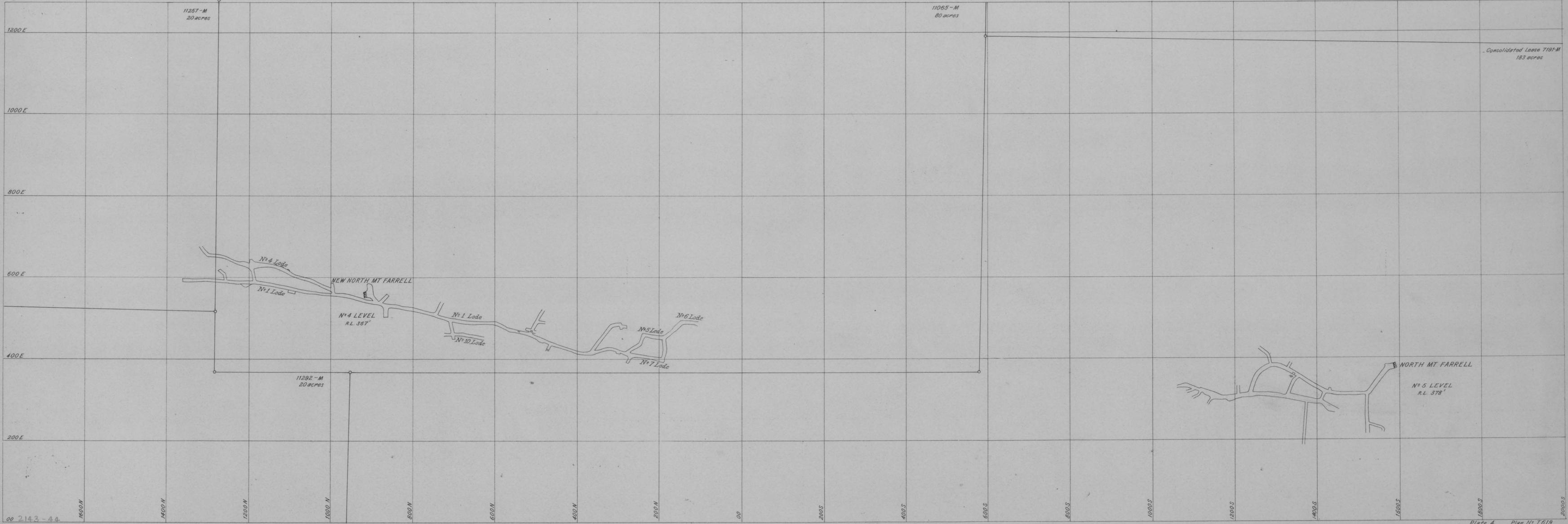
5 cm



2143

204

5 cm



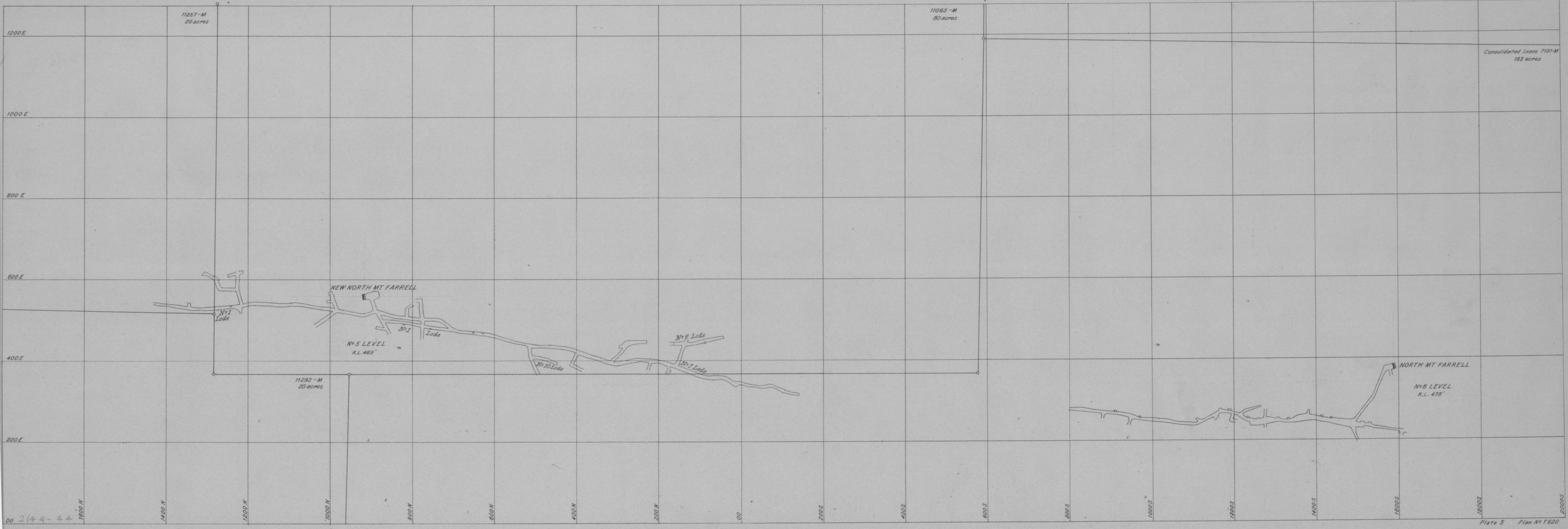
00 2143-44

Plate 4 Plan N° T 619

2144

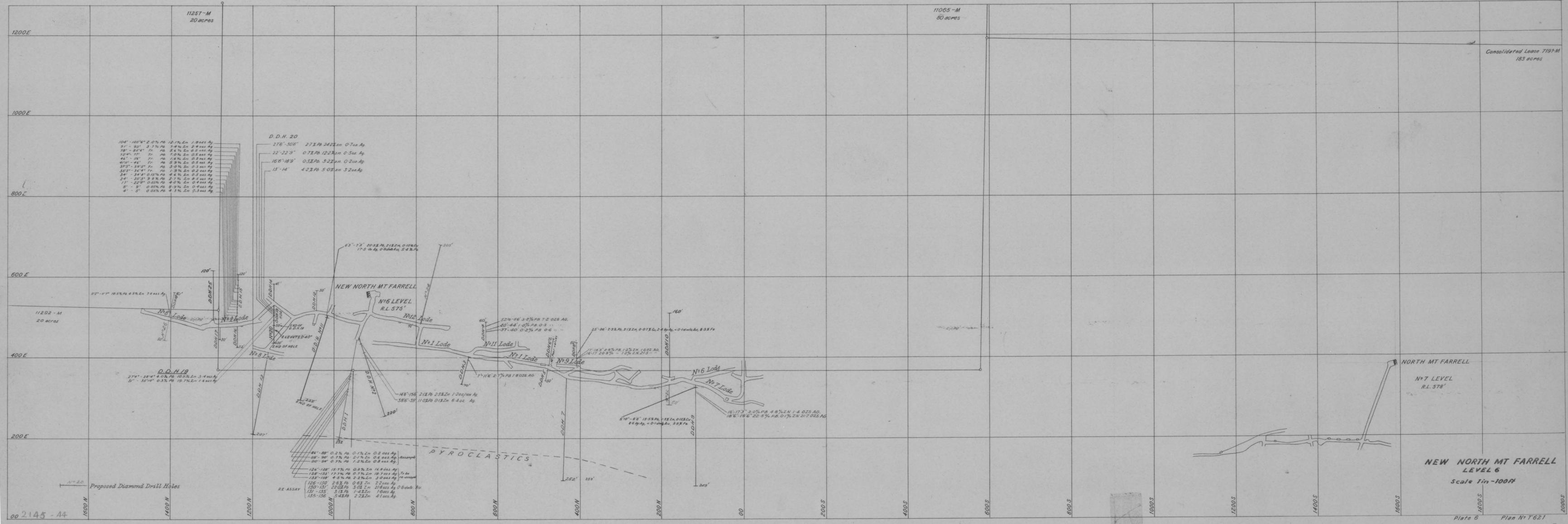
206

5 cm



2145

206



Consolidated Lease 7191-M
183 acres

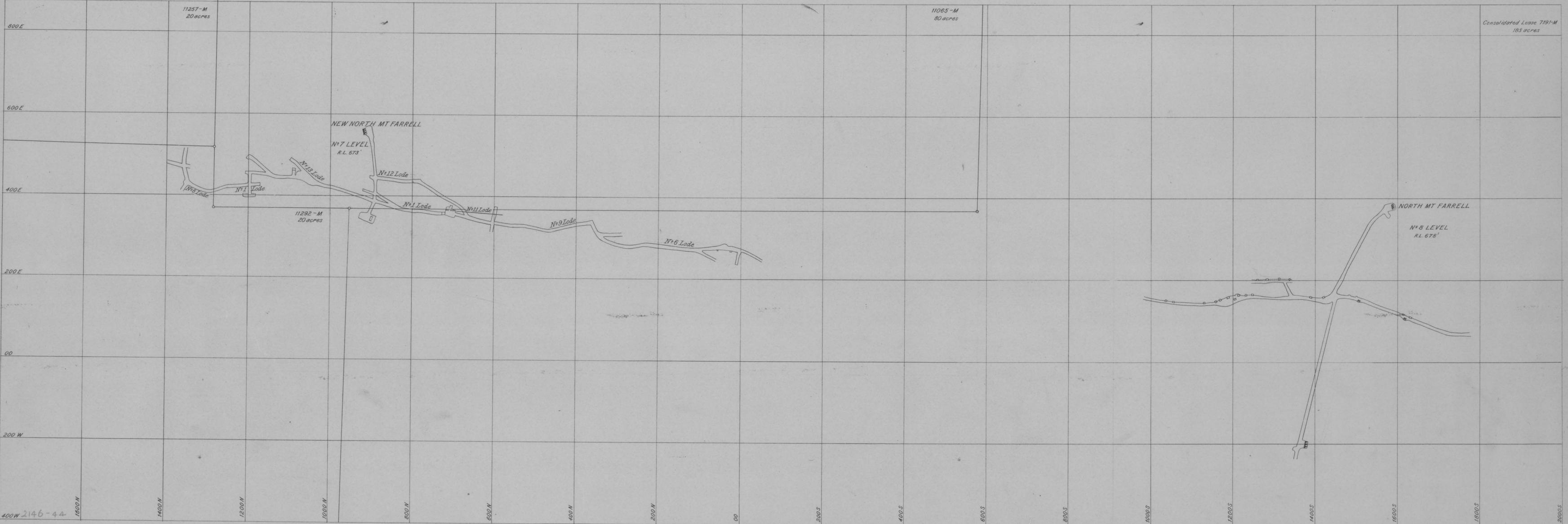
NEW NORTH MT FARRELL
LEVEL 6
Scale 1 in = 100 ft

Plate 6 Plan No. T 621

2146

207

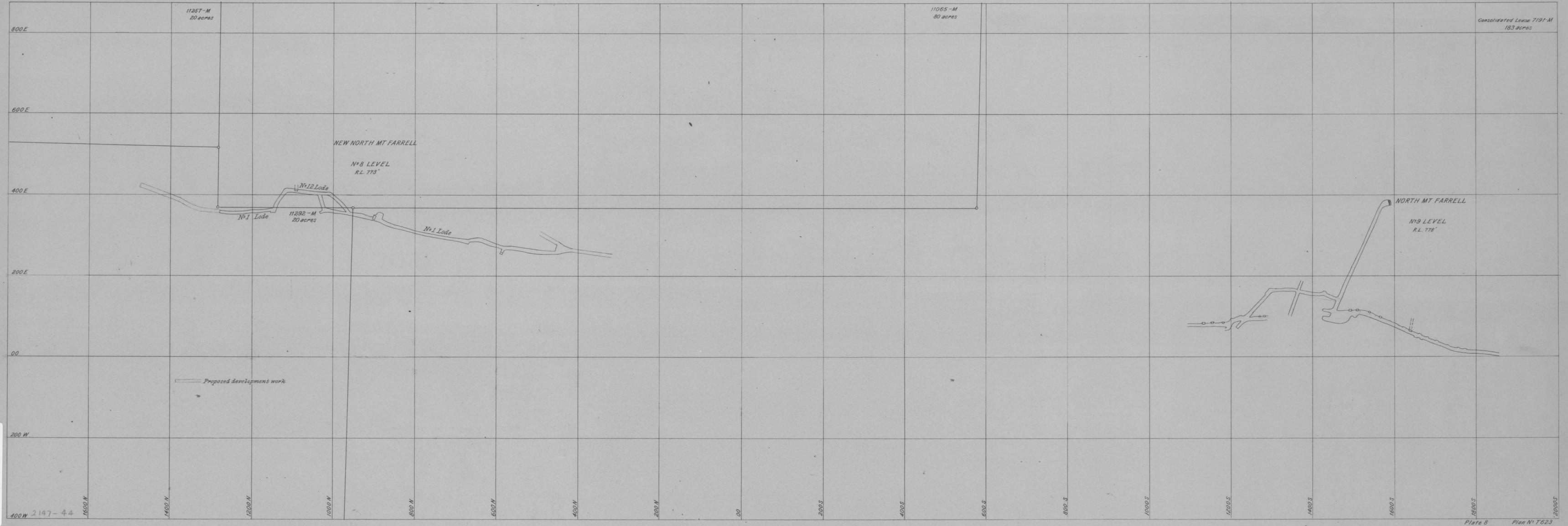
5 cm



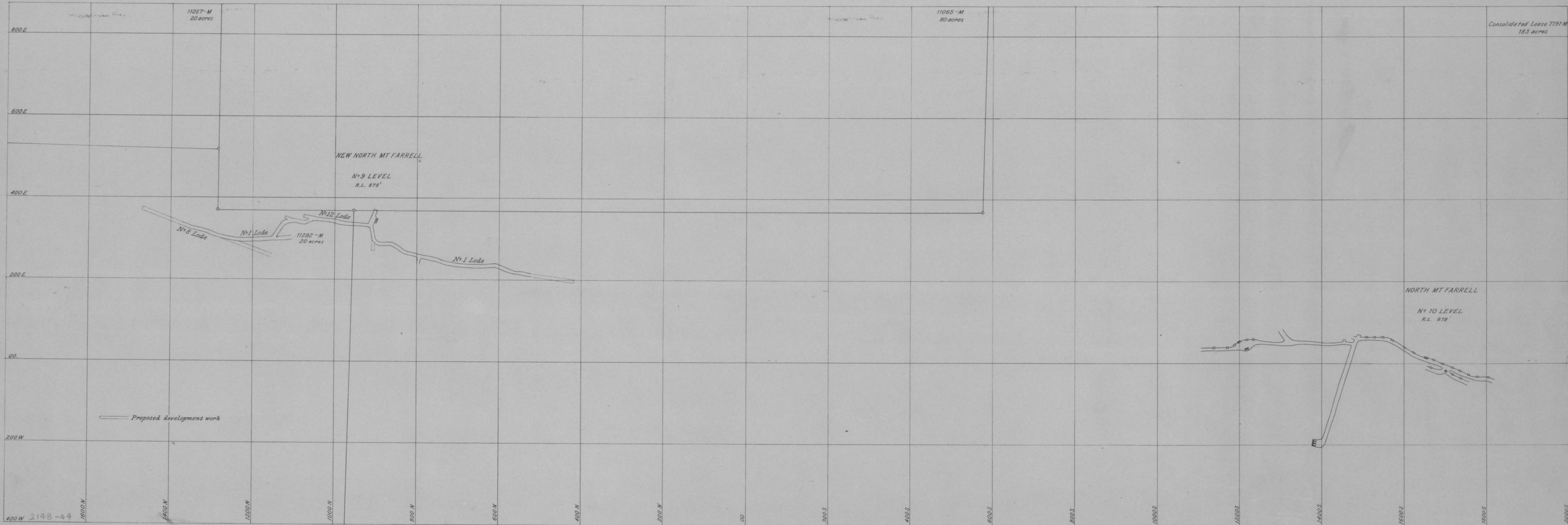
2147

758

5 cm



2148

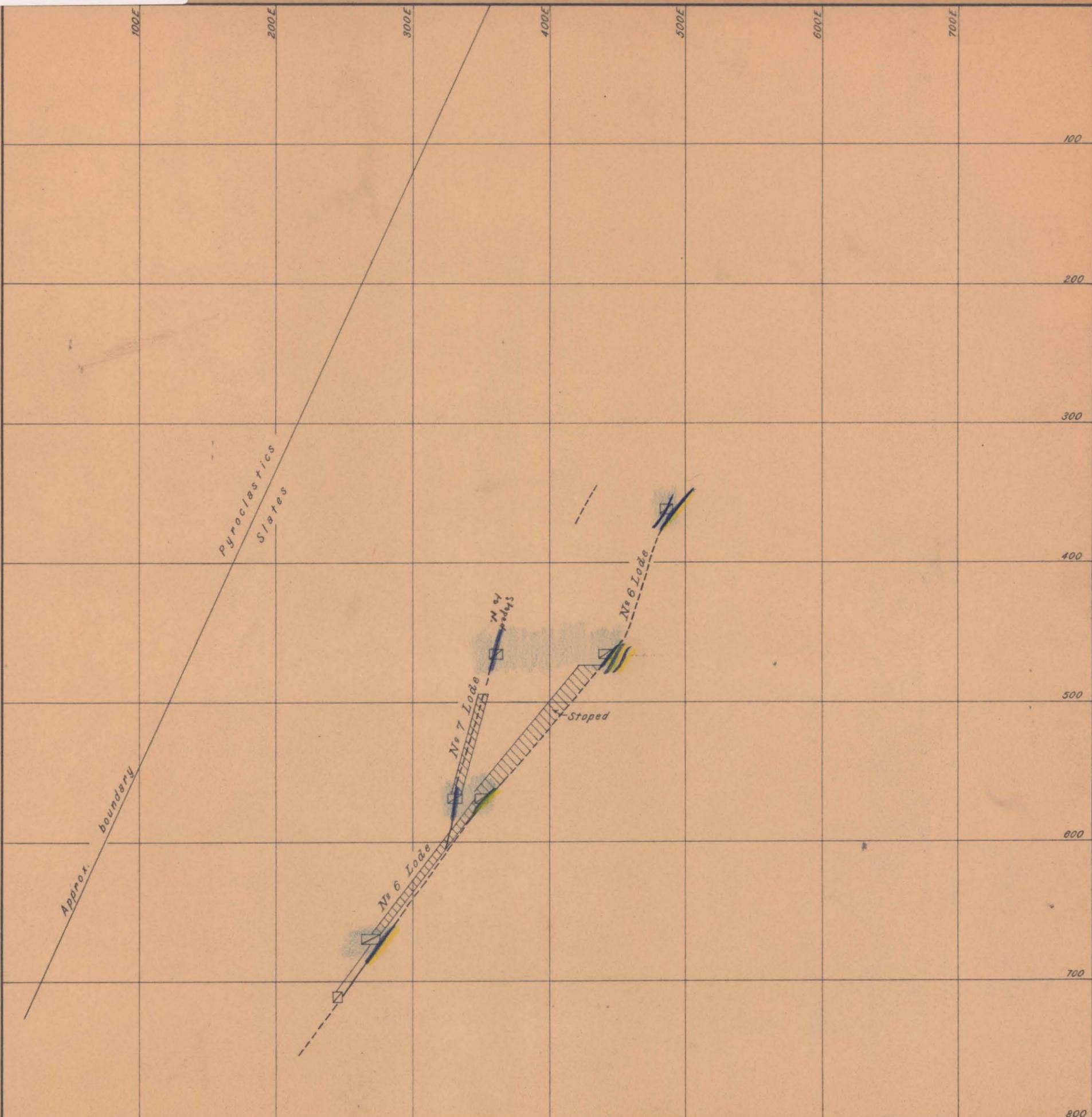


5 cm

2149

210

5 cm



NEW NORTH MT FARRELL

TRANS. SECTION 100 N.

Scale, 60 ft. to 1 in.

Dec., 1959

P.R.P./7/100

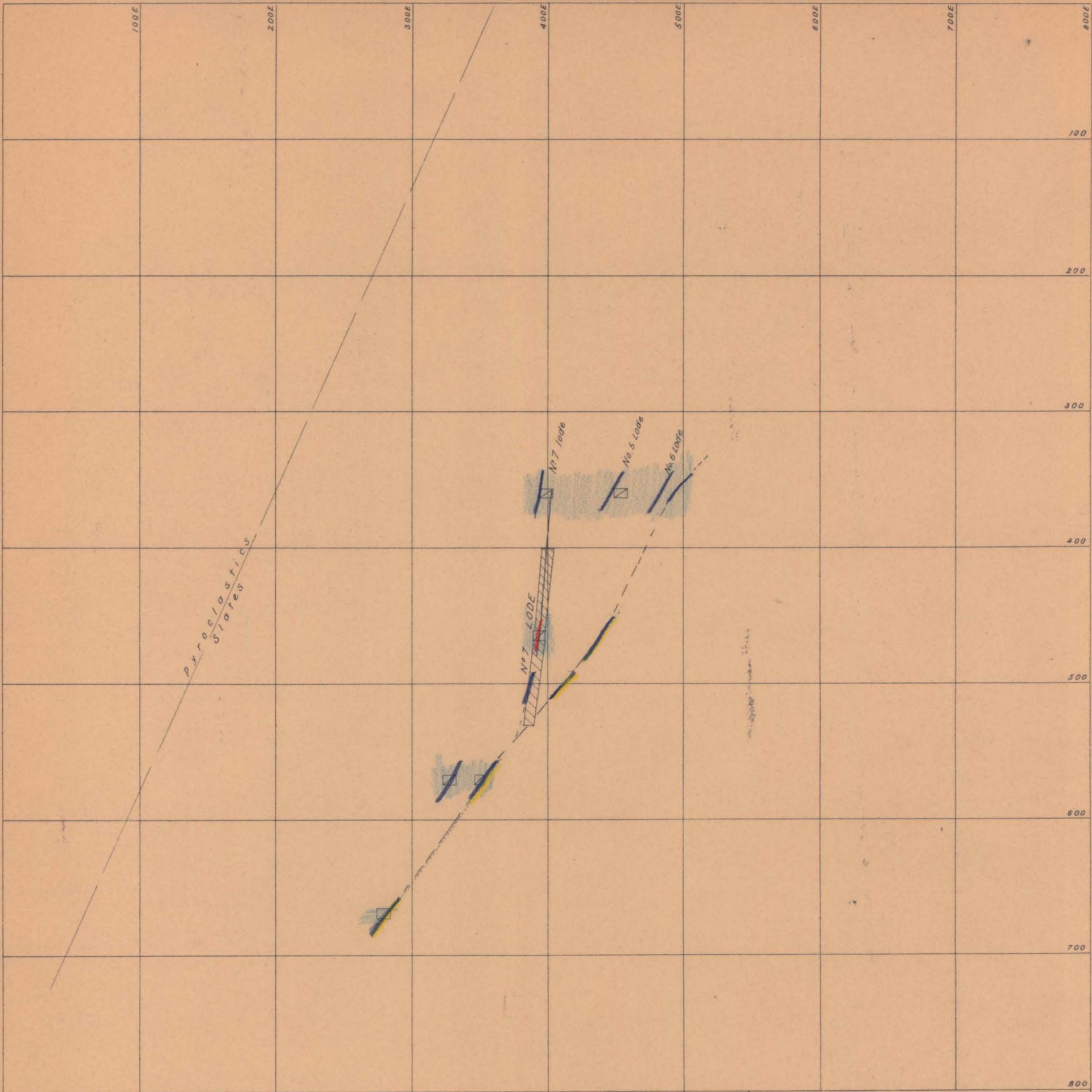
2149-44

Plan No T 625

2150

211

5 cm



2150-44

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

SECTION 200N

NEW NTH. MT. FARRELL MINE

N.W. TASMANIA

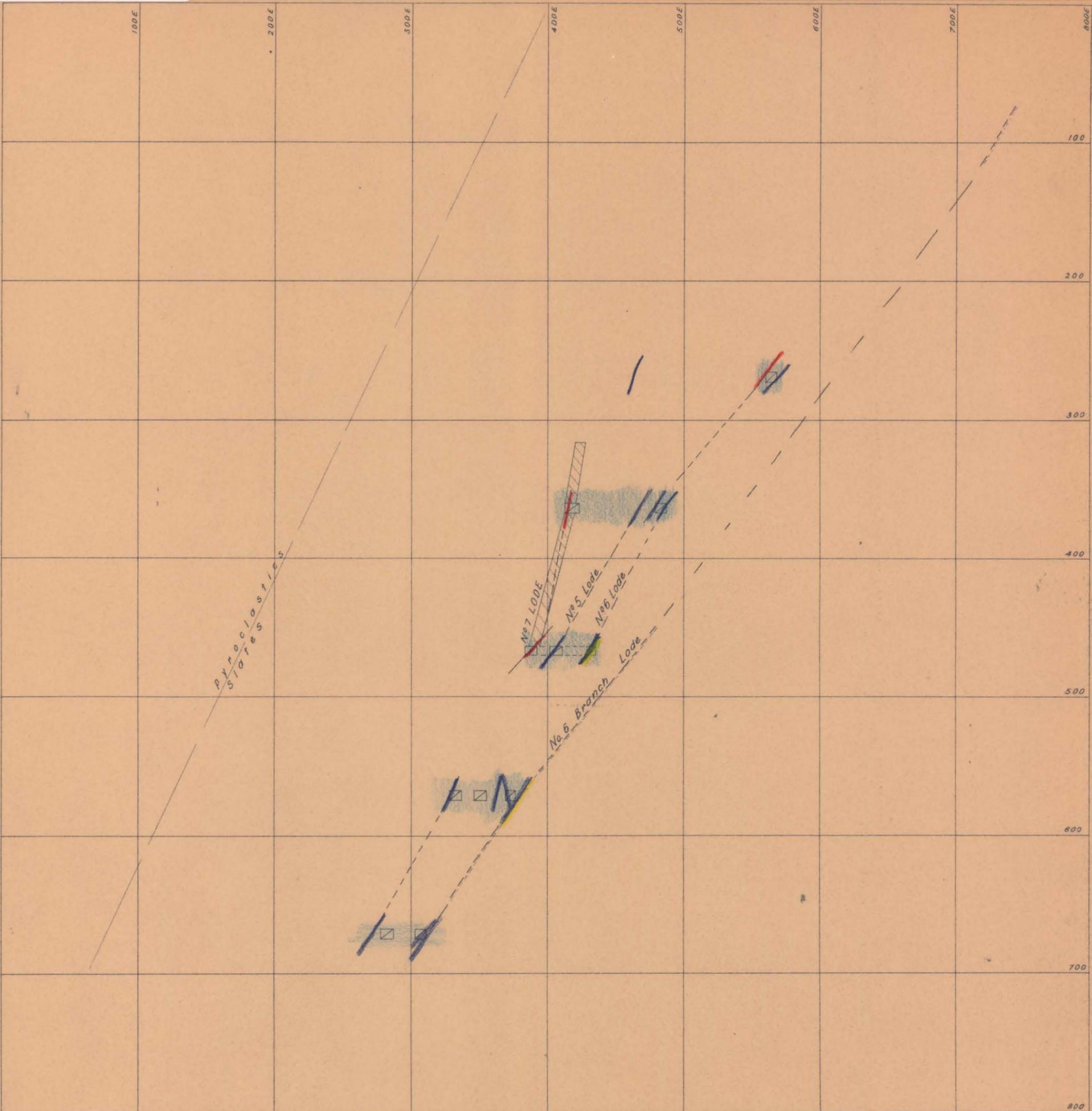
SCALE: 60 FT. TO 1 INCH

PRP 7/100

T 626

2151
212

5 cm

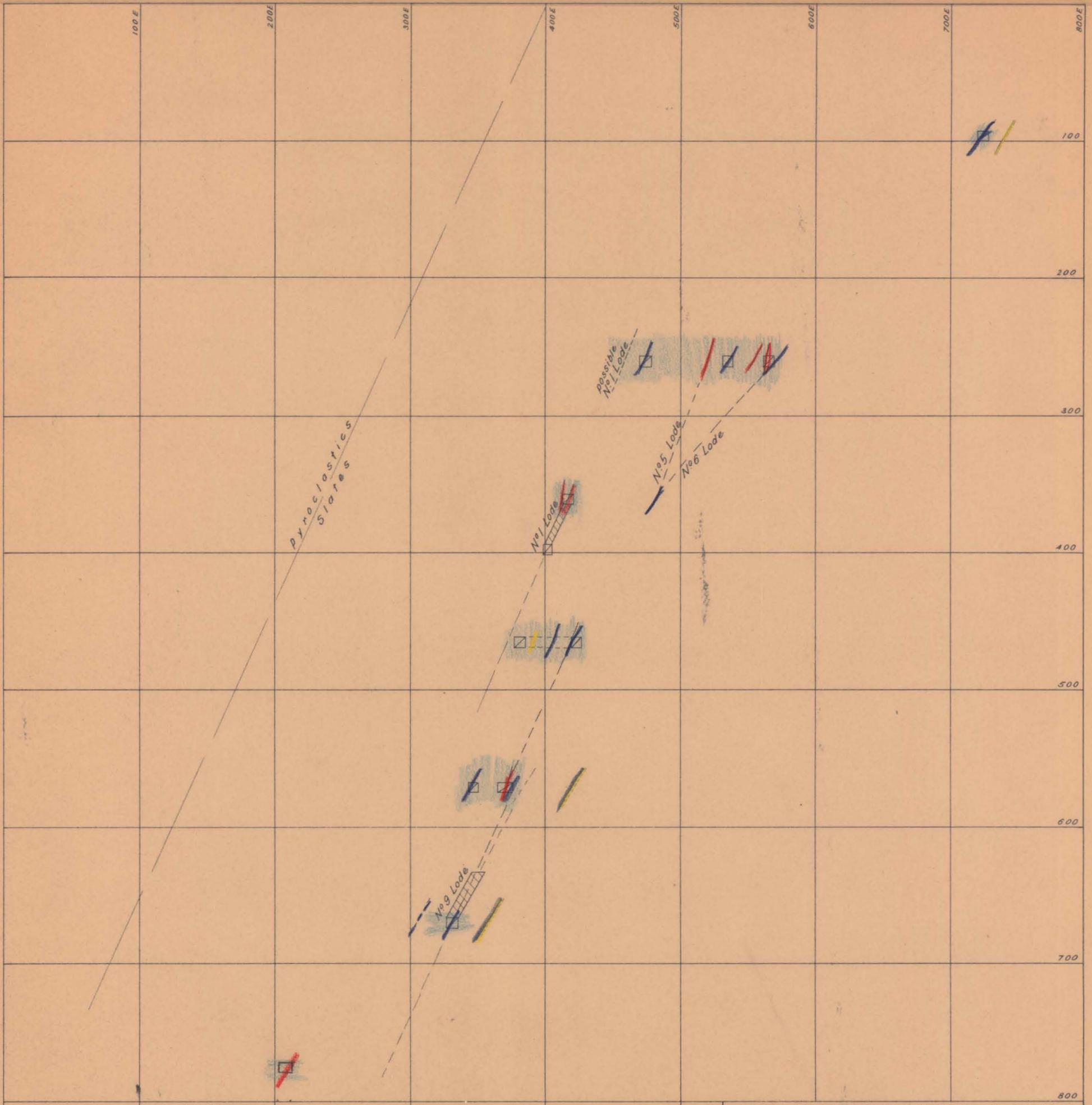
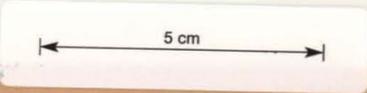


2151-44

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED
SECTION 300N
NEW NTH. MT. FARRELL MINE
 N.W. TASMANIA
 SCALE: 60 FT. TO 1 INCH
 PRP 7/100 T 627

2152

213



2152-44

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

SECTION 400N
NEW NTH. MT. FARRELL MINE

N.W. TASMANIA
SCALE: 60FT. TO 1 INCH

PRP 7/100

T 628

2153A

5 cm

RL. 800

700

600

500

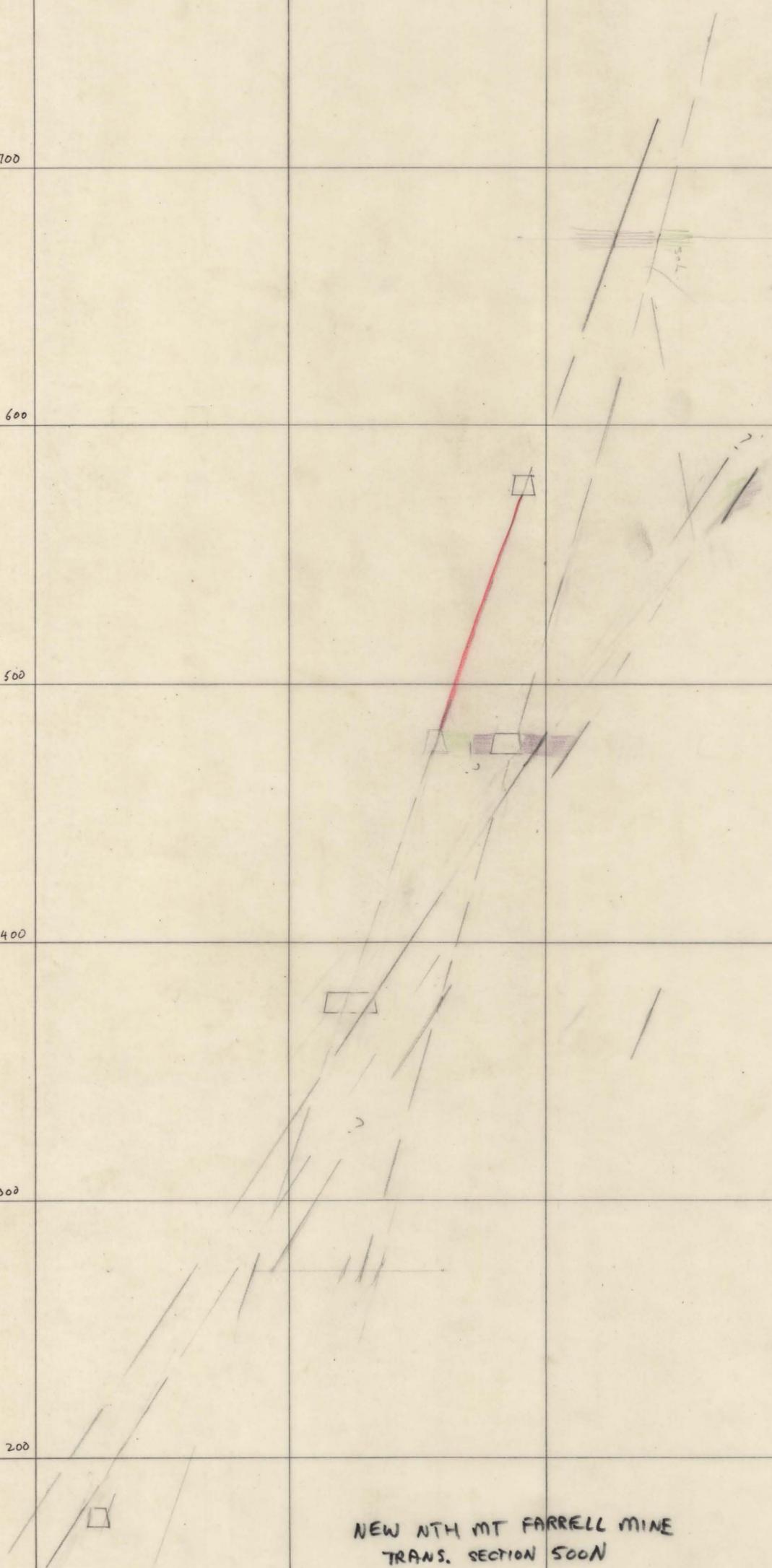
400

300

200

100

□ No information

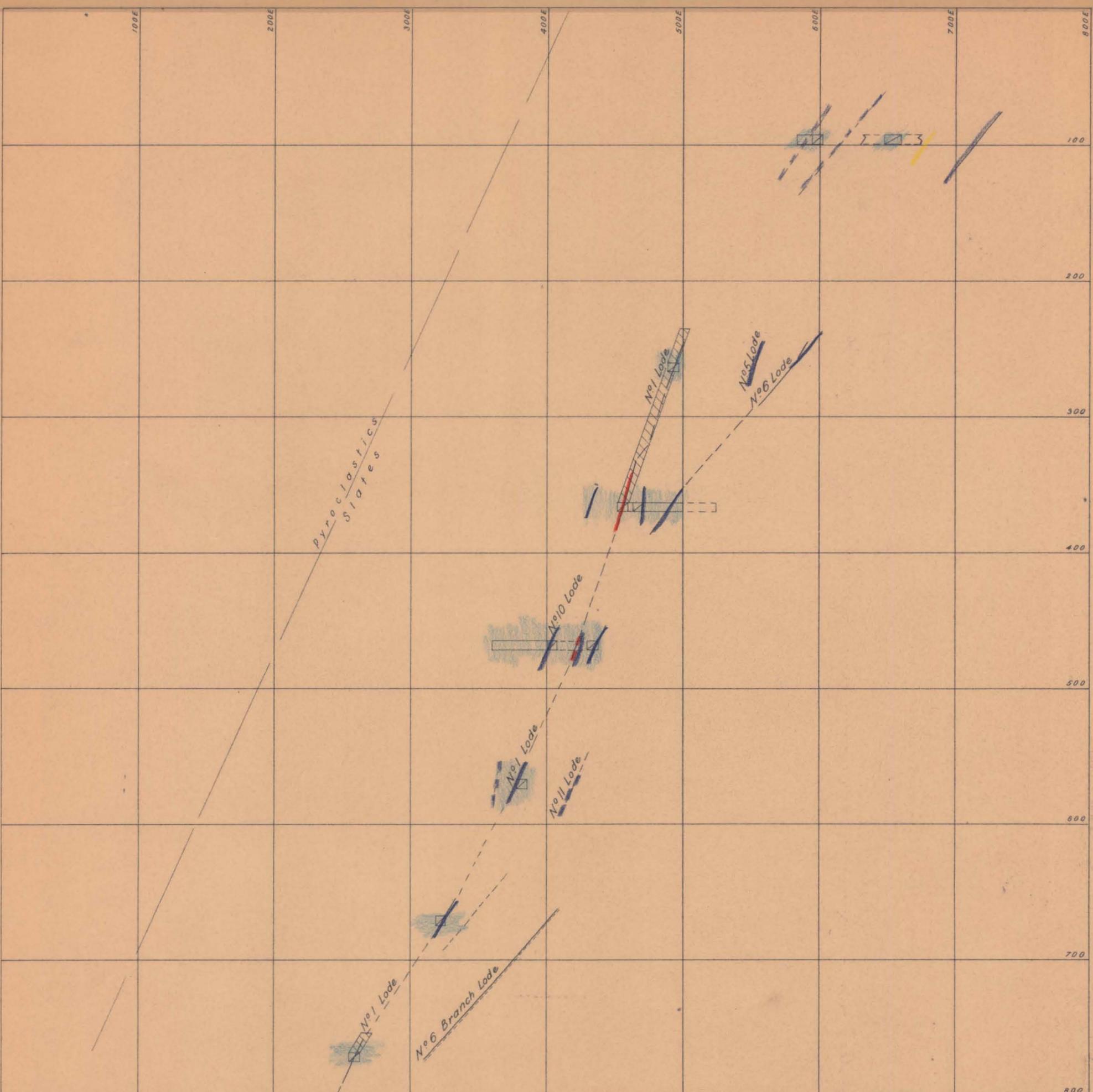
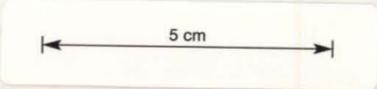


NEW NTH MT FARRELL MINE
TRANS. SECTION SOON

2153A

2153 B

215



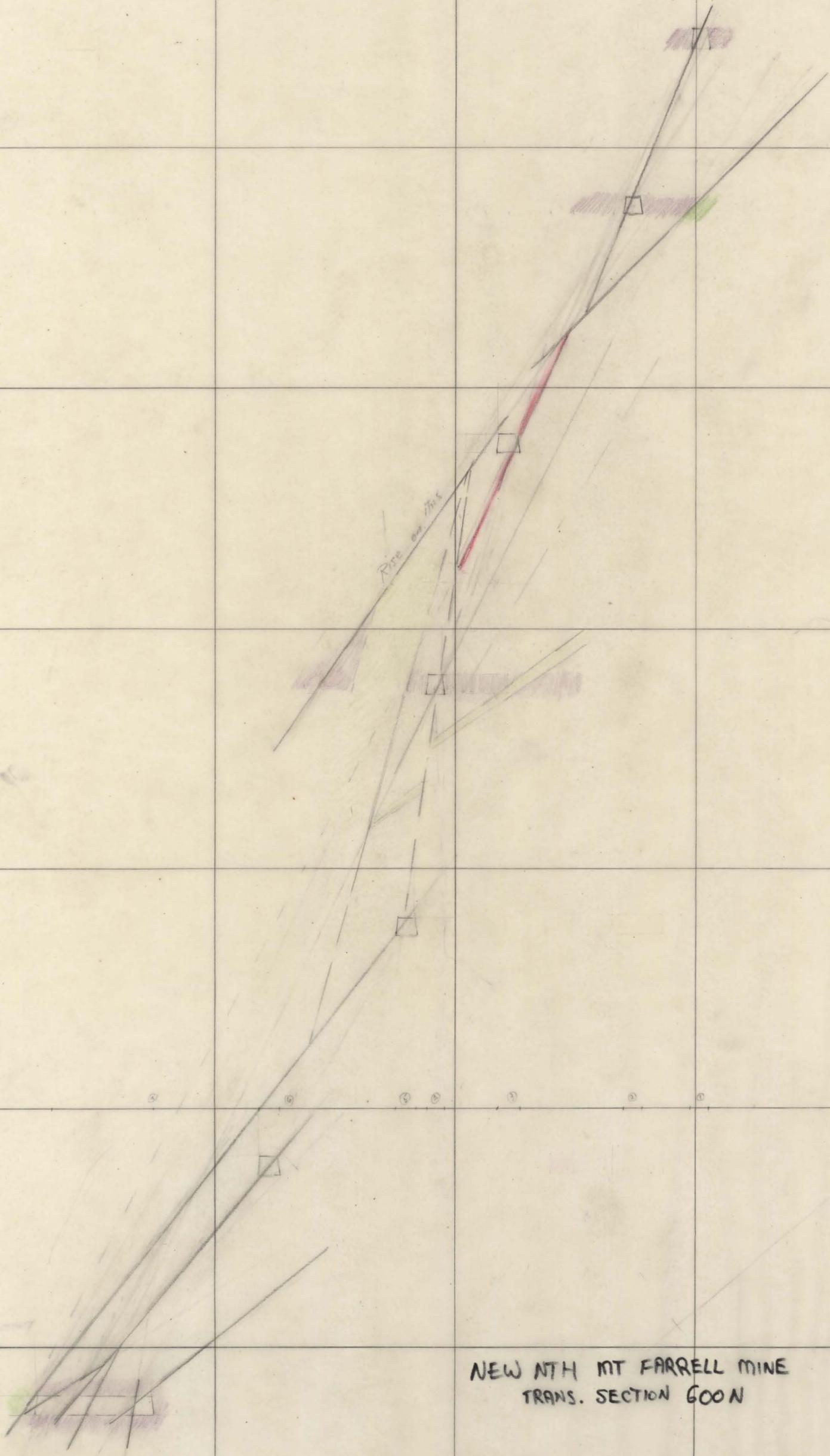
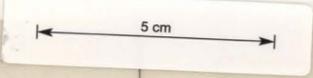
2153-44

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED
SECTION 500N
NEW NTH. MT. FARRELL MINE
 N.W. TASMANIA
 SCALE: 60 FT. TO 1 INCH
 PRP 7/100

T 629

2154A

216



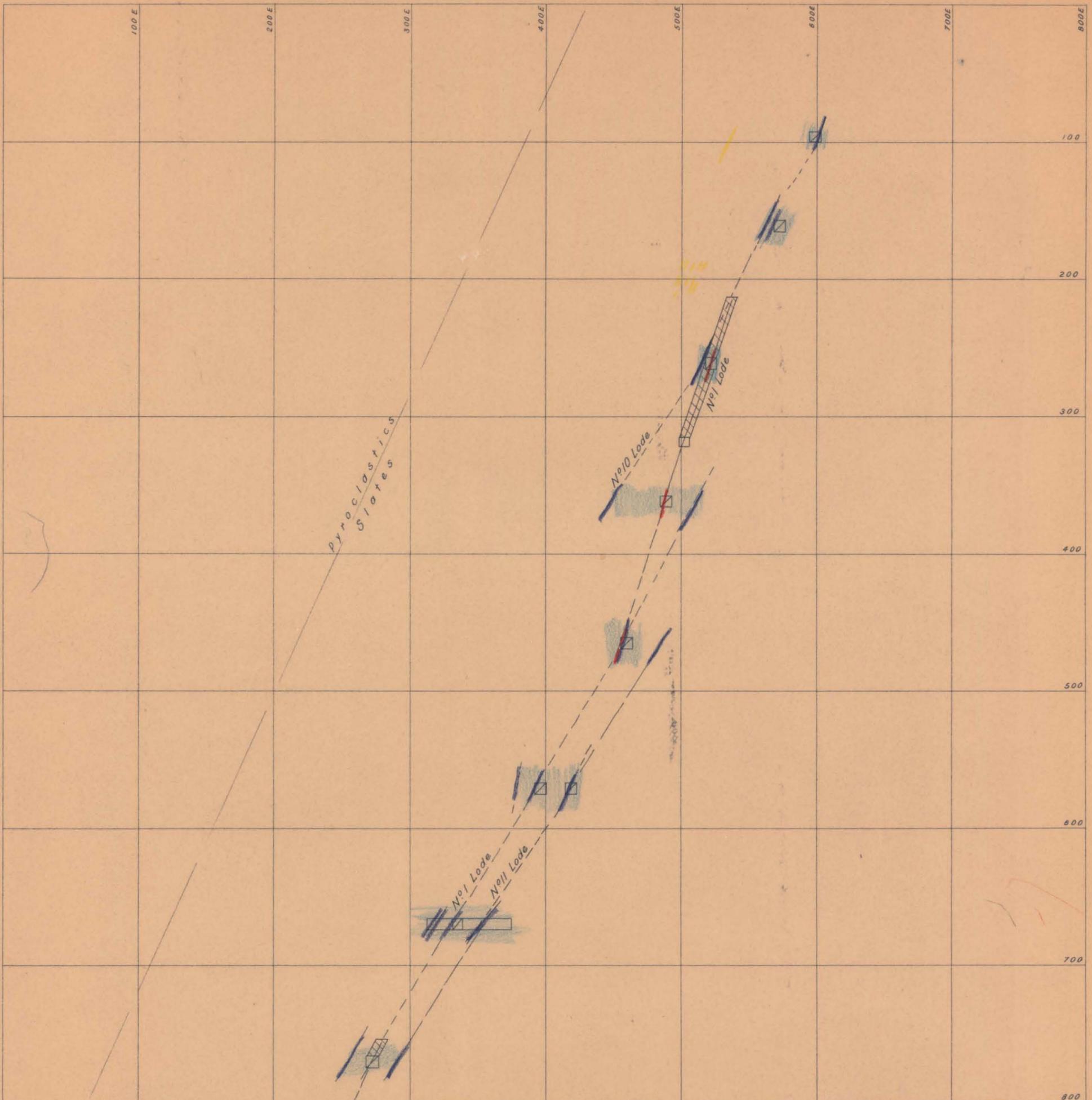
NEW NTH MT FARRELL MINE
TRANS. SECTION 600N

2154A

2154_B

217

5 cm



2154-44

RIO TINTO AUSTRALIAN EXPLORATION PTY LIMITED

SECTION 600N
NEW NTH. MT. FARRELL MINE

N. W. TASMANIA

SCALE: 60 FT TO 1 INCH

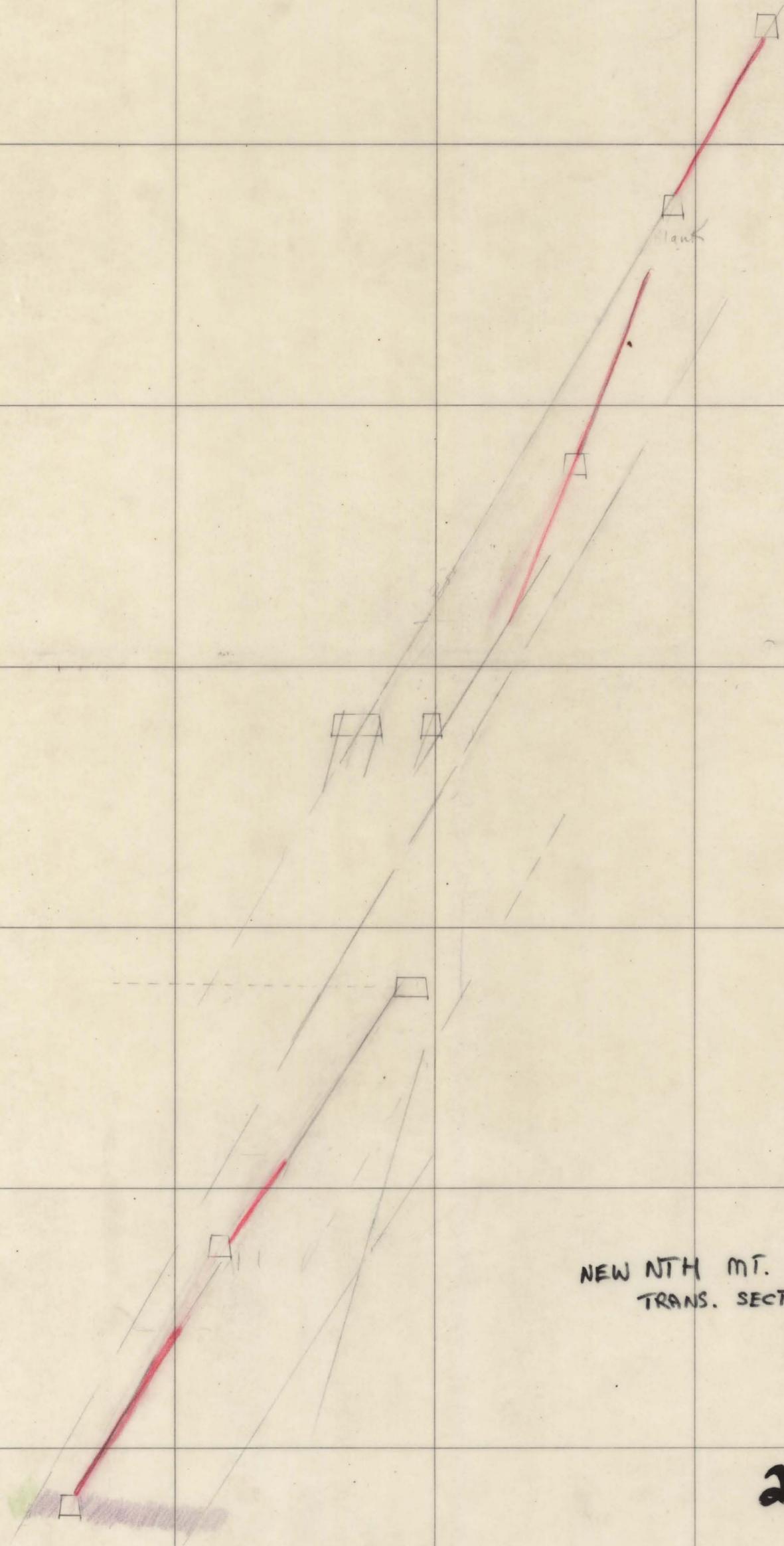
PRP 7/100

T 630

2155A

218

5 cm



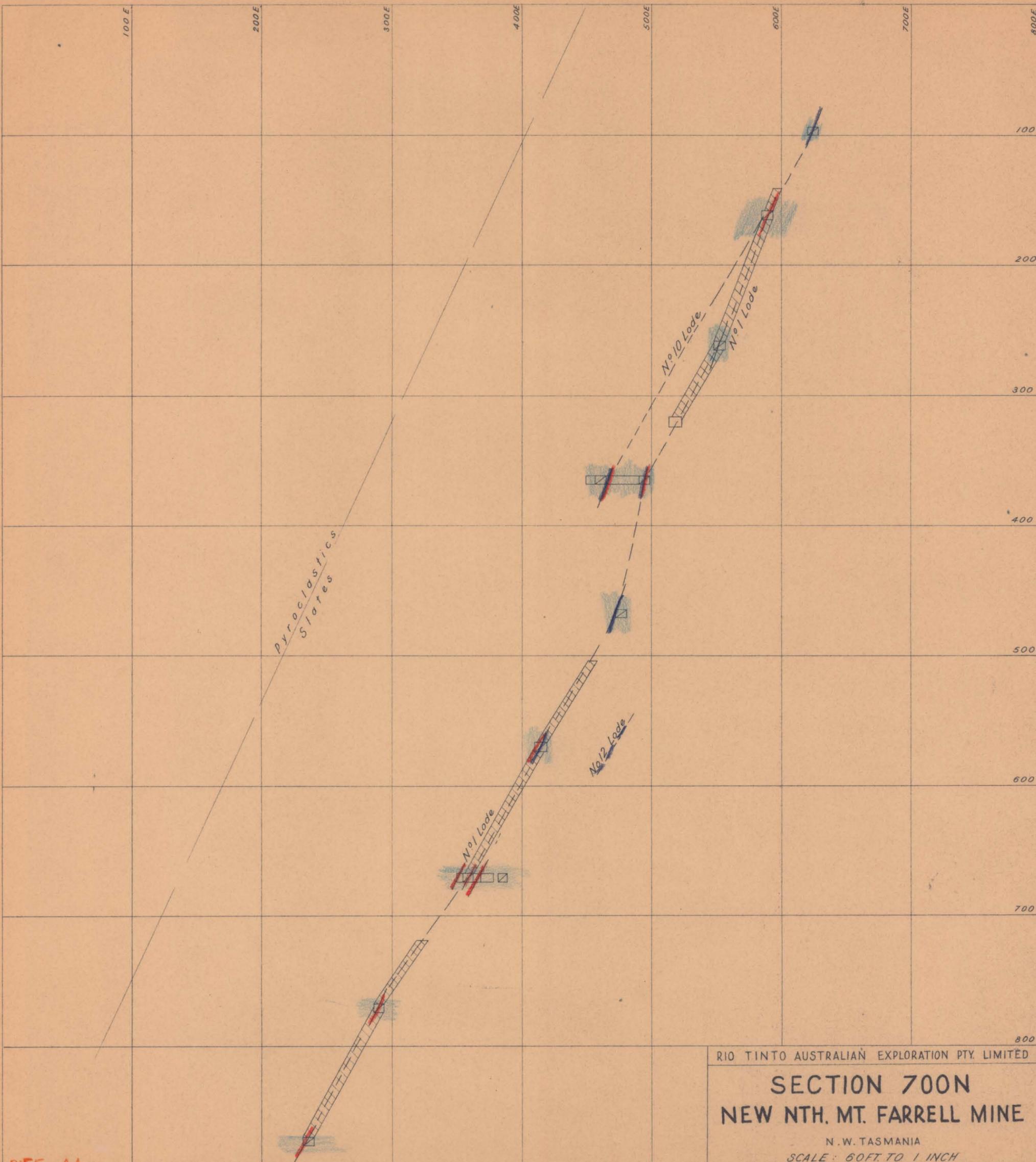
NEW NTH MT. FARRELL MINE
TRANS. SECTION 700N

2155A

2155

219

5 cm



2155-44

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

SECTION 700N
NEW NTH. MT. FARRELL MINE

N. W. TASMANIA
SCALE: 60 FT. TO 1 INCH

PRP 7/100

T. 631

2156A

220

5 cm



NEW NTH MT FARRELL MINES
TRANS. SECTION 800N

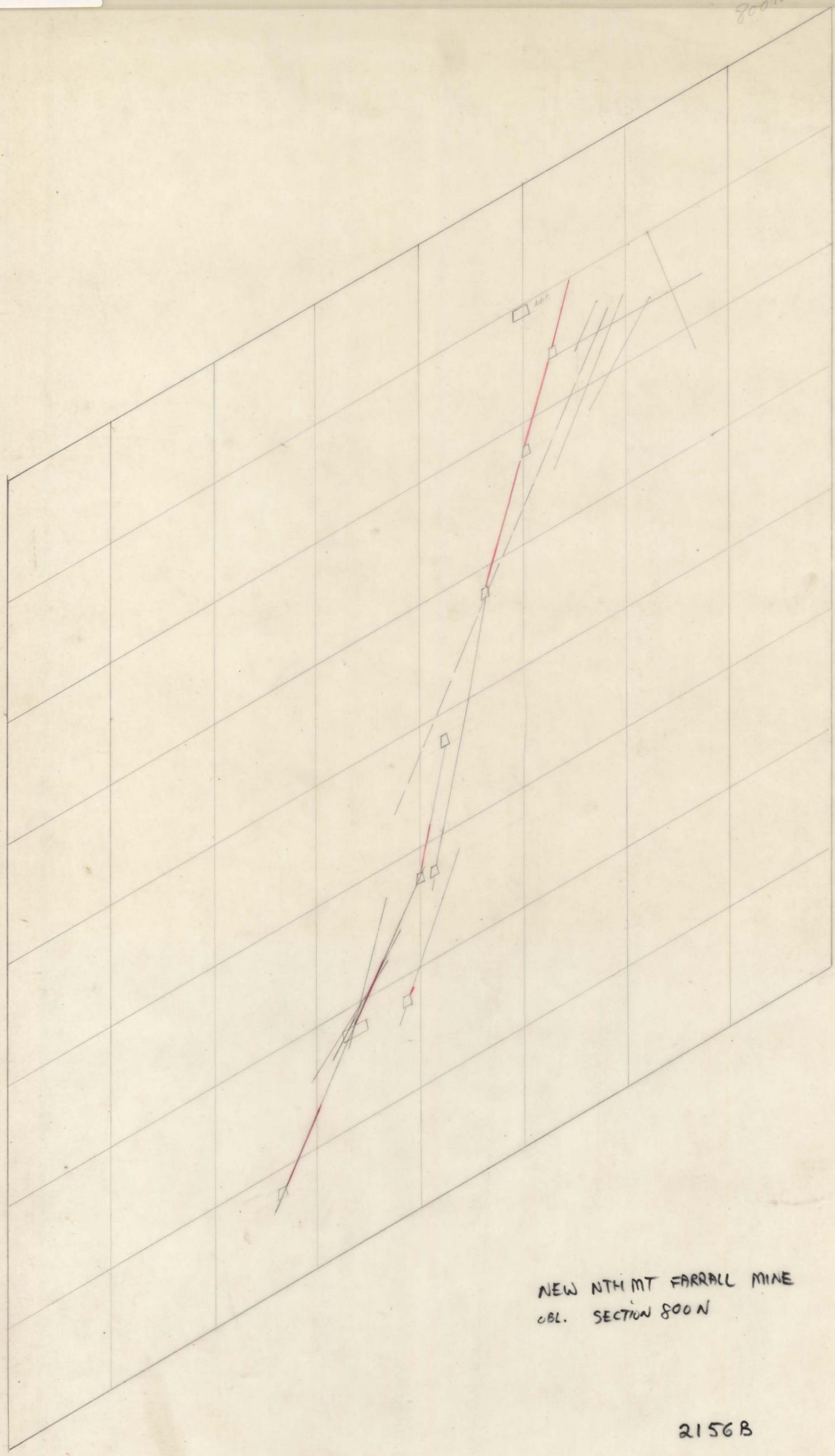
Plan 2156A

2156B

221

5 cm

800N



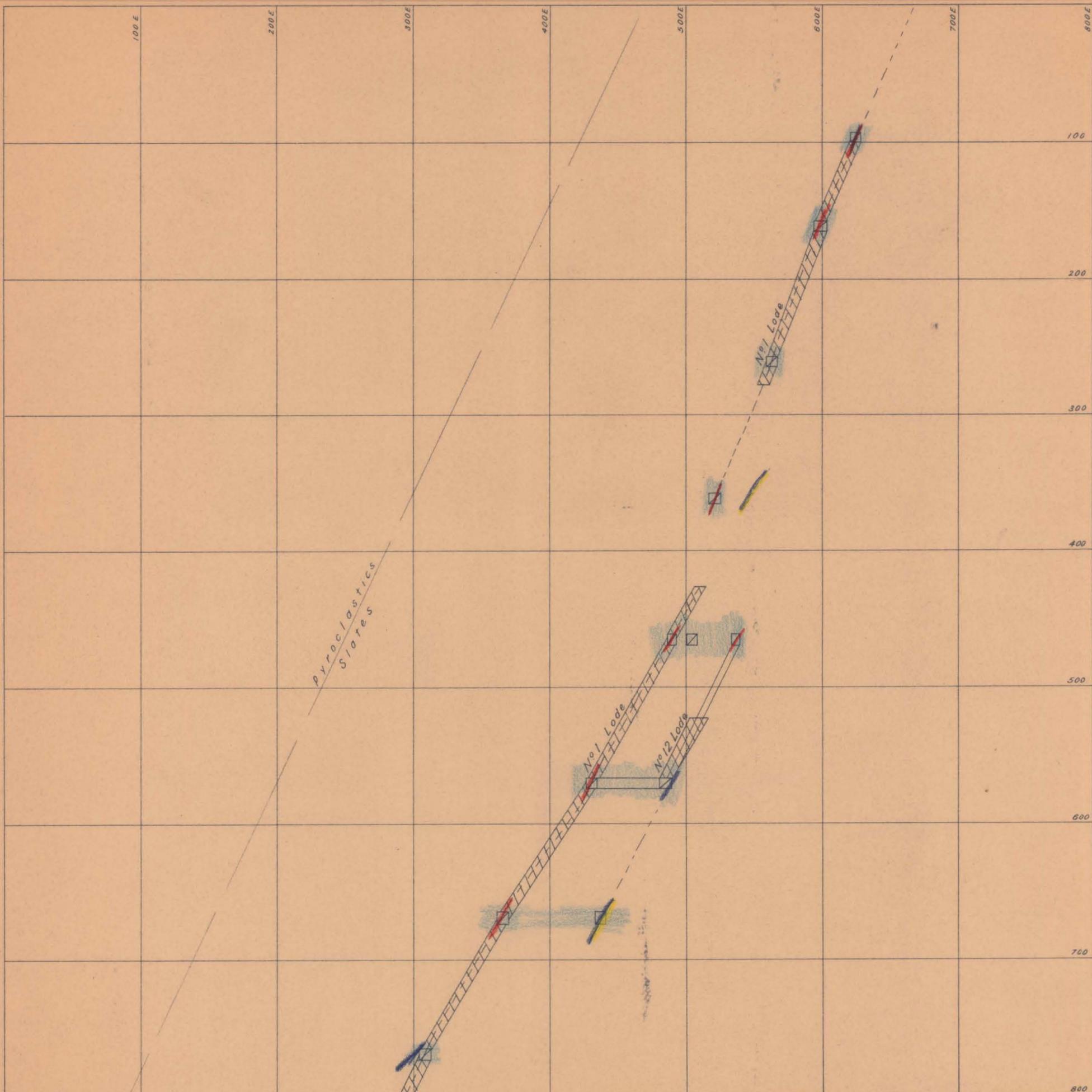
NEW NTH MT FARRALL MINE
OBL. SECTION 800N

2156B

2156_C

222

5 cm



2156-44

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

SECTION 800N
NEW NTH. MT. FARRELL MINE

N. W. TASMANIA

SCALE: 60 FT. TO 1 INCH

PRP 7/100

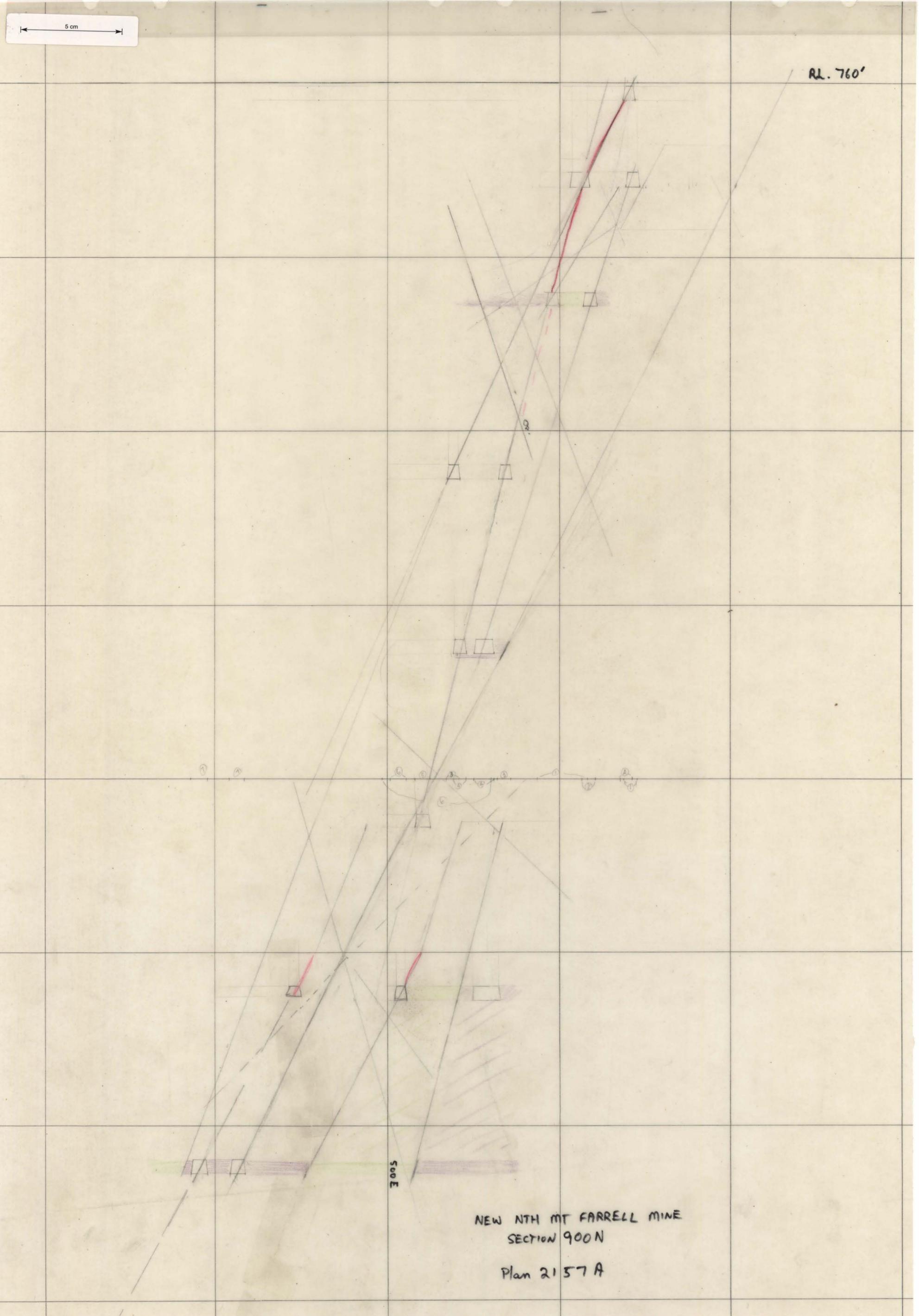
T 632

2157A

223

5 cm

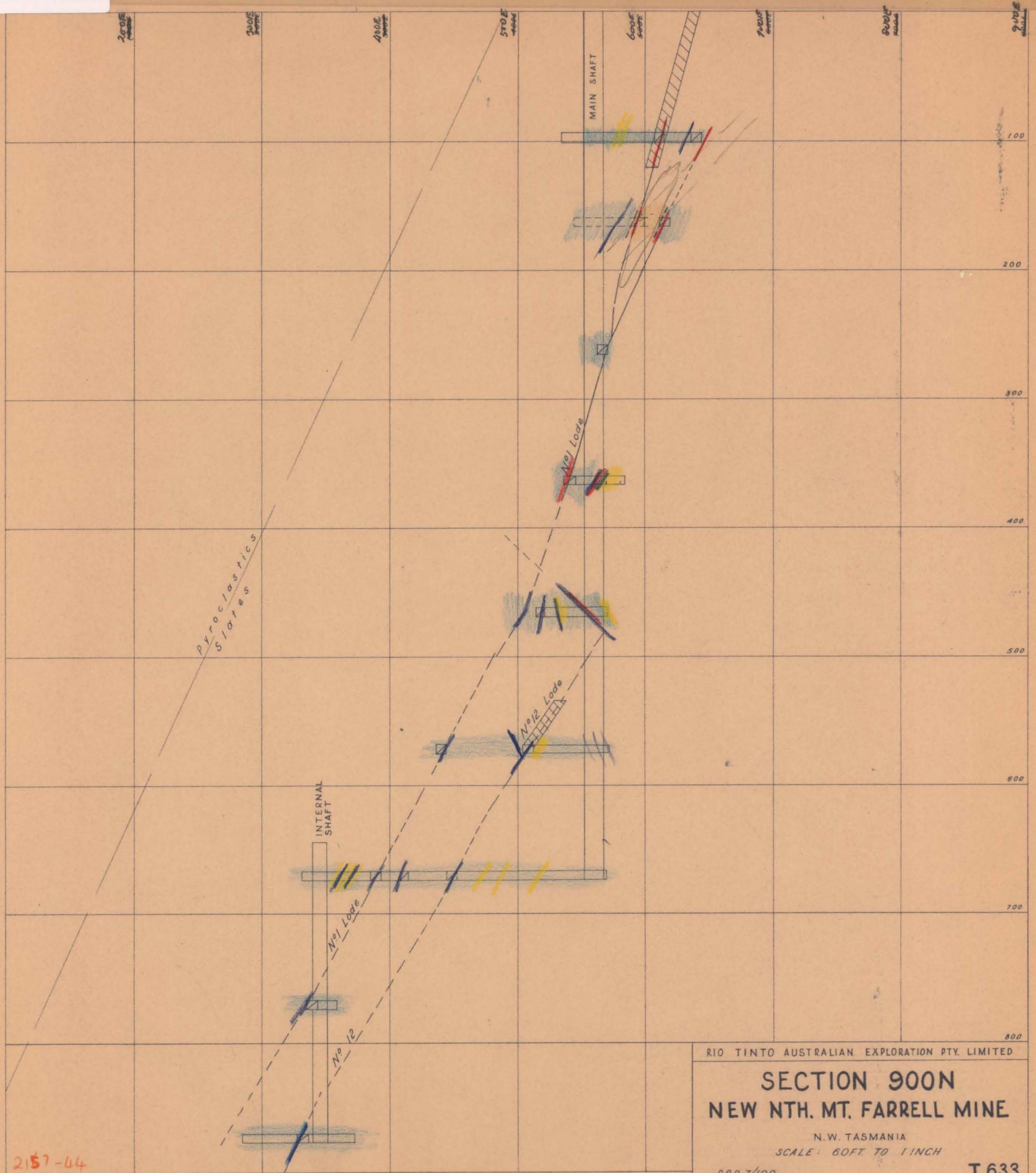
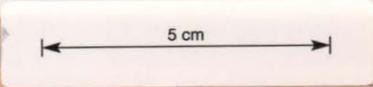
RL. 760'



NEW NTH MT FARRELL MINE
 SECTION 900N
 Plan 2157A

2157_B

224



2157-44

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

SECTION 900N NEW NTH. MT. FARRELL MINE

N.W. TASMANIA
SCALE: 60FT TO 1 INCH

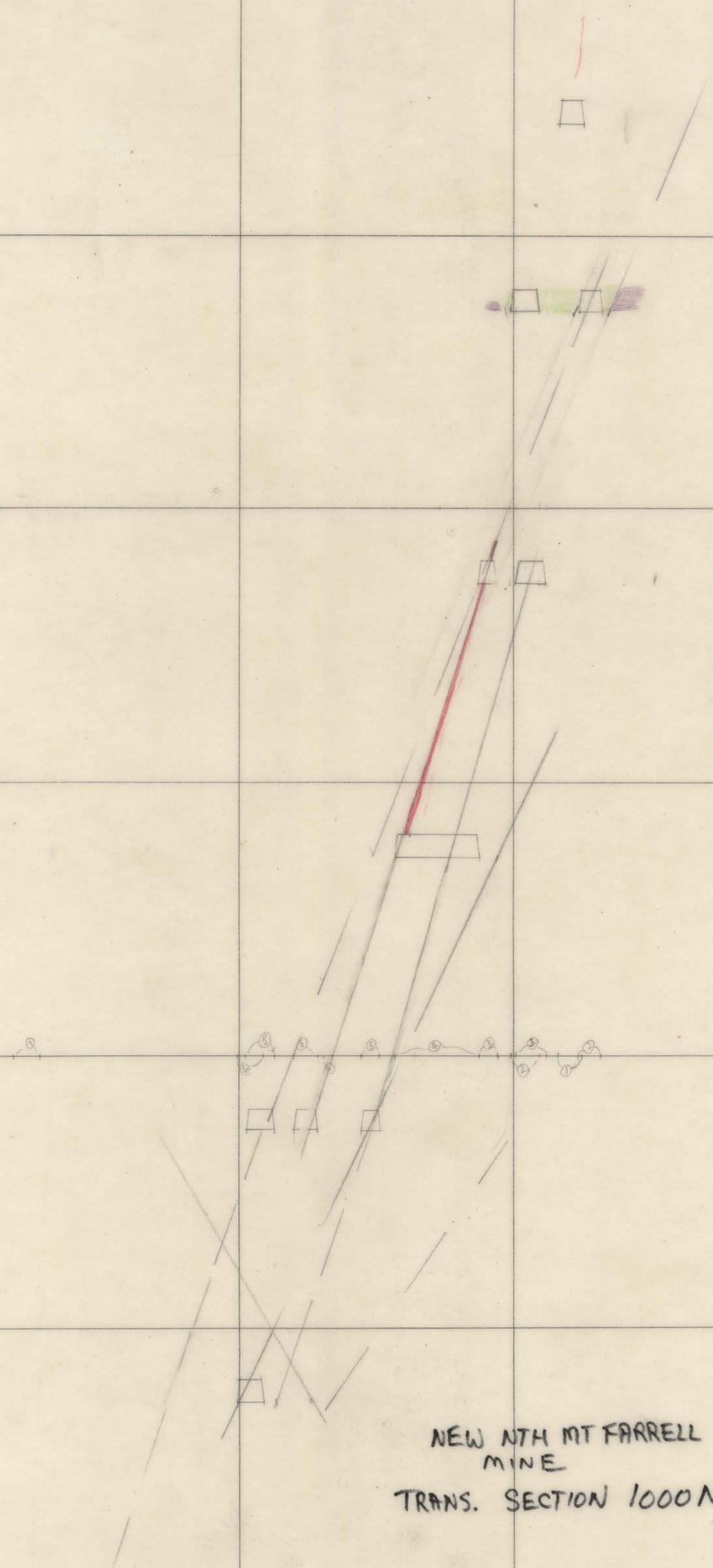
PRP 7/100

T 633

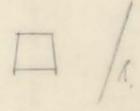
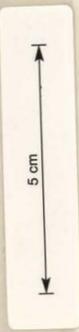


225

2158A



NEW NTH MT FARRELL
 MINE
 TRANS. SECTION 1000N

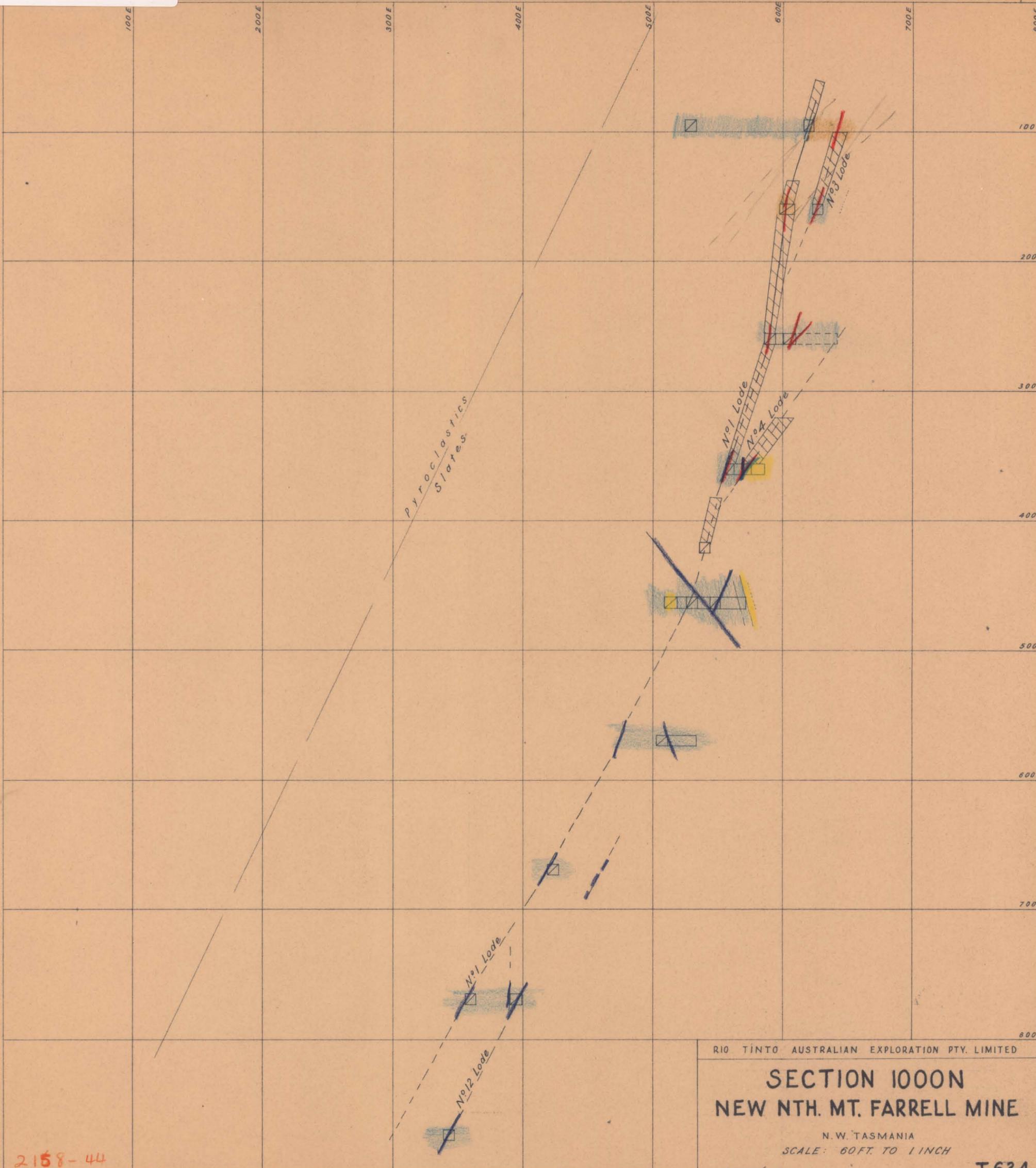


2158A

2158_B

226

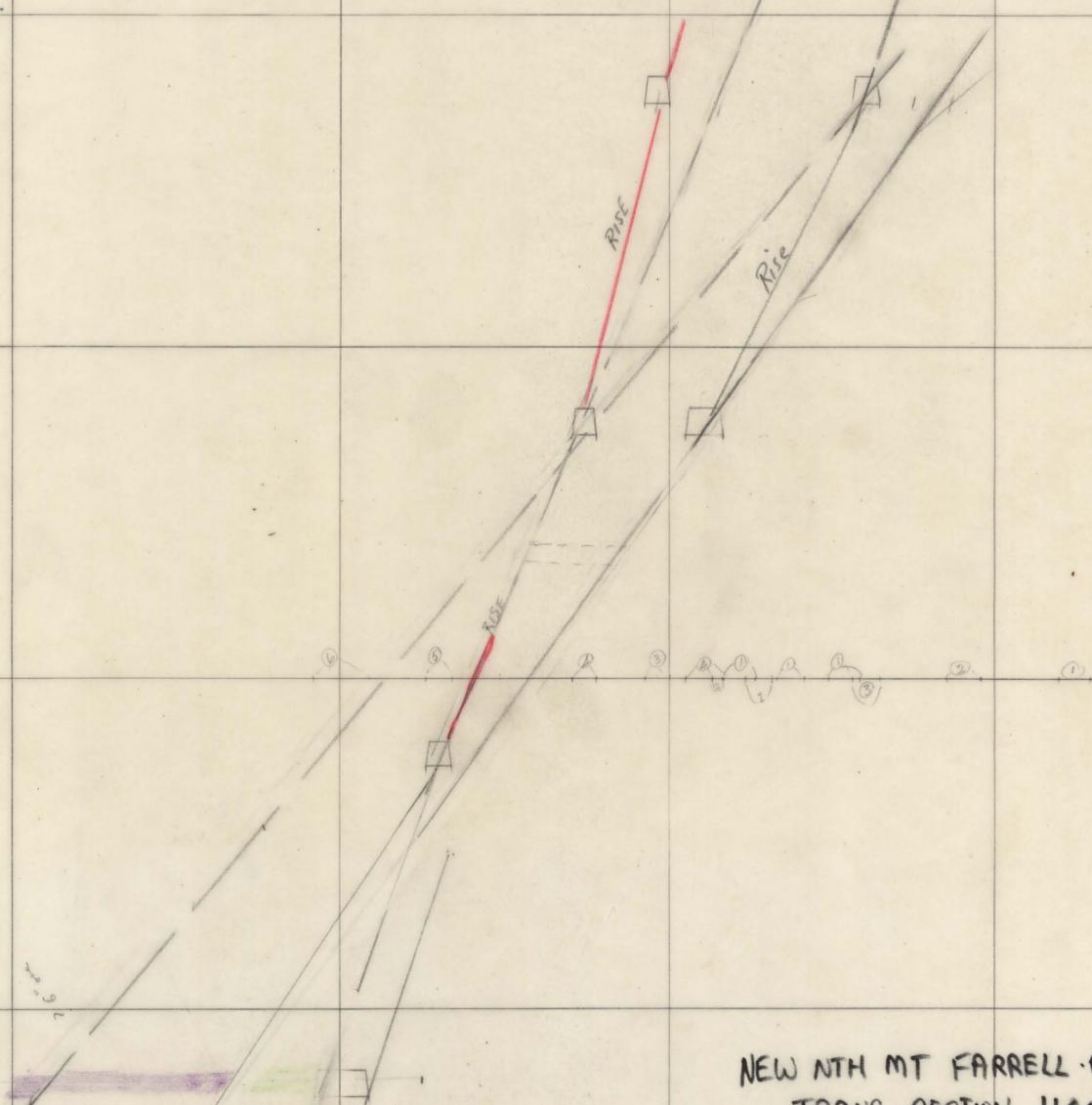
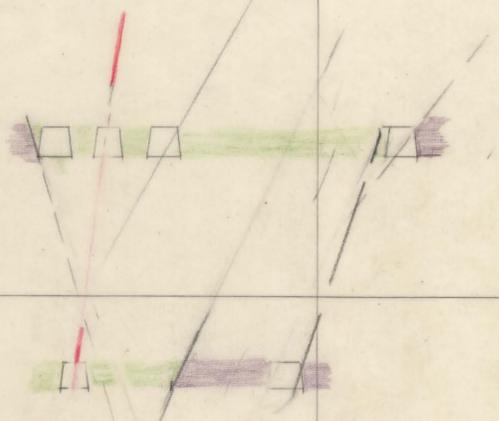
5 cm



2158-44

T 634

5 cm

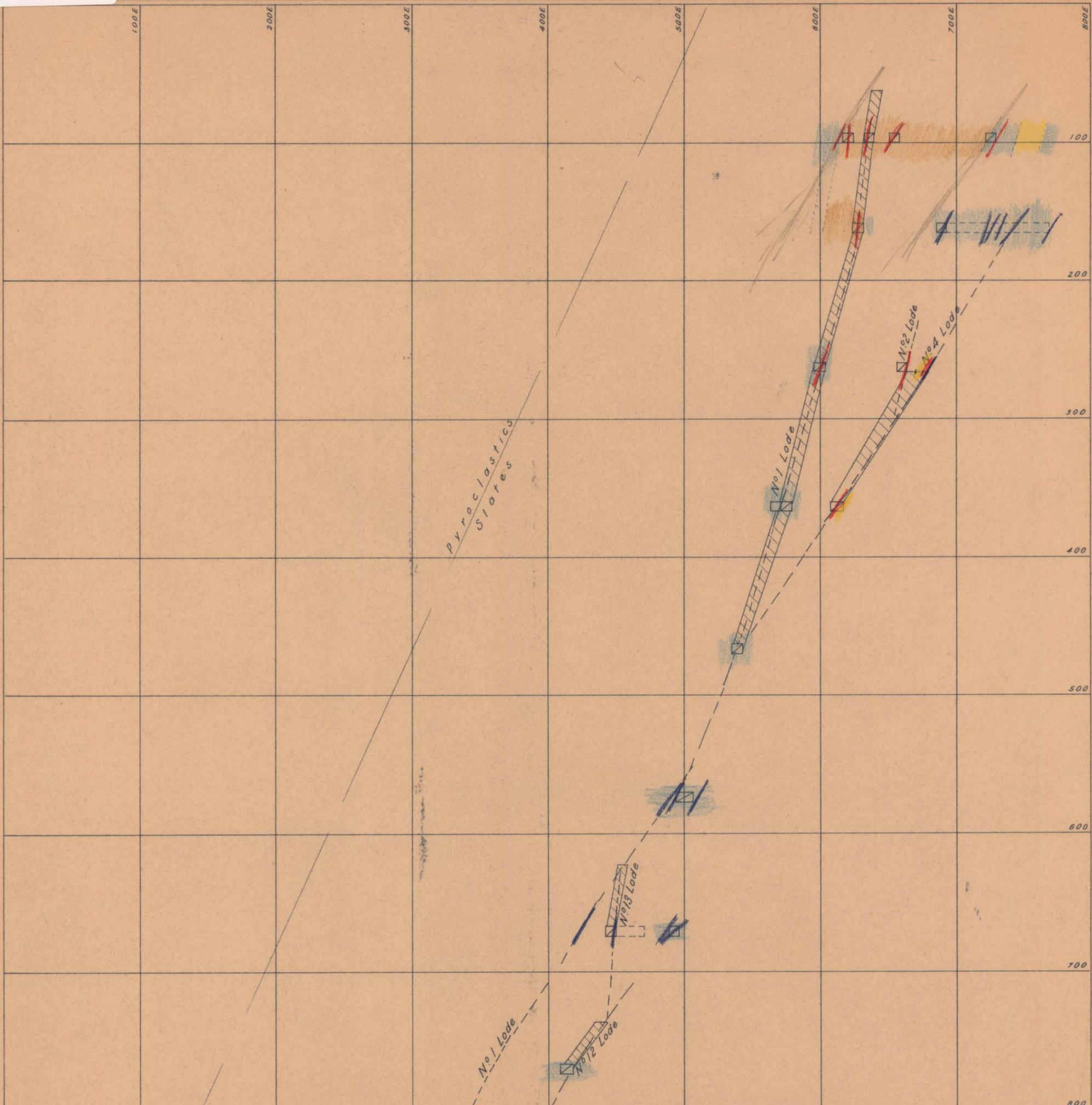
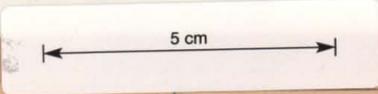


N 115°
 507

NEW NTH MT FARRELL MINE
 TRANS. SECTION 1100N

2159A

2159 B 228



2159-44

RIO TINTO AUSTRALIAN EXPLORATION PTY LIMITED
SECTION 1100N
NEW NTH. MT. FARRELL MINE
 N. W. TASMANIA
 SCALE: 60 FT TO 1 INCH
 PRP 7/100 T 635

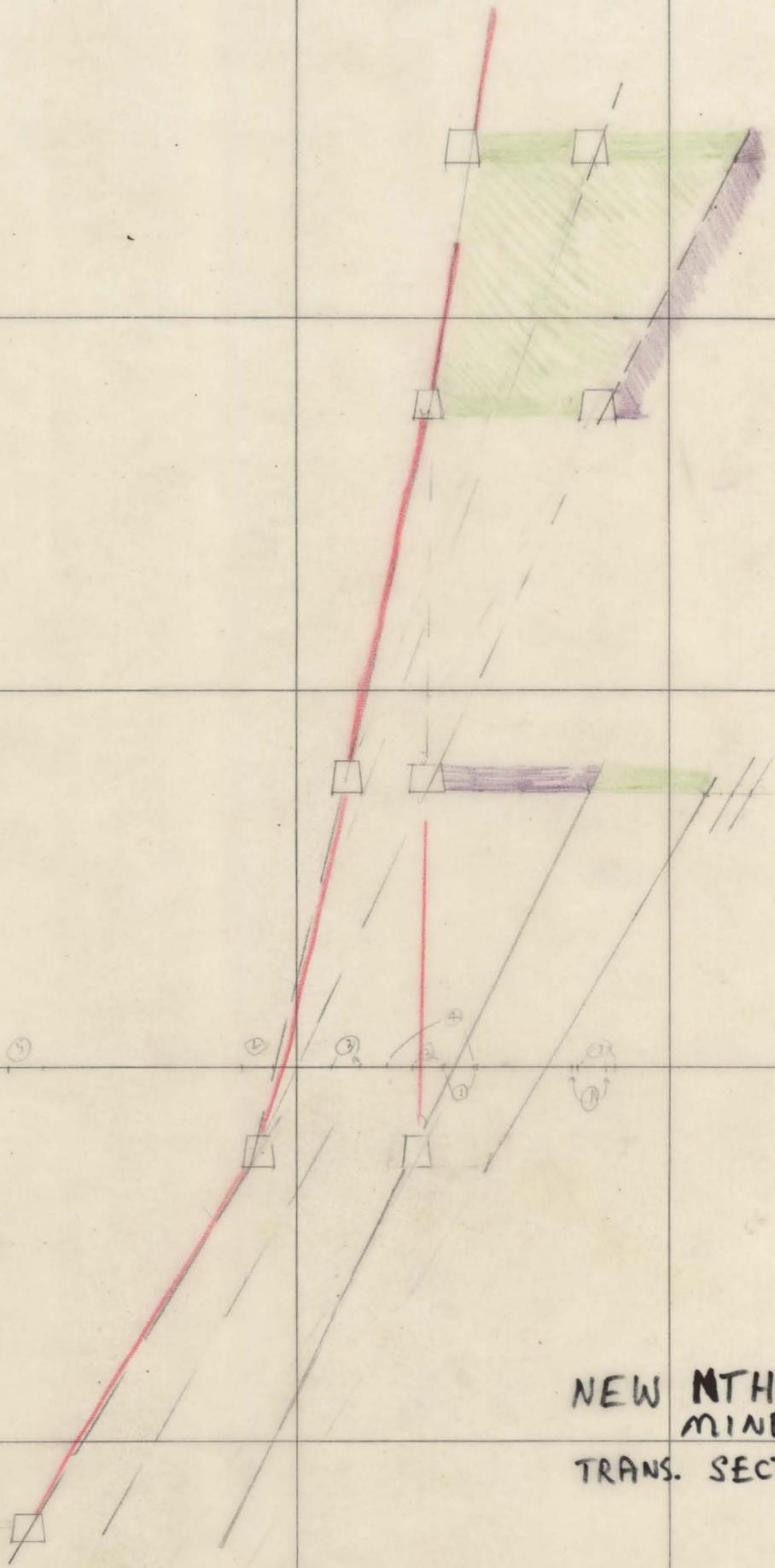
2160 A

229

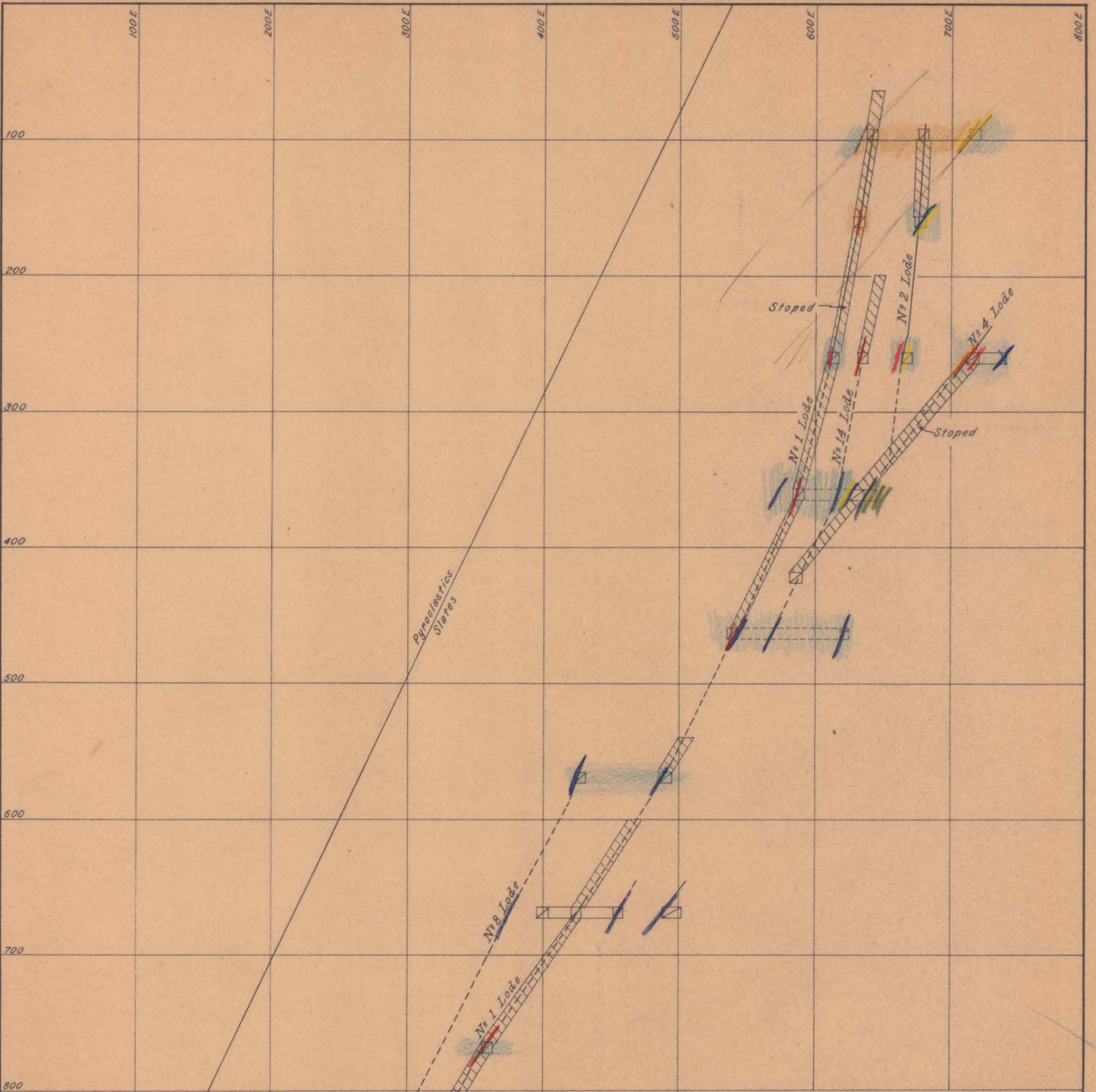
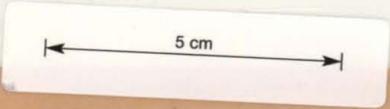
5 cm

NEW NTH MT FARRELL
MINE
TRANS. SECTION 1200N

2160 A



2160 B 230



NEW NORTH MT FARRELL

TRANS. SECTION 1200 N.

Scale 60 ft to 1 in.

Dec, 1959 P.R.P./7/100

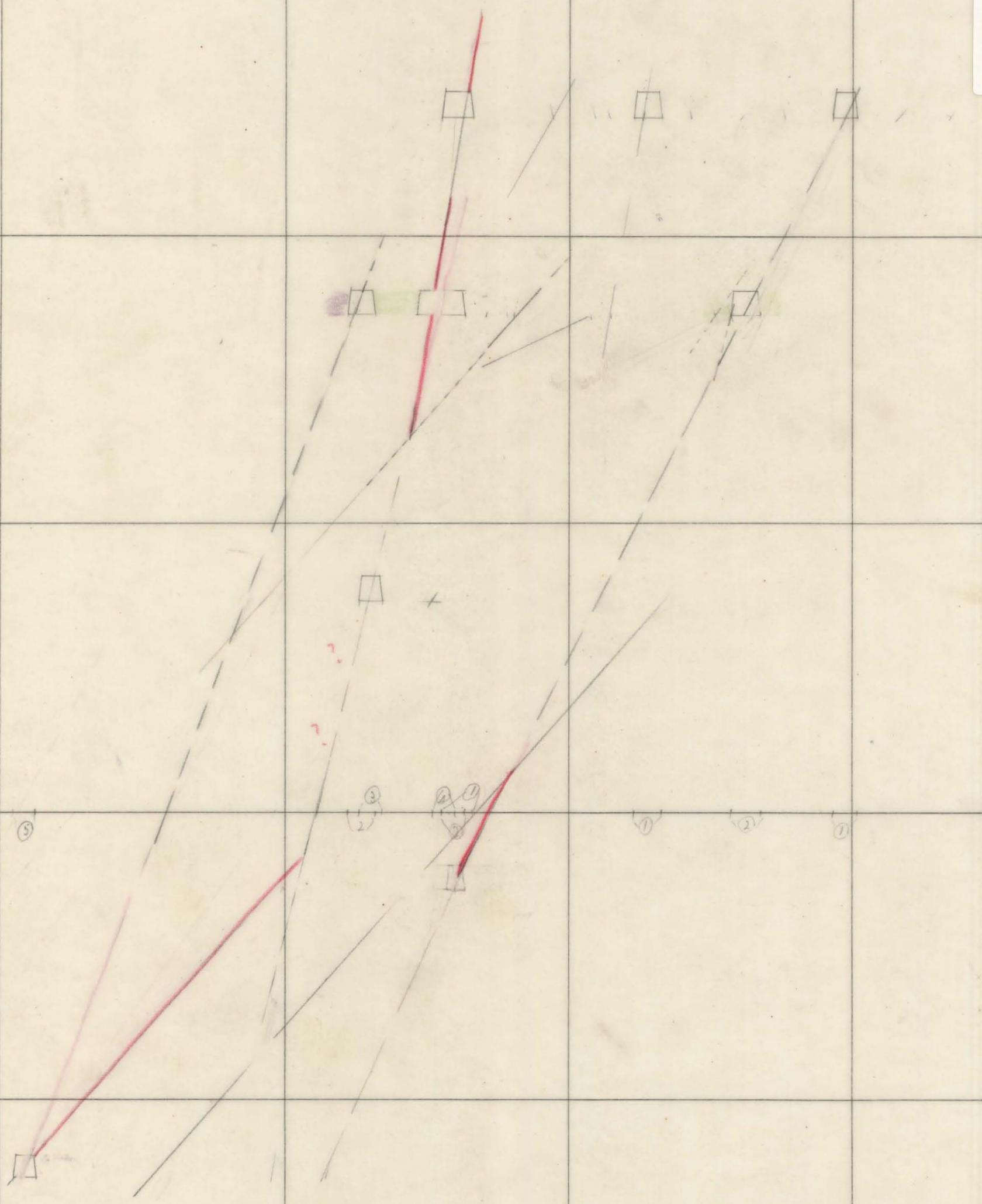
260-44
900

Plan N° T 636

5 cm

2161A

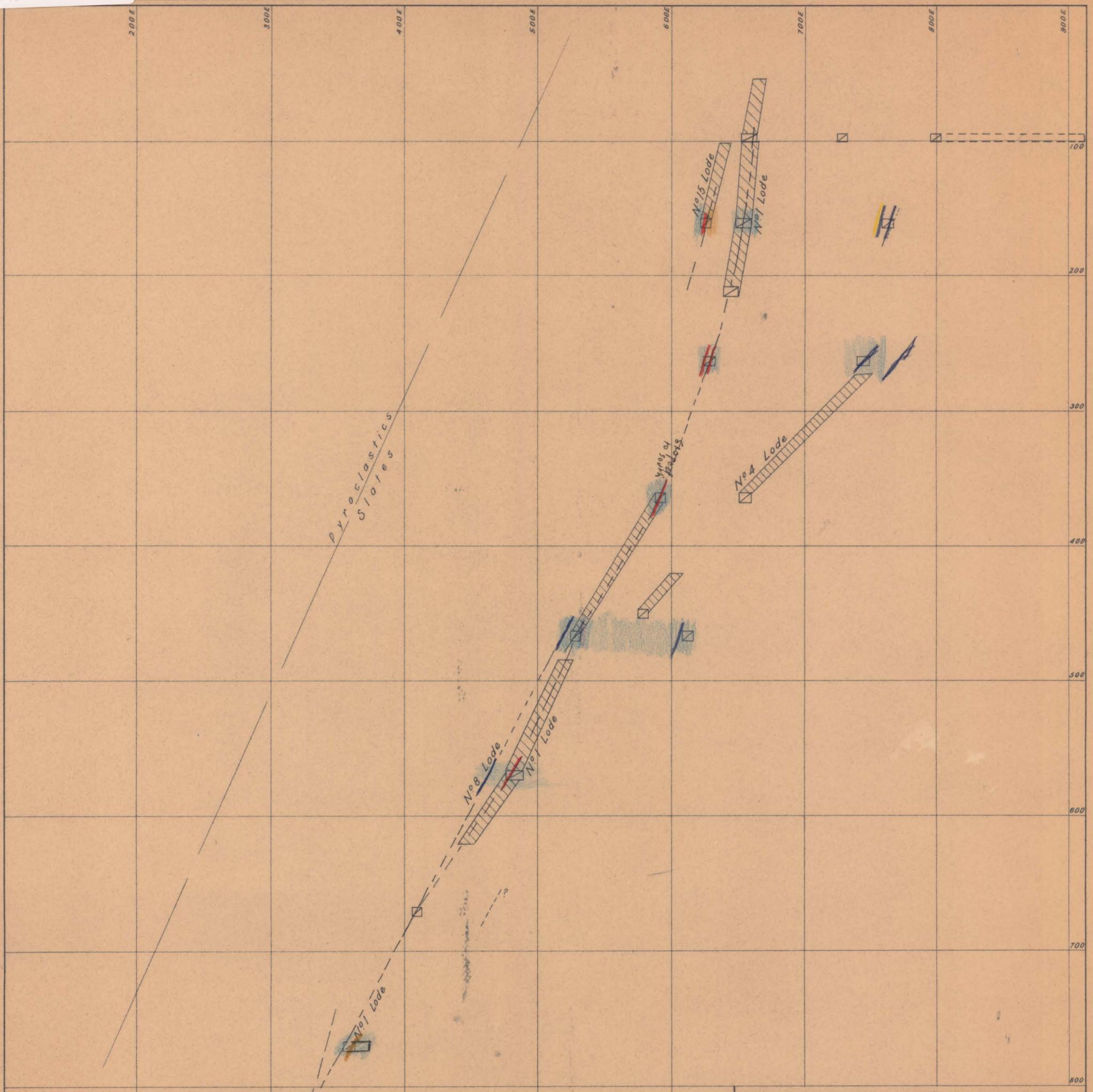
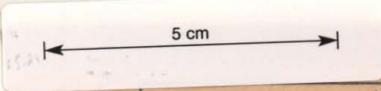
1/23/



NEW NEW MT FARRELL MINE
TRANS. SECTION 1300N

Plan 2161A

2161 B 232



2161-44

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

SECTION 1300N

NEW NTH. MT. FARRELL MINE

N.W. TASMANIA

SCALE: 60 FT. TO 1 INCH

PRP 7/100

T 637

5 cm

FINNS ADIT.

NO 1 LEVEL

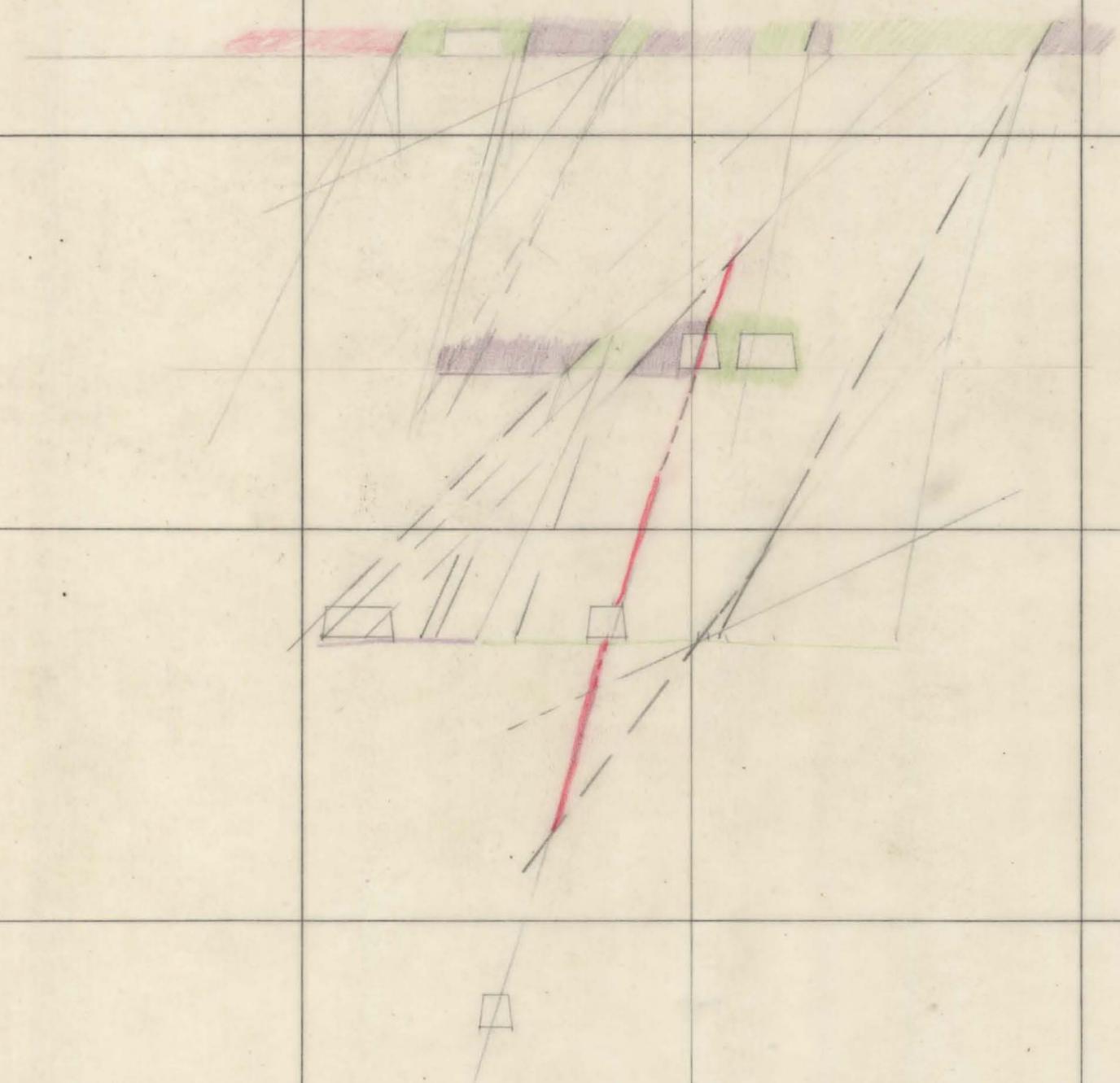
2162 A

233

NEW NTH MT FARRELL MINE
TRANS. SECTION 1400 N

Plan 2162 A

60' = 1" ?



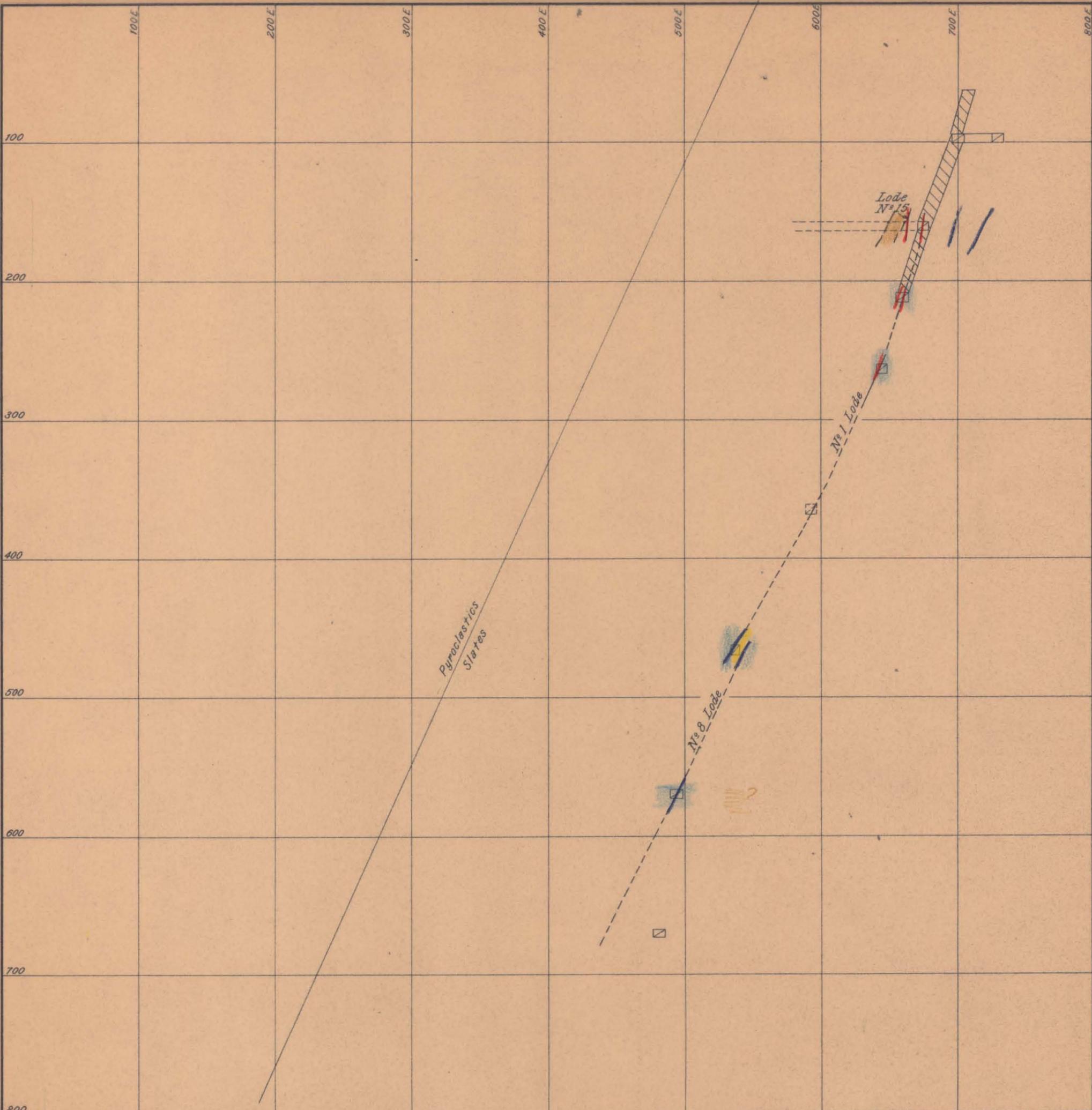
② ③ ④ ⑤ ⑥

2162

B

234

5 cm



NEW NORTH MT FARRELL

TRANS. SECTION 1400N.

Scale 60ft. to 1in.

Dec. 1959. PRP/7/100

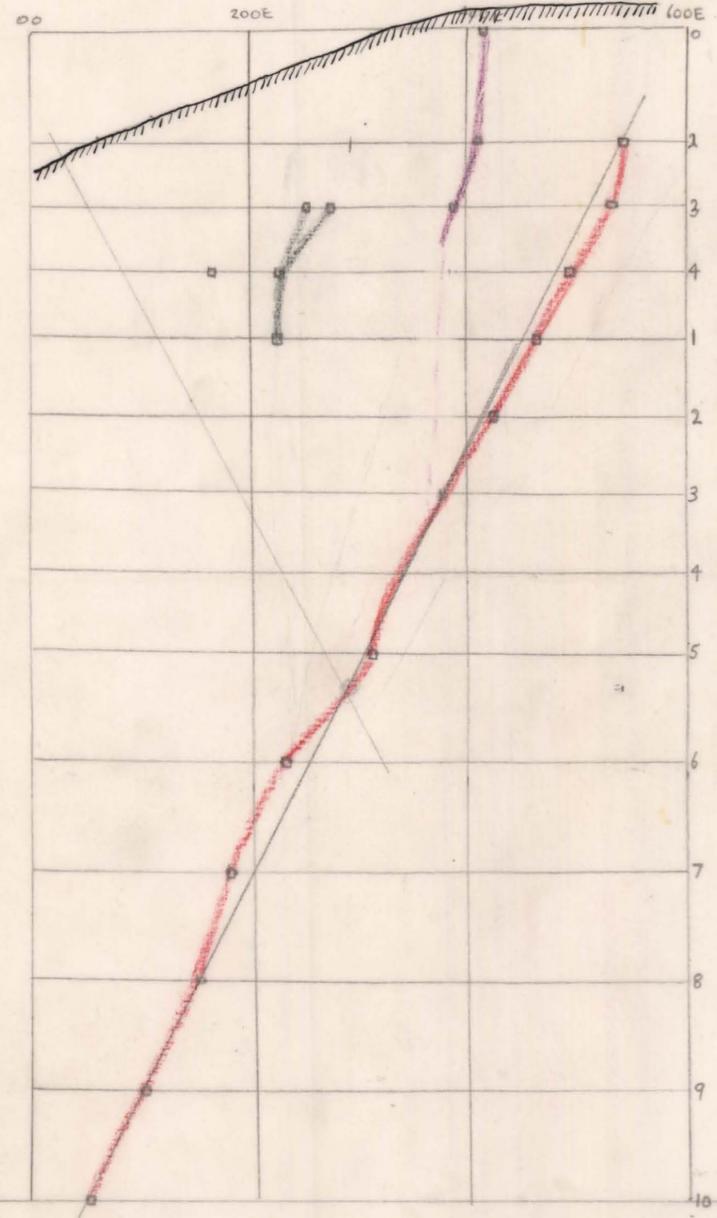
Plan N° T 638

2162-44

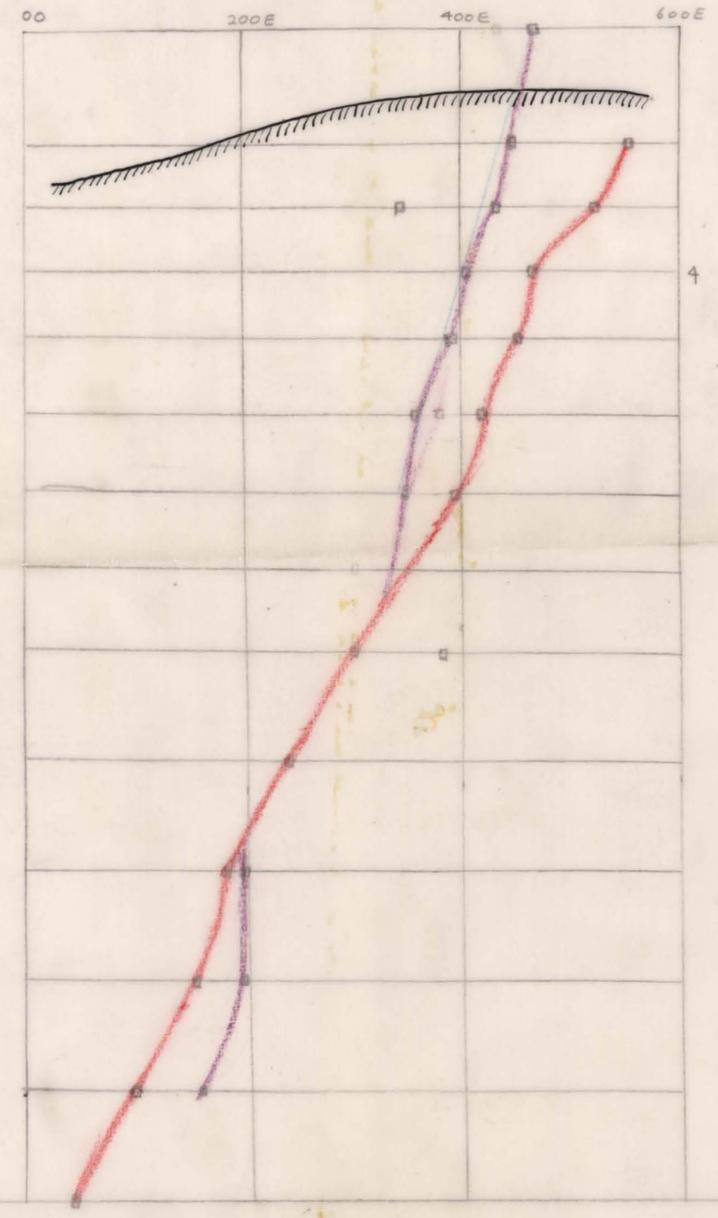
300

Scale 100' = 1"

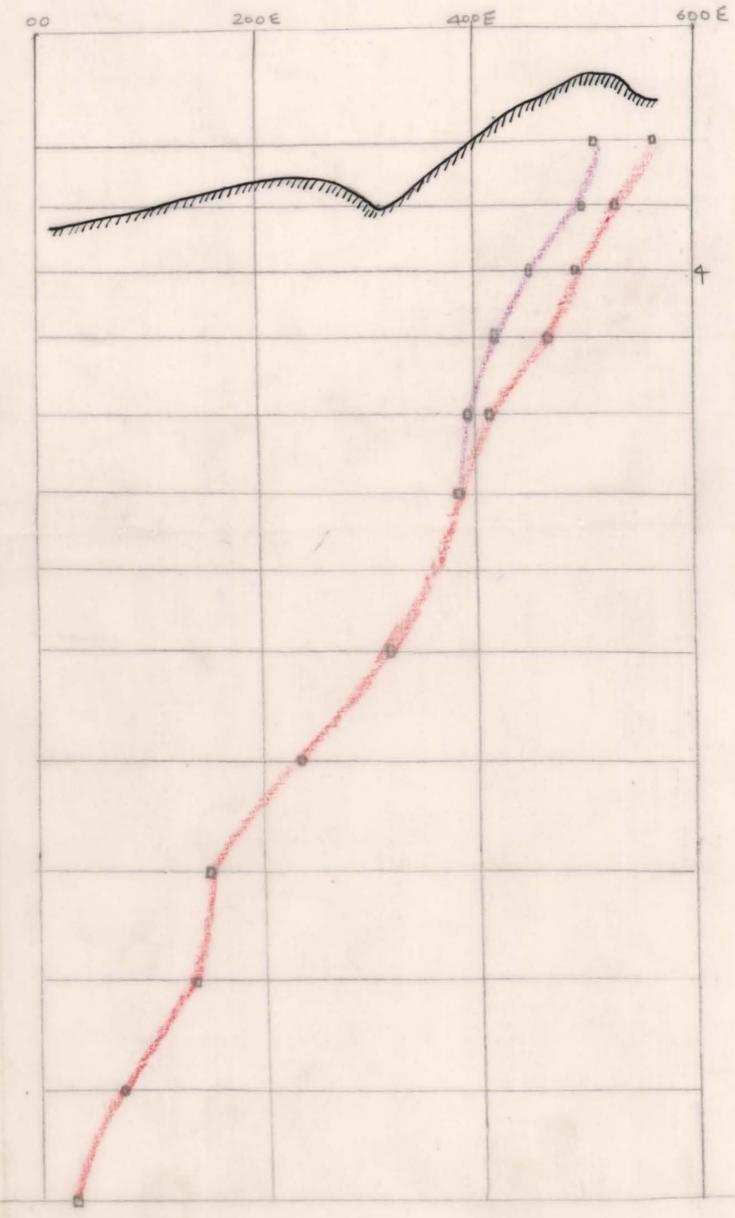
1500S.



1300S.



1100S.



2162
C
235

6 cm

TRANSVERSE SECTIONS 1100S, 1300S, 1500S.

1500S, 1300S, 1100S
TRANSVERSE SECTIONS
NEW NTH MT FARRELL SILVER-LEAD MINE-3

MT FARRELL

2162 B

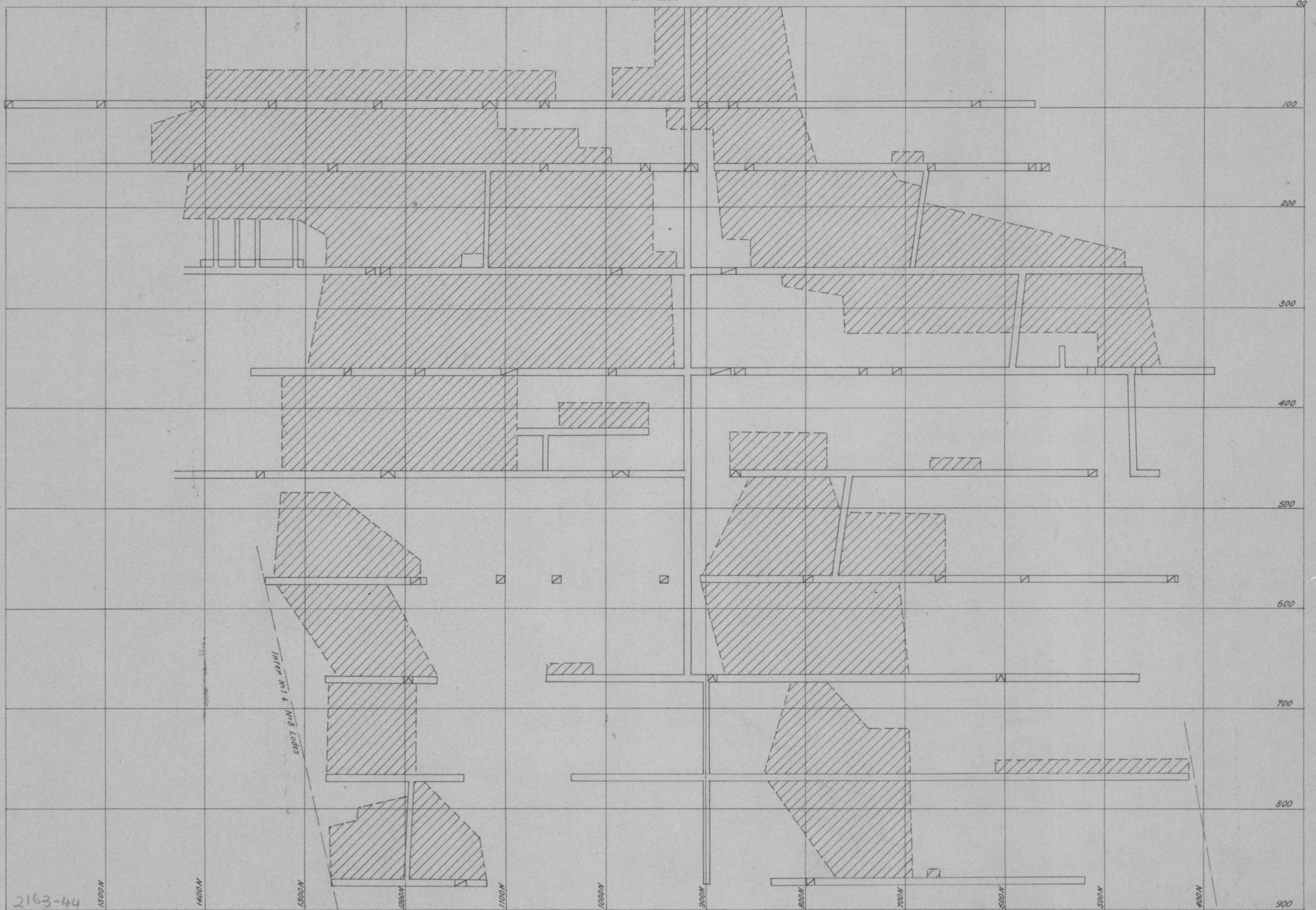
2163

236

5 cm

NEW NORTH MT FARRELL

LONGITUDINAL SECTION
N^o 1 Lode



2163-44

2164

757

5 cm



NEW NORTH MT FARRELL

LONGITUDINAL SECTIONS

Nos 2, 3, 4, 5, 6 and 7 Lodges

Scale 60' to 1"

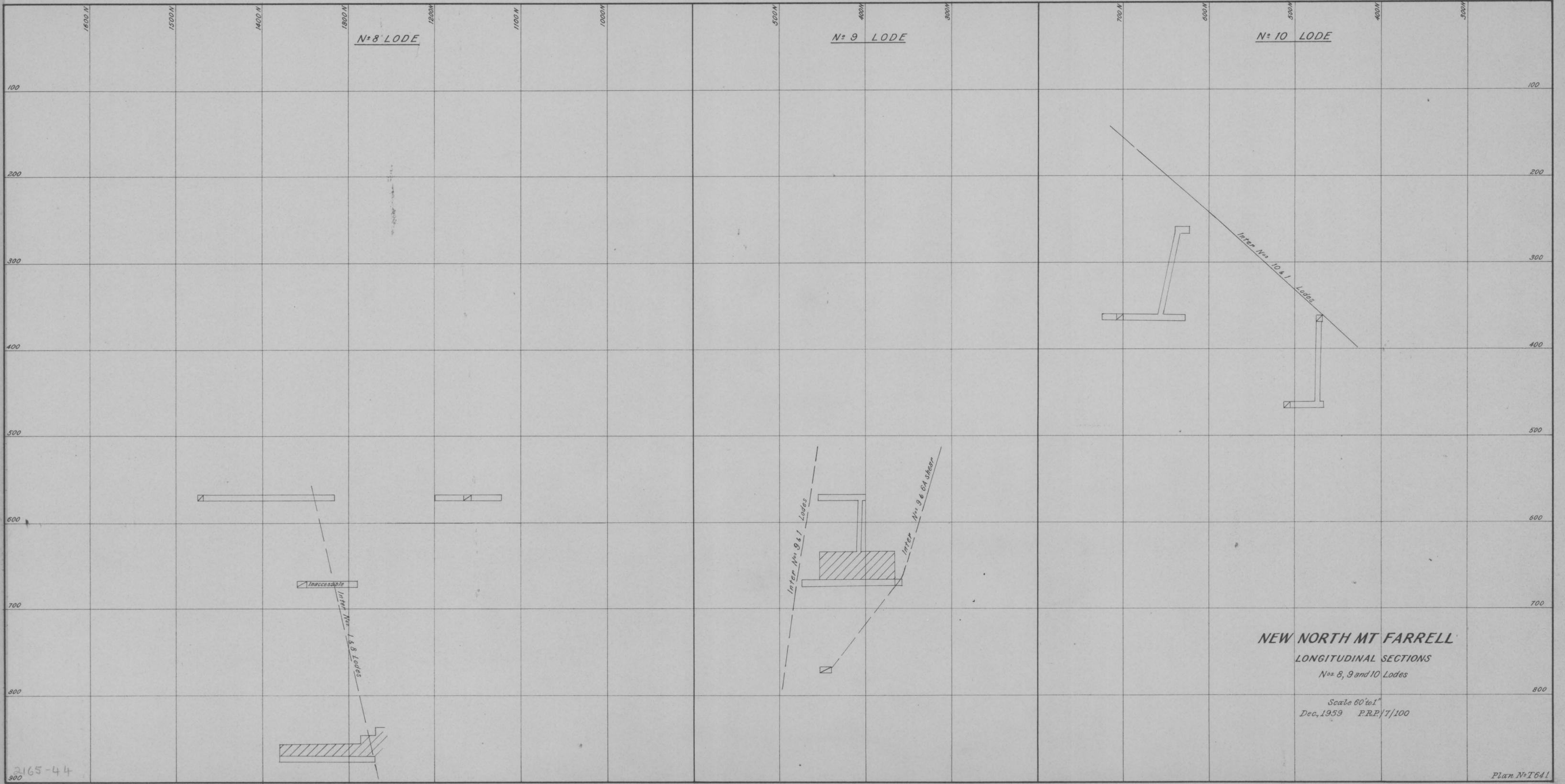
2164-44

PLAN MT 640

2165

238

5 cm



NEW NORTH MT FARRELL
 LONGITUDINAL SECTIONS
 Nos 8, 9 and 10 Lodes

Scale 60' to 1"
 Dec., 1959 P.R.P./7/100

2165-44
 300

Plan No T641

5m

2166

1951



2166-44

Plan No. T642