

PINE CREEK GOLDFIELDS

REPORT ON DRILLING OF BATTERY SHEAR, WATERTANK HILL,
KOHINOOR FAULT AND COX'S HIGH GRADE TARGETS, SOUTHERN
MINING LEASE.

MAY - JUNE 1986.

C. CANNARD
MARCH, 1987

CR 1986 0332

CONTENTS

SUMMARY

1. INTRODUCTION
2. PREVIOUS WORK
3. DRILLING DETAILS
4. SAMPLING AND ASSAY PROCEDURE
5. BATTERY SHEAR
 - 5.1 GEOLOGY
 - 5.1.1 STRUCTURE
 - 5.1.2 STRATIGRAPHY
 - 5.1.3 MINERALISATION
 - 5.2 RESULTS
6. WATERTANK HILL
 - 6.1 GEOLOGY
 - 6.1.1 STRUCTURE
 - 6.1.2 STRATIGRAPHY
 - 6.1.3 MINERALISATION
 - 6.2 RESULTS

LIST OF FIGURES

1. DRILLING TARGET LOCATION PLAN	1:5000
2. DRILLHOLE LOCATION PLAN SHEET 30 - 14	1:1000
3. DRILLHOLE LOCATION PLAN SHEET 30 - 15	1:1000
4. SOUTHERN MINING LEASE GEOLOGY PLAN	1:5000

APPENDICES

1. BATTERY SHEAR DRILL SECTIONS; 10700N TO 10450N
2. WATERTANK HILL DRILL SECTIONS; 10800N TO 10700N
3. KOHINOOR FAULT DRILL SECTIONS; 10800N TO 10550N
4. COX'S DRILL SECTIONS; 10600N TO 10500N

1. INTRODUCTION

This report presents the results of drilling, conducted during May and June 1986, on the Southern Mining Lease. Four areas were drilled, all of which were high grade/low to medium tonnage targets. these have the potential to provide above average grade feed to the Enterprise mill.

The four areas drilled were Battery Shear, Watertank Hill, Kohinoor Fault and Cox's. The locations of these areas are shown on figure 1.

2. PREVIOUS WORK

Previous work on these targets consisted of geological mapping, sampling, costeaning and diamond drilling. This work was undertaken at differing times by various workers. The results of this previous work are collated in "A Report On Exploration on the Pine Creek Leases, C.J. Cannard and R.N. Dann, August 1984." Figure 4 - Southern Mining Lease Geology Plan shows the significant geological features of this area.

The major structures in the Southern Mining Lease area are three parallel anticlines about 200 metres apart. From the west they are the Enterprise Anticline, the Czarina Anticline and the Kohinoor Anticline. All are upright, moderately tight folds striking about 315° T.N. and plunging gently to the south.

The Battery Shear - Chinatown Shear system has been mapped over 1km of strike. It consists of several narrow gossanous crush zones over 20 metres width. No major displacement of stratigraphy has yet been mapped about the system.

The Kohinoor Fault is a gossanous fault zone of 1 - 3 metres width. No major displacement of stratigraphy has yet been mapped about the system. The Kohinoor Fault is a gossanous fault zone of 1 - 3 metres width, parallel to and about 20 - 30 metres east of the Kohinoor Anticline. No amount of displacement or sense of movement has yet been deduced.

A poorly defined grit unit of 50 - 60 metres in thickness has been mapped within a thick undifferentiated sequence of greywacke on the Southern Mining Lease. The grit unit appears to be folded about the anticlines and synclines which defines the southern plunge to the structures.

Previous results for each target area are discussed in the Geology section of the relevant area.

3. DRILLING DETAILS

The drilling program was undertaken by Queensland Drilling Co. Pty. Ltd. A Crawlair CM 351 down-the-hole hammer rig was used with an Ingersoll-Rand 750 c.f.m. / 250 p.s.i. compressor. All holes were 115mm diameter. Angled drillholes up to 60 metres were completed. Drilling statistics are:

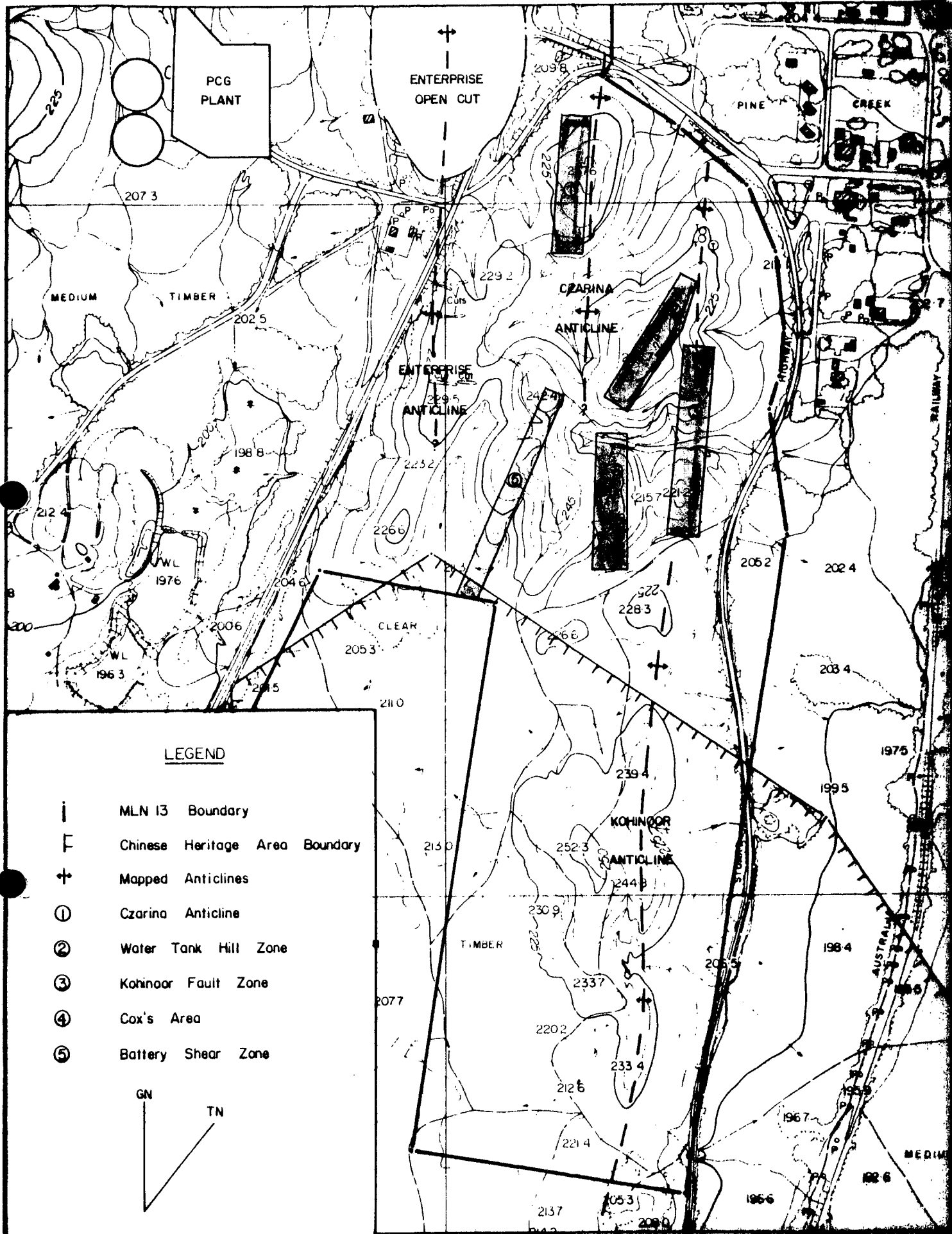
Battery Shear	10 holes	437 metres
Watertank Hill	6 holes	277 metres
Kohinoor Fault	6 holes	196 metres
Cox's	6 holes	224 metres
 TOTAL	 28 holes	 1134 metres

Drillhole locations are plotted on figure 2 & 3.

4. SAMPLING AND ASSAY PROCEDURE

All drillholes were sampled at 2 metre intervals. Drill cuttings were passed through the Millwood 4-deck vibrating riffle to produce a final sample of 2 -3 kgs. The samples were submitted to Australian Assay Laboratories (Pine Creek) Pty Ltd. for Au assay by method FA 50 / D 610. This is the standard 50 gram charge fire assay used for grade control.

Drillhole logs including collar co-ordinates, reduced levels (R.L's), sample intervals, sample duplicates and assay repeats are stored on computer file in the P.C.G. technical office at Pine Creek.



5. BATTERY SHEAR

5.1 GEOLOGY

5.1.1 STRUCTURE

The Battery Shear is a discordant 20 metre wide zone containing numerous narrow highly limonitic crush zones (see figure 4-Southern Mining Lease Geology Plan).

The zone strikes approximately 335° T.N. and dips east at 65° . The structure is situated between the Czarina Anticline and the southern projection of the Enterprise Anticline. The structure (including the Chinatown Shear) is at least 1km in length though much of this is outside P.C.G leases.

5.1.2 STRATIGRAPHY

The stratigraphic horizon transected by the structure on P.C.G. leases is a major grit unit 50 - 60 metres in thickness which is situated about 100 metres above the Upper Mine Greywacke.

5.1.3 MINERALISATION

Oxidised mineralisation consists of narrow sheared highly limonitic quartz veins and stringers. These have been referred to as "crush" zones in previous reports. The mineralisation has similarities with the small reverse fault mineralisation currently exposed on the southern bench of the Enterprise Pit.

Surface sampling of the Battery Shear mineralisation has assayed up to 100 g/t Au.

Two old Mines Departmental Drillholes intersected encouraging Au values, and diamond drillhole PC 1003 intersected two zones of semi-massive pyrrhotite breccia the first of which intersected 7.5 metres @ 1.16 g/t and which may be the Battery Shear. Isolated 1.5 metre intersections of 14.0 g/t Au and 6.9 g/t Au were also recorded from this hole. All intersections in PC 1003 were at least 100 metres in depth.

The base of oxidation is 30 - 50 metres below surface in the target area.

5.2 RESULTS

Ten percussion drillholes on six 50 metre sections from 10700N to 10450N were drilled to test the shallow oxidised potential of the zone. Drillhole profiles and assay results are plotted on sections (see Appendix 1 Battery Shear - Drill Sections).

Significant drill intersections obtained in the target area are;

SECTION	HOLE	INTERSECTION	TRUE WIDTH
10450 N	PC 243	18m @ 1.45g/t Au	16m
	PC 251	20m @ 1.68g/t Au	15m
10500 N	PC 242	6m @ 2.13g/t Au	5m
	PC 252	4m @ 0.84g/t Au	2m
10550 N	PC 241	4m @ 7.48g/t Au	4m
	and	6m @ 0.77g/t Au	6m
		PC 253	16m @ 1.54g/t Au
10600 N	PC 254	14m @ 1.60g/t Au	13m
	PC 220	8m @ 0.84g/t Au	8m

Based on an average true width of mineralisation per section of 10 metres, a strike length of 200 metres and projecting mineralisation to 50 metres below surface the results suggest the potential for 220,000 tonnes of mineralised material (200m x 10m x 50m x 2.2s.g. = 220,000 tonnes). The true-width weighted average grade of intersections to date is 1.75 g/t Au.

The mineralisation zone is open to the south where it passes into MCN 193 and MCN 523 controlled by Ericson and Dominion Gold. The northern extension of the mineralisation zone on sections 10650N and 10700N is inadequately tested. Mineralisation may occur west of the current holes which failed to intersect significant grades.

6. WATERTANK HILL

6.1 GEOLOGY

6.1.1 STRUCTURE

A discordant zone of thick (up to 1.0m) quartz veins has been mapped on the west limb of the Kohinoor Anticline at Watertank Hill (see figure 3 - Southern Mining Lease Geology Plan). The individual veins strike 010^0 T.N. and dip 40^0 east. This is the same orientation as the Enterprise sheeted vein and ladder vein sets. The zone of veins appears to strike approximately 335^0 and dip about 60^0 east.

6.1.2 STRATIGRAPHY

The quartz veining at Watertank Hill occurs in a thick undifferentiated sequence of greywackes probably at least 200 metres stratigraphically above the Enterprise sequence.

6.1.3 MINERALISATION

The quartz veining at Watertank Hill consists of thick (up to 1.0m) quartz widely spaced veins of ladder vein style. The veins have alteration envelopes up to 2 metres thick with disseminated sulphides. Mineralisation is of similar style to that of the Enterprise ladder veins.

Two costeans intersected up to 15 metres of ore grade mineralisation across the zone. One hundred metres north of the zone diamond drillhole PC 187 intersected an east dipping zone of quartz veins however this returned only anomalous Au values.

The base of oxidation is at least 50 metres deep in this area.

6.2 RESULTS

Six percussion drillholes on three 50 metres sections between 10700 N and 10800 N were designed to test the shallow oxidised potential of the zone. Drillhole profiles and assay results are plotted on the drill sections (see Appendix 2 Watertank Hill-Drill Sections).

Significant drill intersections obtained in the target area are;

SECTION	HOLE	INTERSECTION	TRUE WIDTH
10700 N	PC 257	14m @ 1.15 g/t Au	12m
10750 N	PC 221	10m @ 0.82 g/t Au	9m
	PC 256	6m @ 1.53 g/t Au	5m
10800 N	PC 222	8m @ 1.43 g/t Au	7m
	PC 255	10m @ 0.99 g/t Au	9m

The true width weighted average grade of intersections to date is 1.14 g/t Au.

Based on a strike length of 150 metres, an average true width per section of 9 metres and projecting mineralisation to 50 metres below surface there is potential for 150,000 tonnes of mineralised material (150m x 9m x 50m x 2.2s.g = 148,500 tonnes).

The mineralised zone is open to both the north and south.

7. KOHINOOR FAULT

7.1 GEOLOGY

7.1.1 STRUCTURE

The Kohinoor Fault is a gossanous fault zone up to 5 metres in width, parallel to and about 20 metres east of the Kohinoor Anticline (see figure 3 - Southern Mining Lease Geology Plan). While no sense of movement has been proven, the orientation position and style of mineralisation suggest it is analogous to the Eastern Fault Zone.

7.1.2 STRATIGRAPHY

The Kohinoor Fault is situated in a thick undifferentiated sequence of greywackes probably at least 200 metres stratigraphically above the Enterprise sequence.

7.1.3 MINERALISATION

Mineralisation of the fault consists of 1 to 3 metres of highly gossanous breccia. Fragments are of quartz and wallrock. Alteration and minor veining rarely persist for more 1 or 2 metres about the fault. Pb and Zn assay up to 1%.

A costean across the Kohinoor Fault returned 27.5 A/t Au over 3 metres Diamond drillhole PC 186 intersected 5 metres of limonitic gossan which assayed about 1.0 g/t Au.

The base of oxidation varies from about 20 to 40 metres over the drilled zone.

7.2 RESULTS

Six percussion drillholes on six 50 metre sections between 10550 N and 10800 N were designed to test the shallow oxidised potential of this mineralisation. Drillhole profiles and assay results are plotted on the drill sections (see Appendix 3 Kohinoor Fault - Drill Sections).

Drill intersections obtained are;

SECTION	HOLE	INTERSECTION
10550 N	PC 231	2m @ 2.31 g/t Au
10600 N	PC 237	NIL
10650 N	PC 227	2m @ 1.12 g/t Au
10700 N	PC 226	4m @ 1.07 g/t Au
	and	2m @ 4.87 g/t Au
10750 N	PC 224	2m @ 2.18 g/t Au
10800 N	PC 225	NIL

No significant mineralisation in grade or thickness is indicated.

8. COX'S

8.1 GEOLOGY

Cox's prospect is situated near the syncline axis between Kohinoor and Czarina Anticline, in a thick undifferentiated sequence of greywackes probably at least 200 - 300 metres stratigraphically above the Enterprise sequence (see figure 4-Southern Mining Lease Geology Plan).

A costean at 10550 N, revealed a zone of veining, some of which was bedding concordant, that returned 13.5 metres at 7.32 g/t Au. Gossanous quartz scree occurs up to 100 metres along strike from this zone.

The geology of this prospect is poorly understood. The only significant outcrop is that exposed in the original costean.

8.2 RESULTS

Six percussion drillholes on three 50 metre sections between 10600 N and 10500 N were drilled to test the shallow oxidised potential of this mineralisation. Drillhole profiles and assay results are plotted on the drill sections (see Appendix 4 - Cox's - Drill Sections).

Significant drill intersections obtained in the target area are;

SECTION	HOLE	INTERSECTION
10500 N	PC 260	4m @ 1.12 g/t Au
10550 N	PC 229	2m @ 0.98 g/t Au
10600 N	PC 228	14m @ 1.96 g/t Au

No continuous mineralised zone is indicated. Logging of chips indicated a significant width of quartz veined material however grades are not consistent.

9. RECOMMENDATIONS

9.1 BATTERY SHEAR

Potential exists at Battery Shear for approximately 220,000 tonnes of mineralisation at an indicated grade of about 1.75 g/t Au. The indicated grade is well below current Enterprise grades and thus no further work is recommended on Battery Shear as a high grade target.

The zone still remains valid as a low grade/moderate tonnage target.

9.2 WATERTANK

Watertank Hill has potential for approximately 150,000 tonnes of mineralisation at an indicated grade of about 1.14 g/t Au. No further work is recommended on Watertank Hill as a high grade target.

The zone remains valid as a low grade/moderate tonnage target.

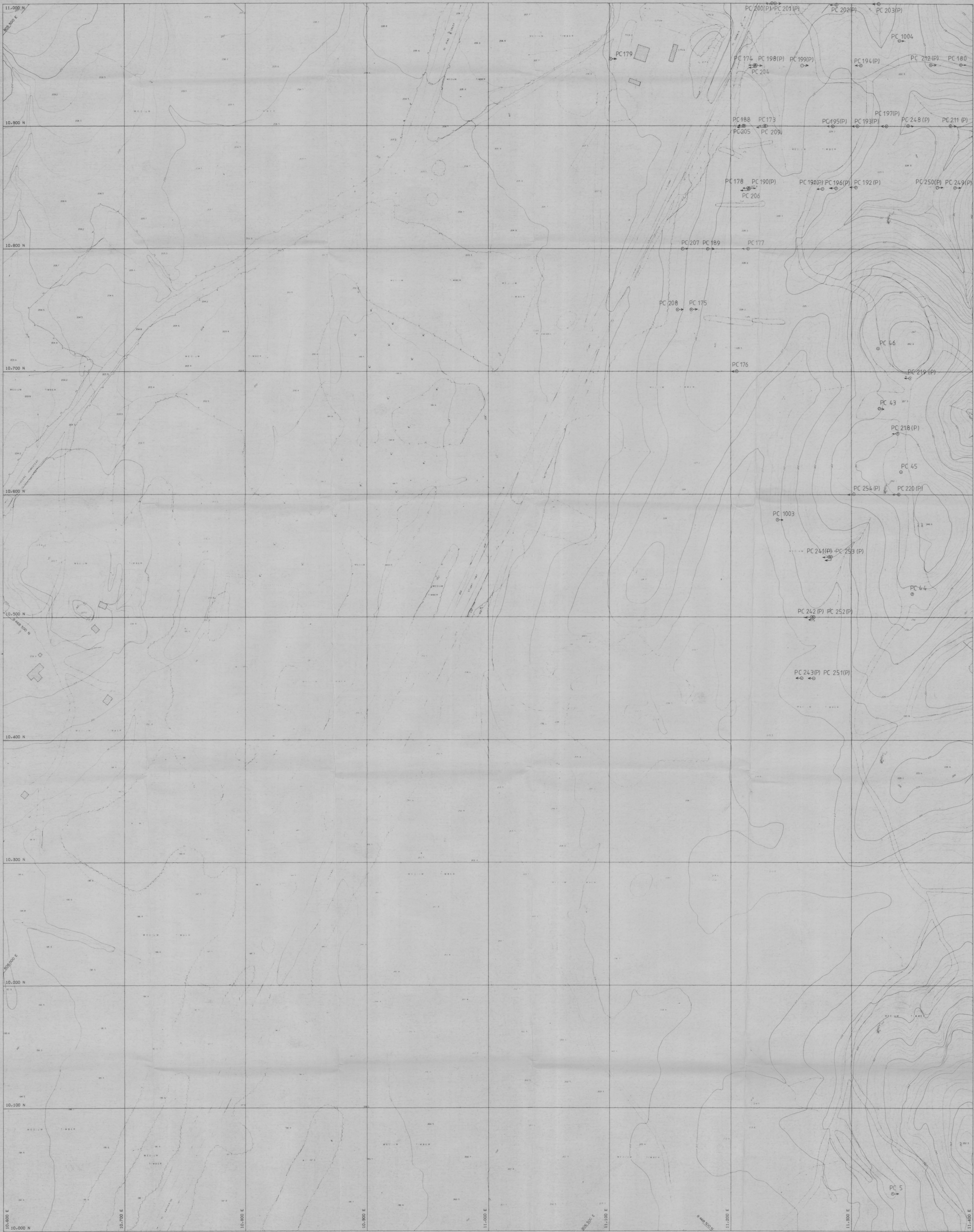
9.3 KOHINOOR FAULT

No significant mineralisation was encountered at Kohinoor Fault. No further work is recommended on this target.

9.4 COX'S

No continuous mineralisation was encountered at Cox's prospect. The original costean intersection of 13.5 metres at 7.32 g/t Au and an unfinished percussion drillhole intersection of 14 metres at 1.96 g/t Au suggest some potential for significant mineralisation at above "Enterprise" grades.

Given the lack of geological knowledge 2 diamond drillholes of 50 metres each are recommended to evaluate the geology of the prospect. These two drillholes should establish whether there is sufficient potential to warrant further work.



LEGEND

DRILLHOLE

PC 234(P) PERCUSSION

PC 212 DIAMOND

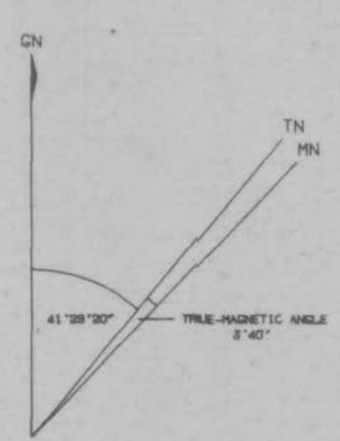
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VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM



TOPOGRAPHIC BASE COMPILED
BY GEO-SPECTRUM (AUST.)
IN AUGUST 1985 FROM AERIAL
PHOTOGRAPHY FLOWN 19TH MAY, 1983.

SHEET INDEX

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30-13	30-14	30-15
30-18	30-19	30-20



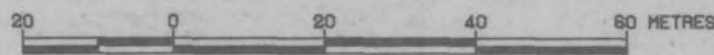
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PINE CREEK PROJECT

DRILLHOLE LOCATIONS

CR1988 0532

SCALE 1:1000



LEGEND		SHEET INDEX			
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CONTOUR INTERVAL 1 METRE HORIZONTAL DATUM • LOCAL MINE GRID VERTICAL DATUM • AUSTRALIAN HEIGHT DATUM GEO-SPECTRUM (AUSTRALIA) TOPOGRAPHIC BASE COMPILED BY GEO-SPECTRUM (AUST.) IN AUGUST 1983 FROM AERIAL PHOTOGRAPHY FLOWN 15TH MAY, 1983.				GEOLOGIST # C.C. DRAWN # N.G.R. DATE # ARP 87 CHECKED # C.C. 1:250,000 REFERENCE # SCALE 1:1000 	
				PINE CREEK PROJECT DRILLHOLE LOCATIONS CR1986 0332	



LEGEND

- | | | | |
|--|----------------------------|--|---------------------|
| | Upper Mine Greywacke | | Lease Boundary |
| | Spotted Silt Unit | | Anticline |
| | Nodular Chert Unit | | Syncline |
| | Lower Mine Greywacke | | Fault |
| | Undifferentiated Greywacke | | Shear Zone |
| | Grit | | Geological Boundary |
| | Granite | | |

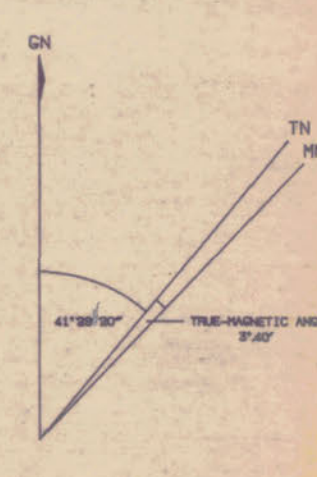
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VERTICAL DATUM AUSTRALIAN HEIGHT DATUM

GEO-SPECTRUM
(AUSTRALIA)

TOPOGRAPHIC BASE COMPILED BY GEO-SPECTRUM (AUST.) IN AUGUST 1983 FROM AERIAL PHOTOGRAPHY FLORA 15TH MAY 1985.

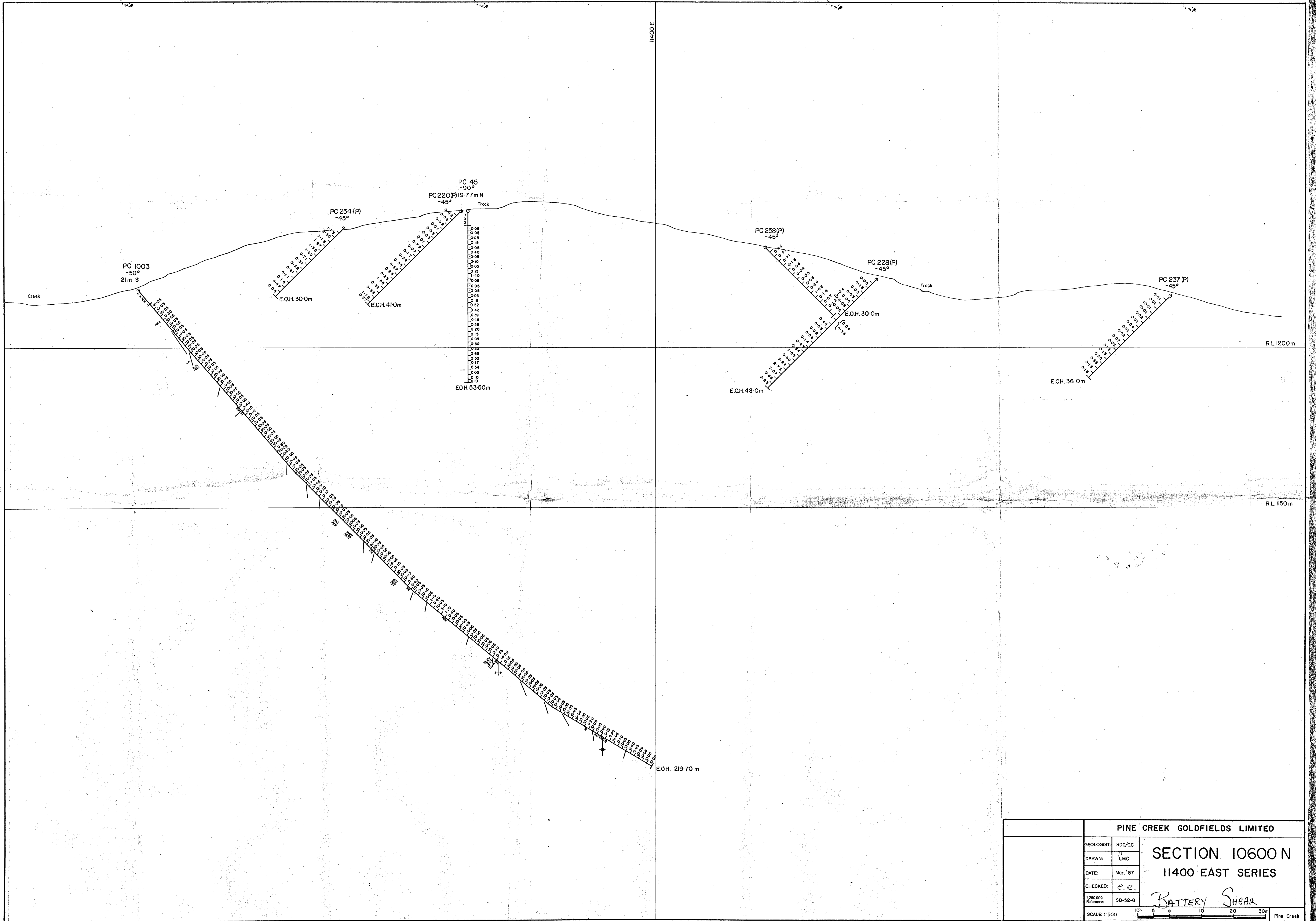
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39	40	41



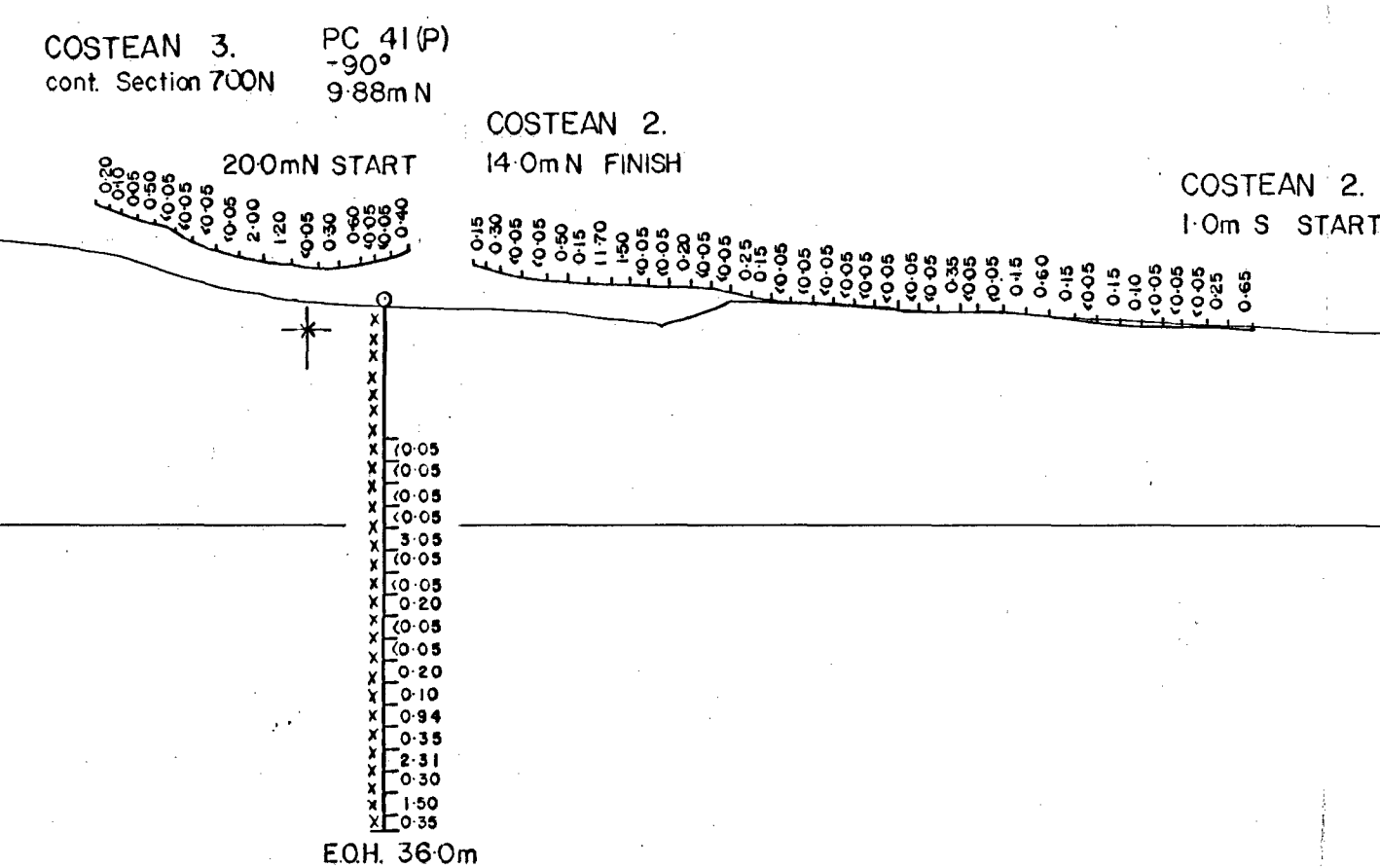
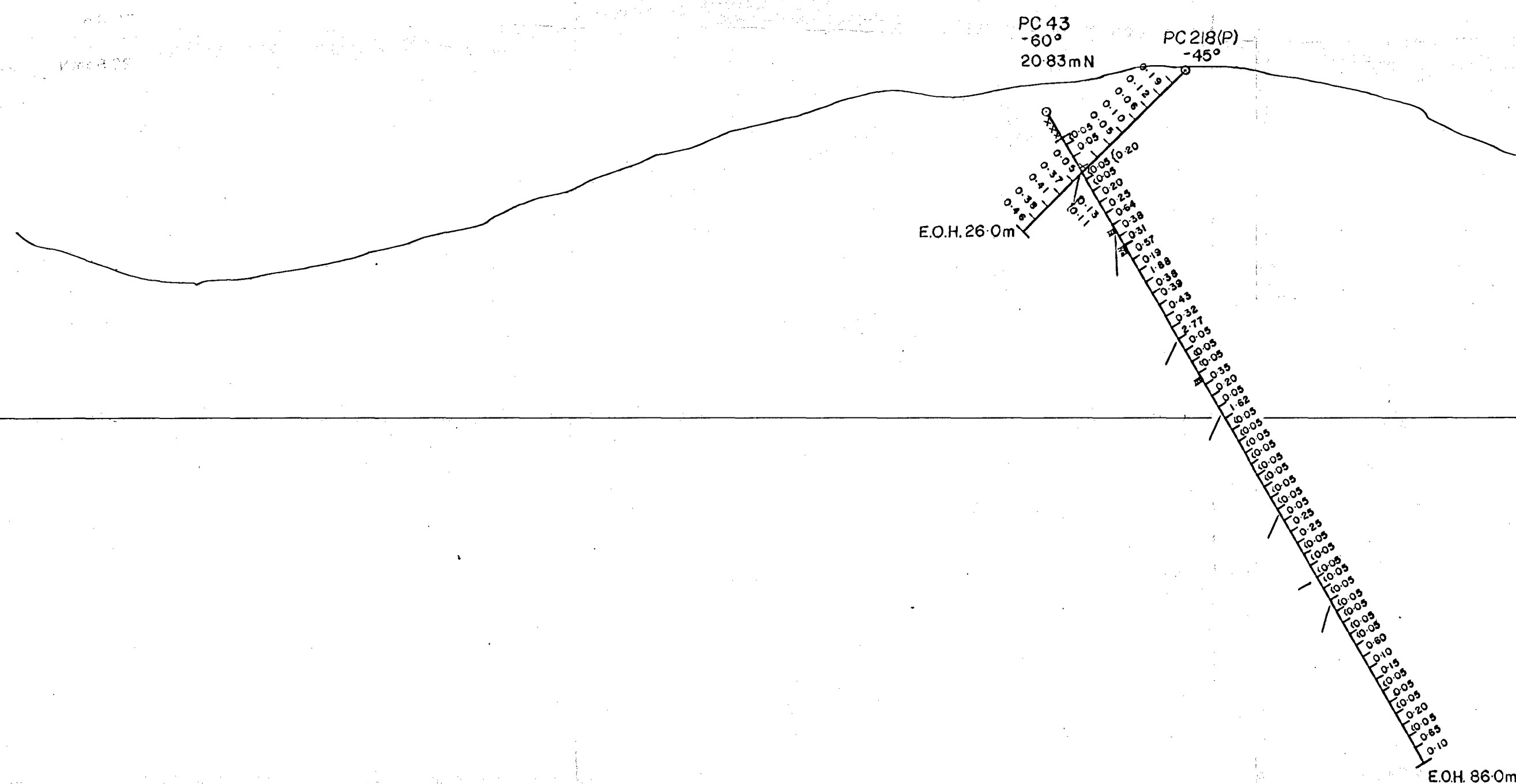
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APPENDIX 1



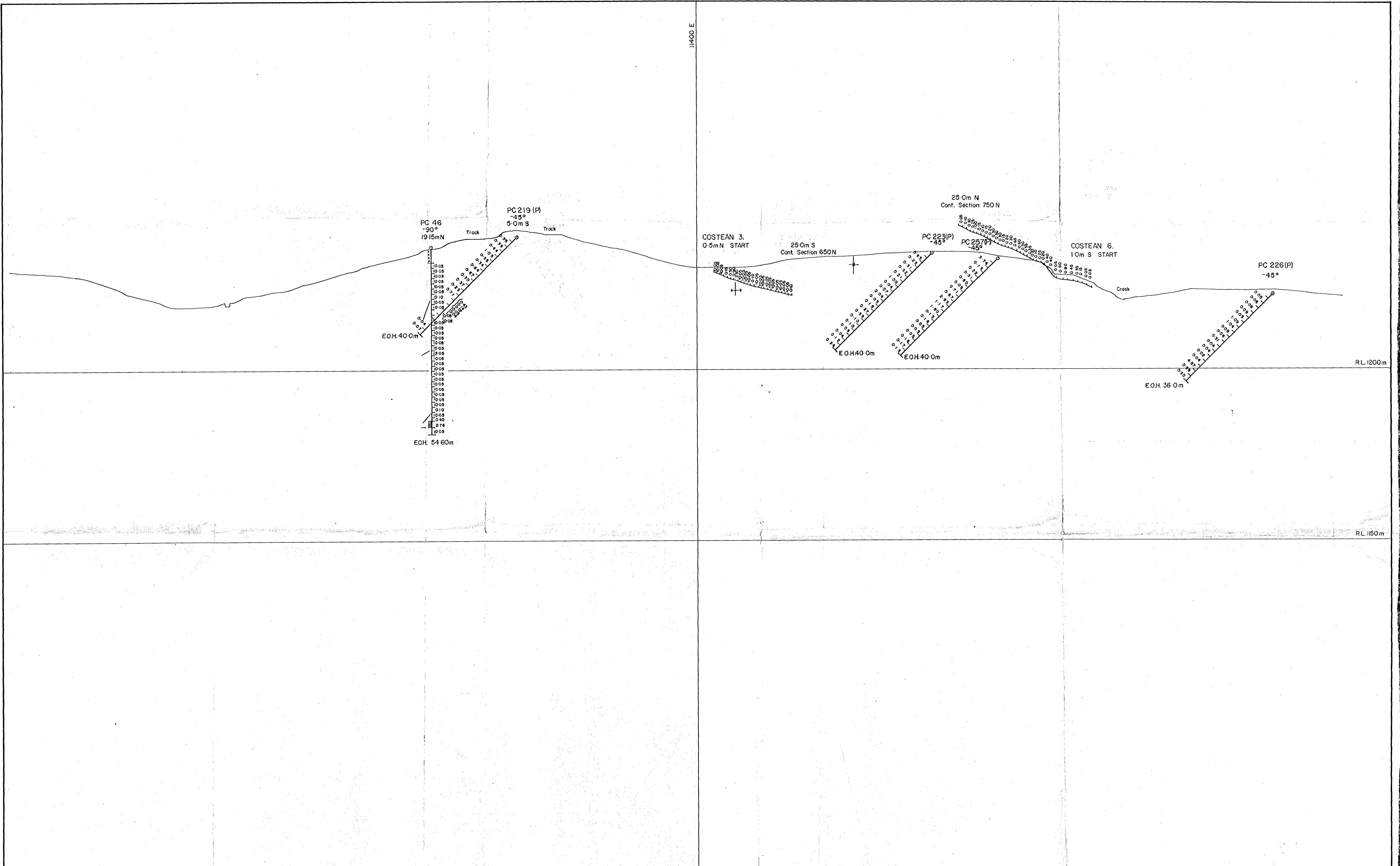
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CR 1986 0332

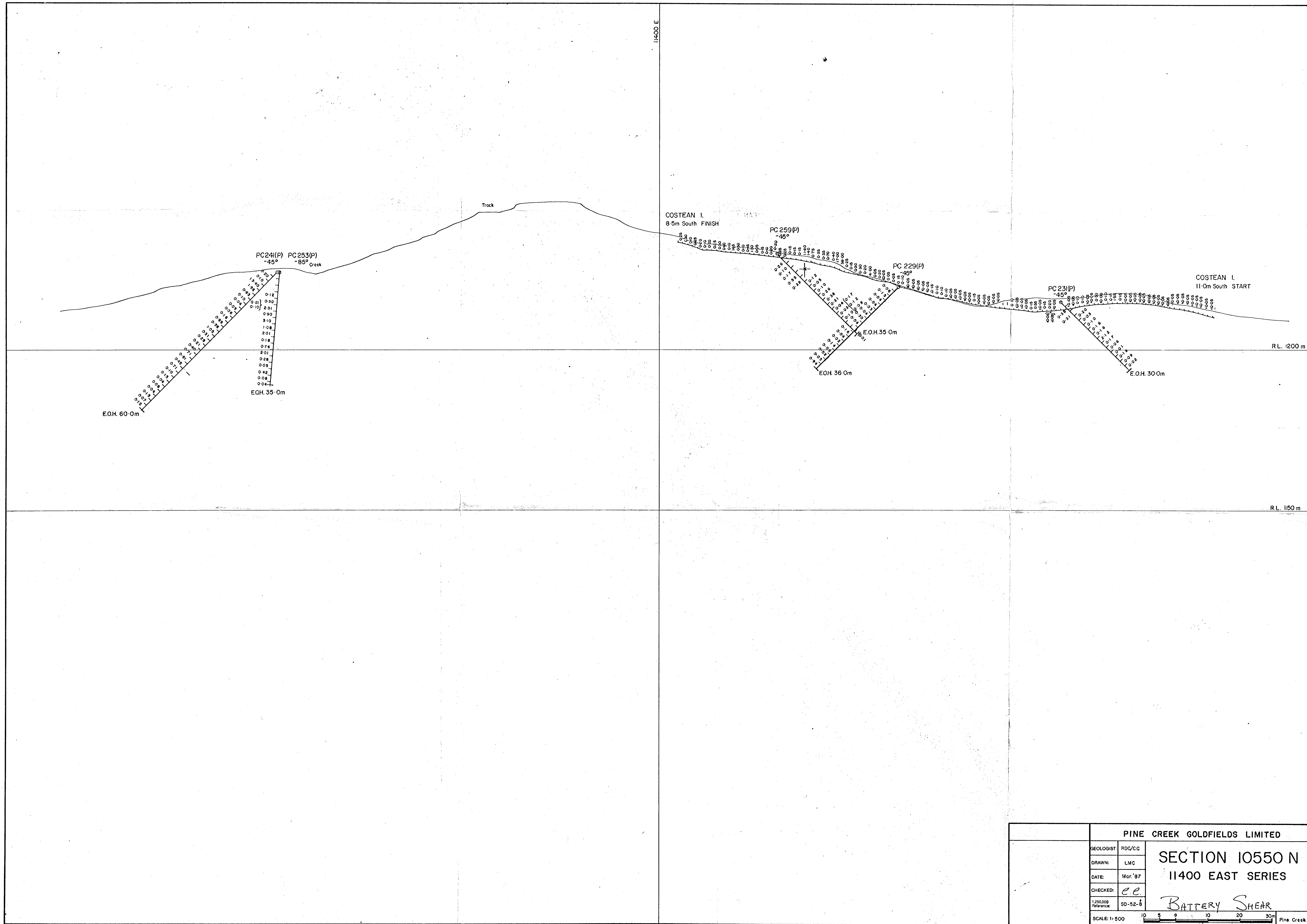


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CR1986 0332

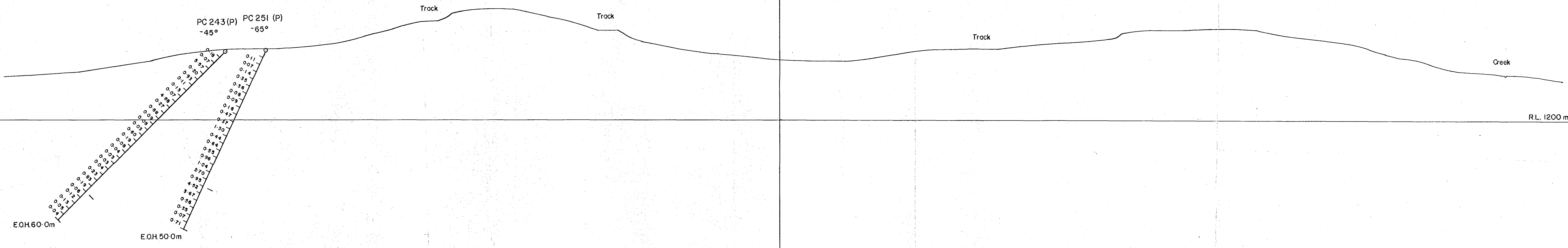


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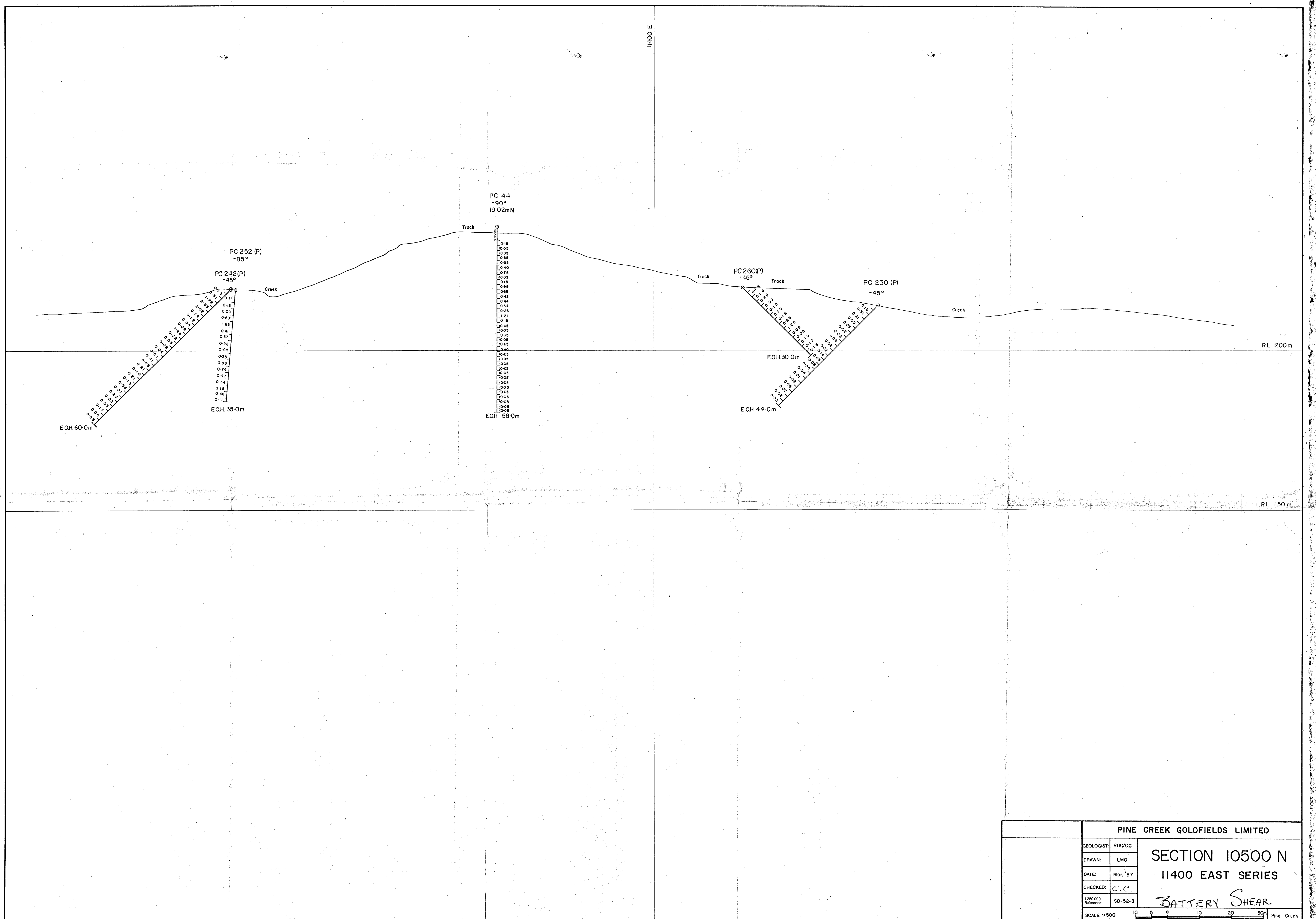
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CR1006 0332



REVISIONS		PINE CREEK GOLDFIELDS LIMITED	
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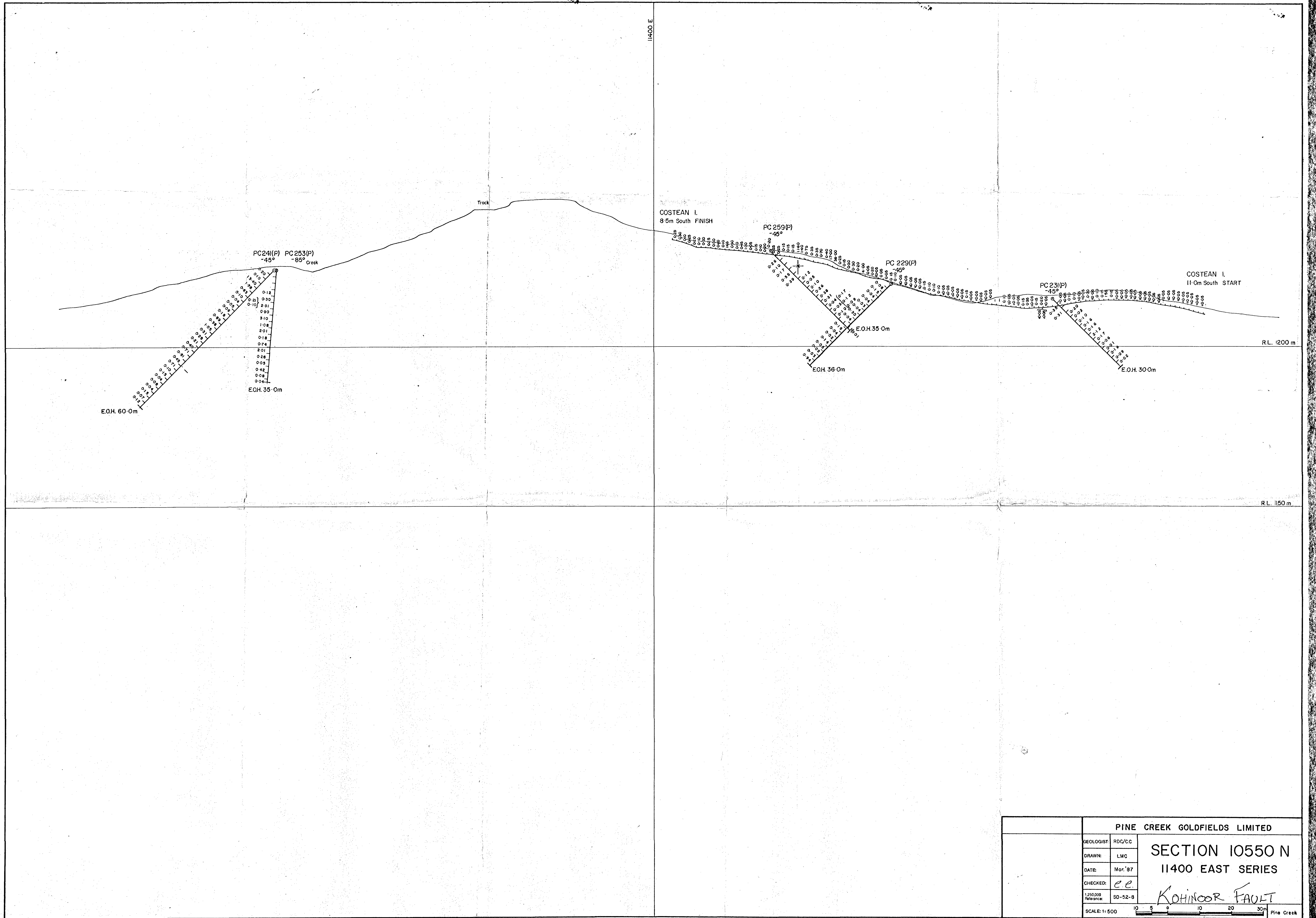
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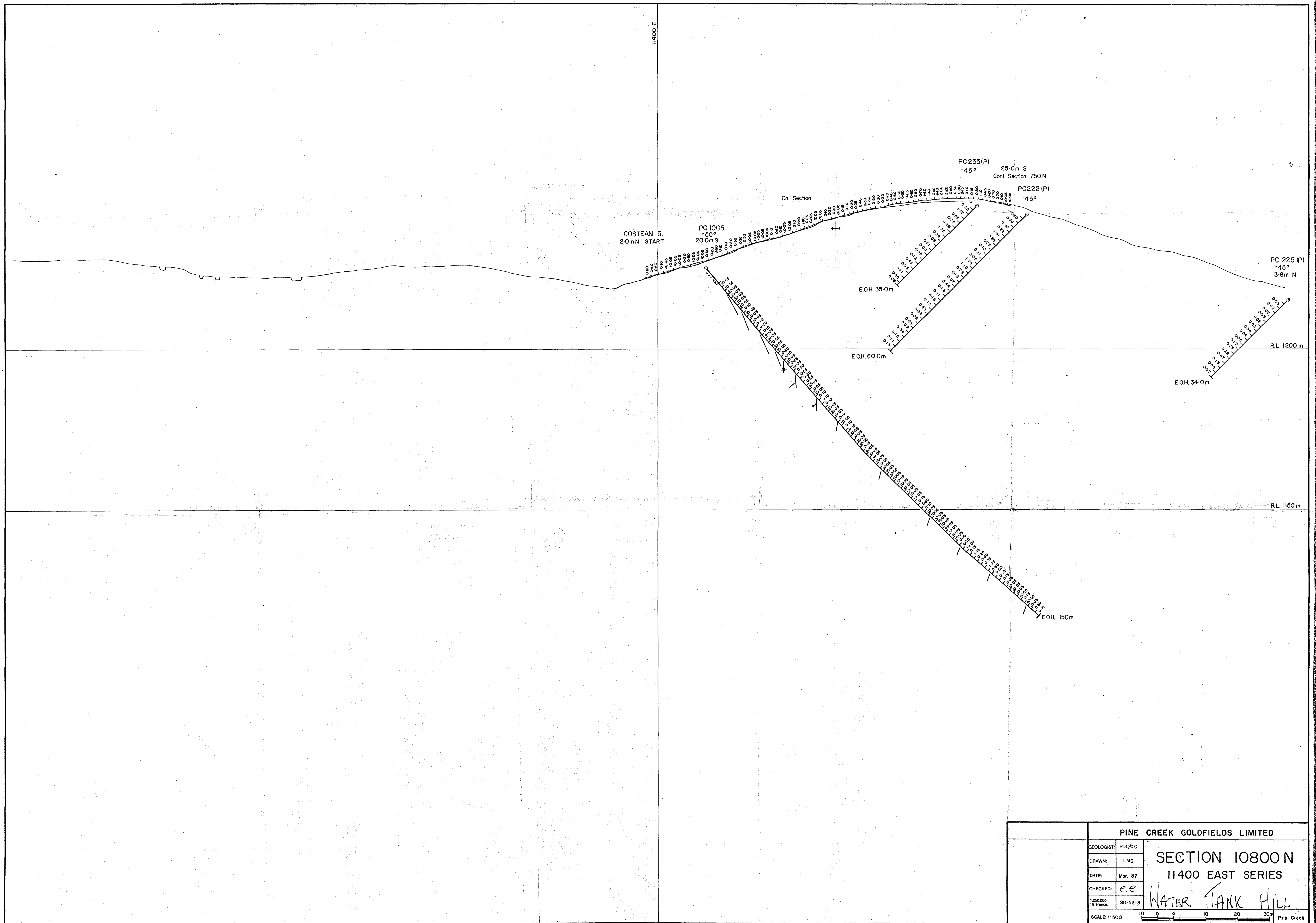
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APENDIX 2



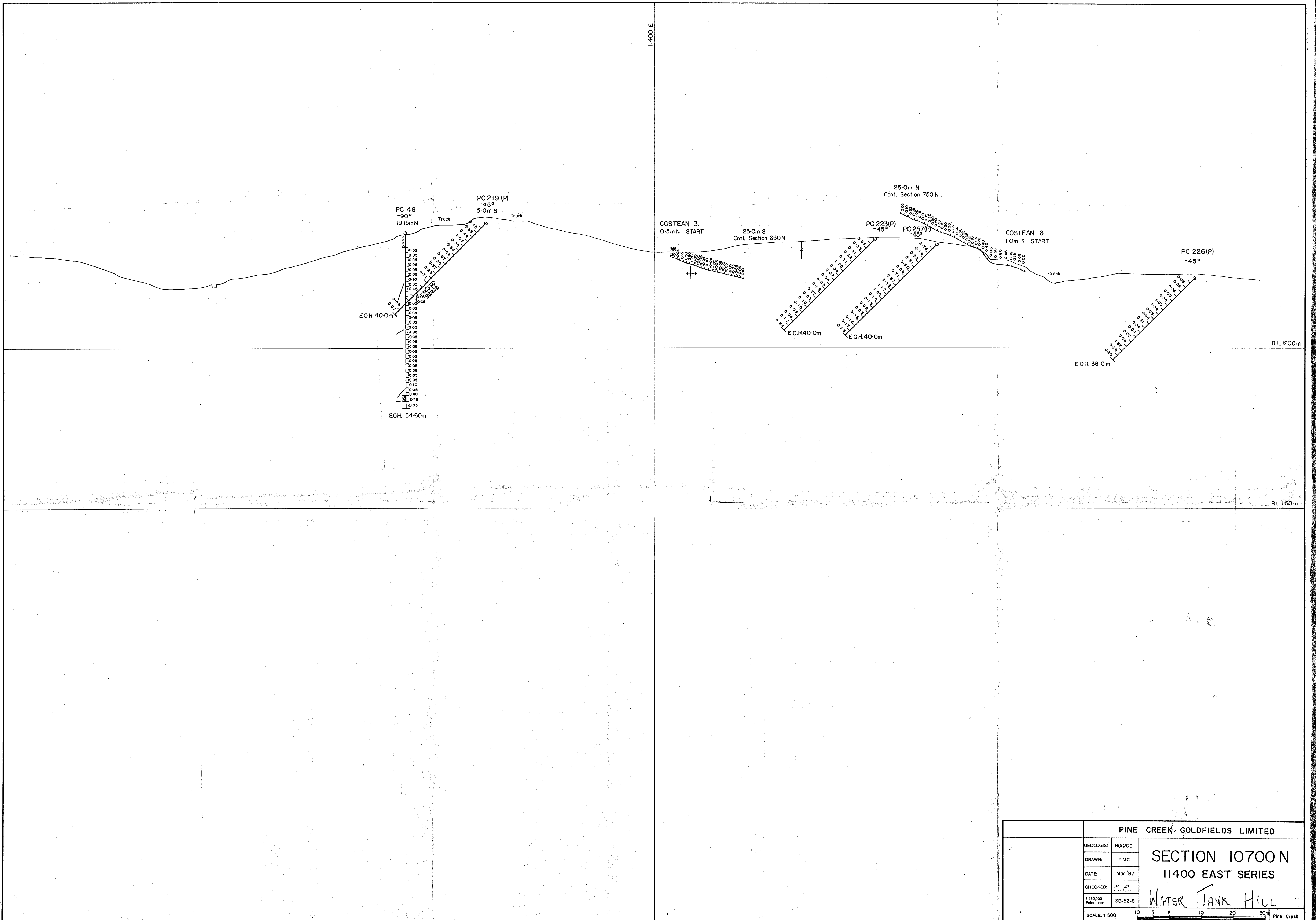
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CR1086 0332



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CR1986 0332

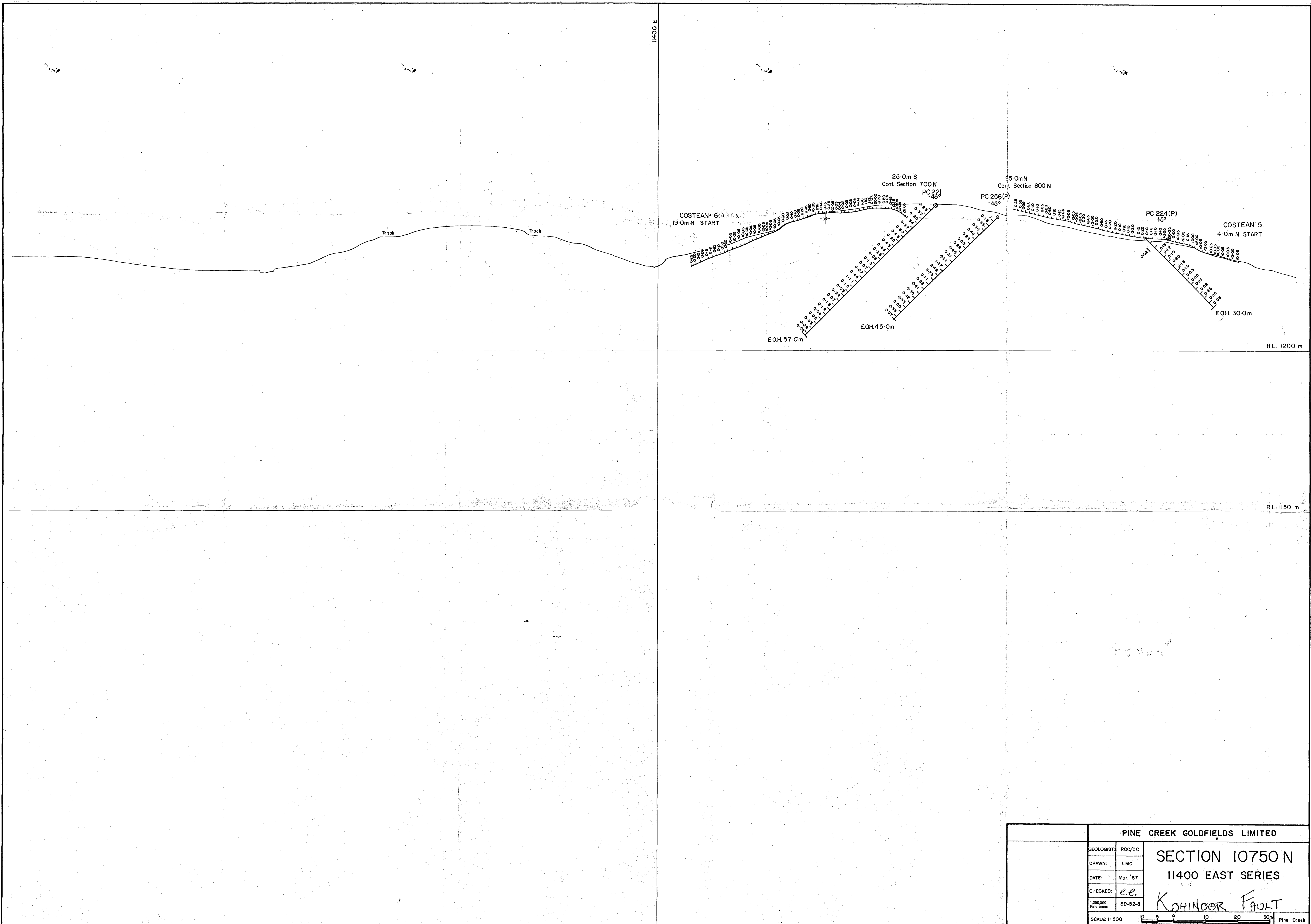


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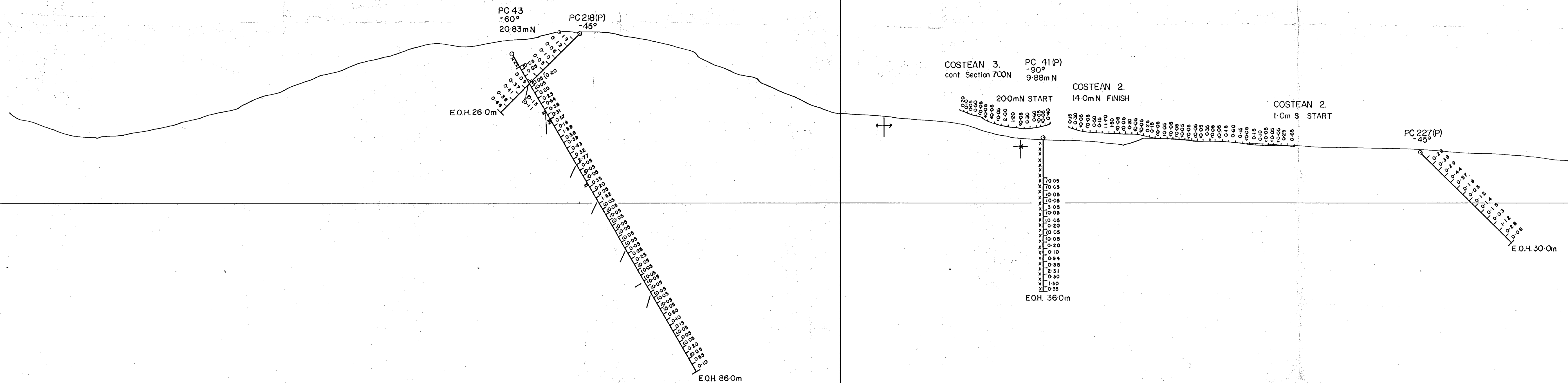
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APPENDIX 3



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6.1986 0332

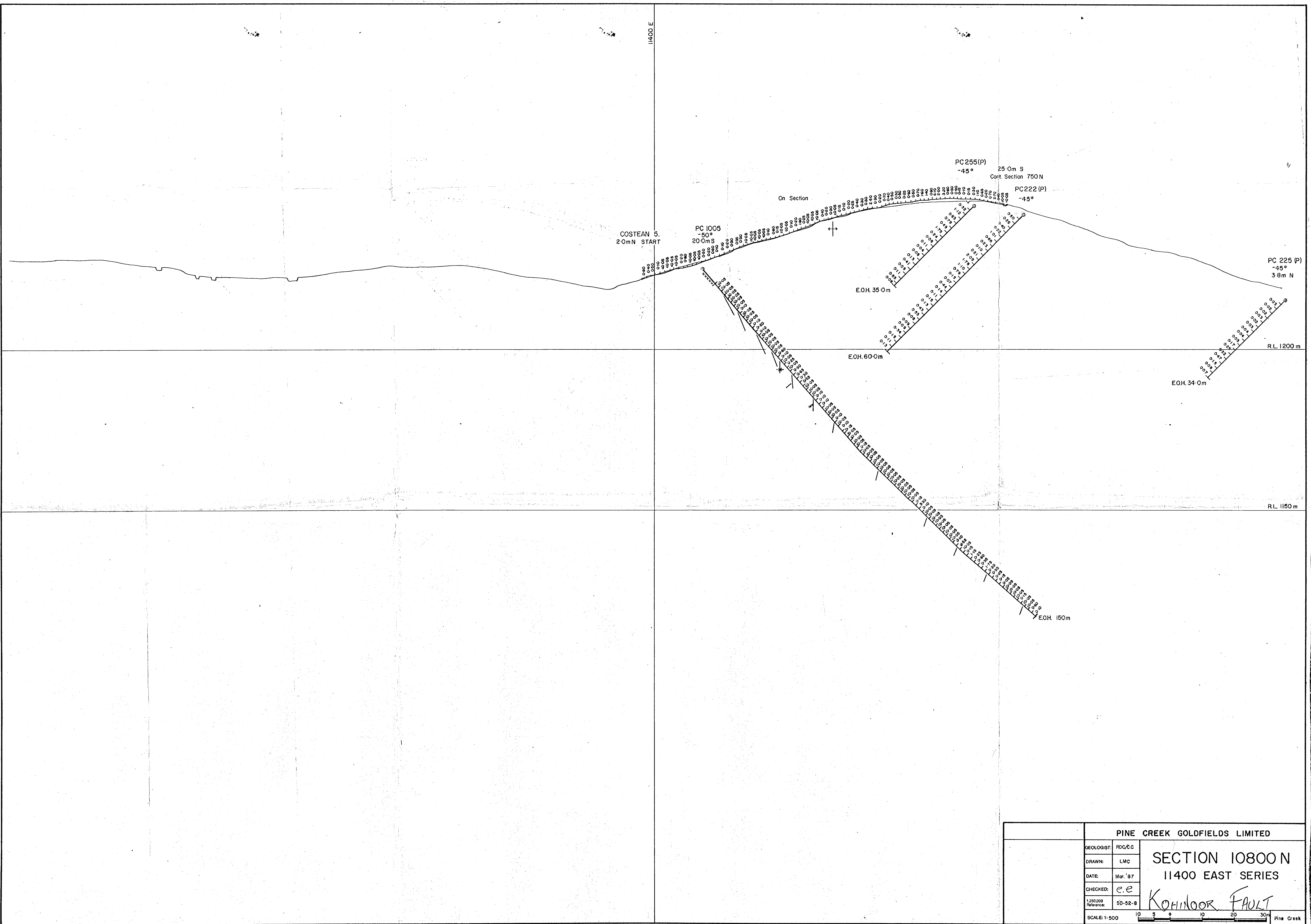


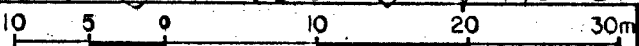
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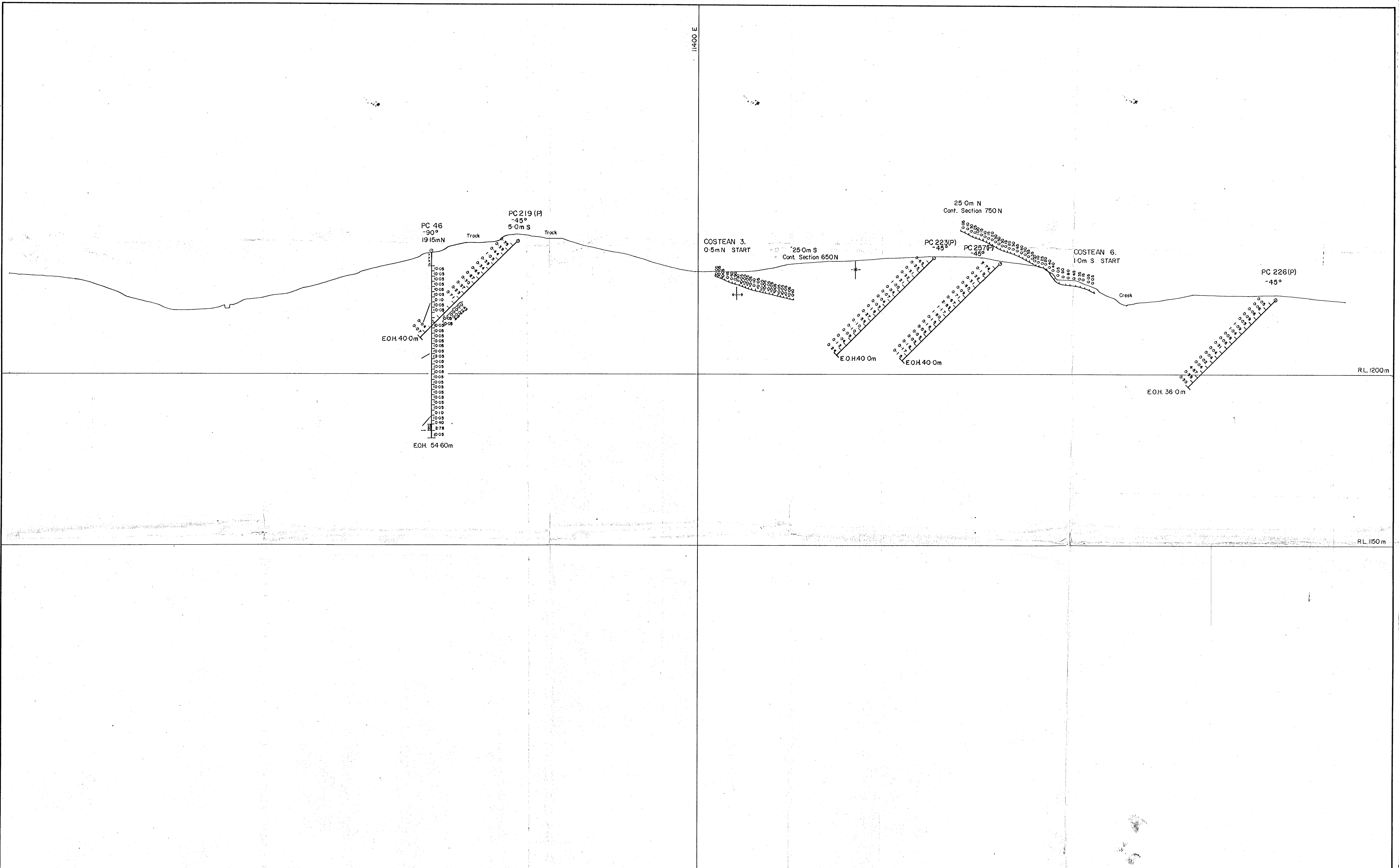
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CR 1986 0332



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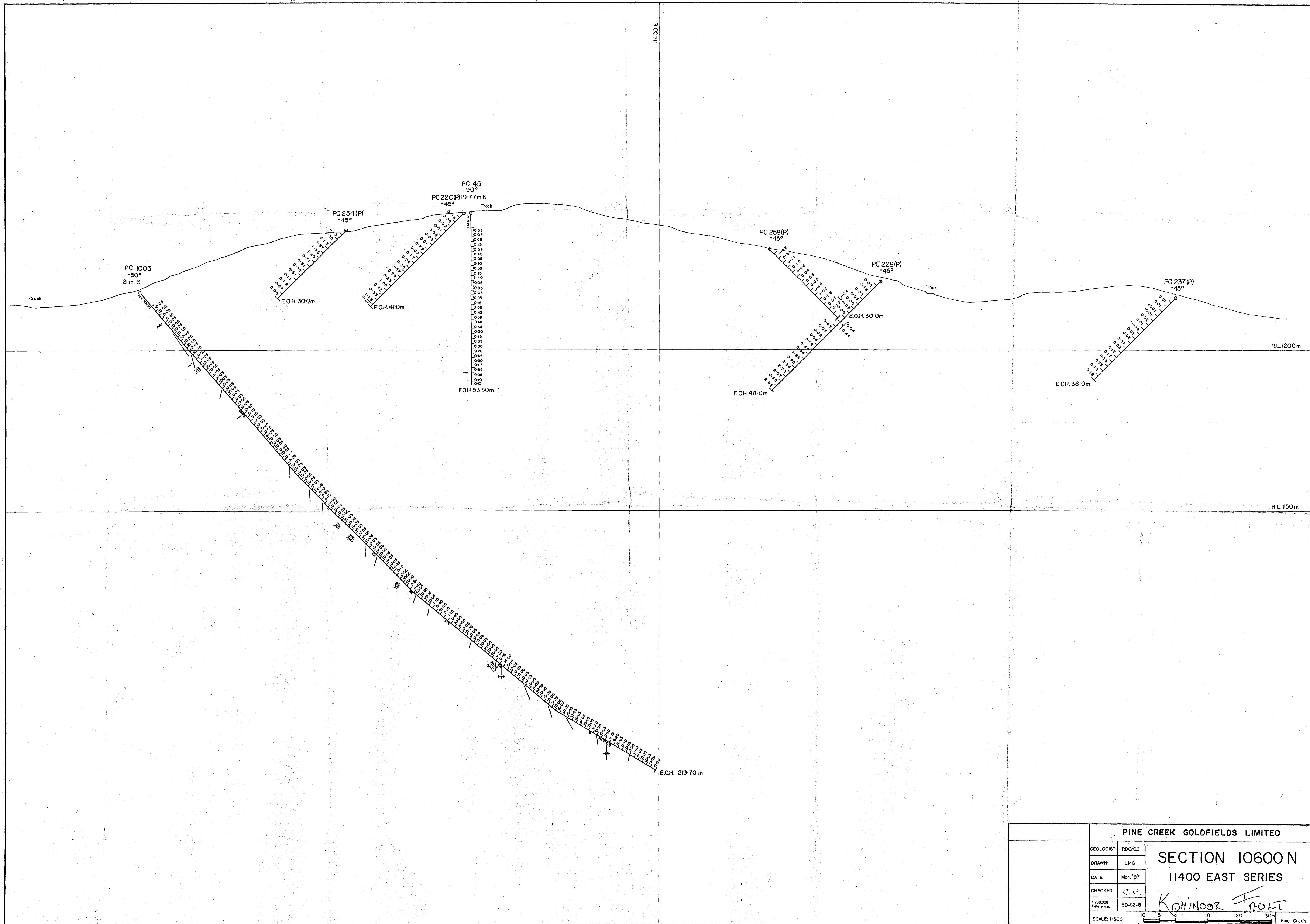
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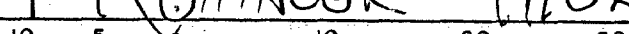


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SECTION 10700 N
11400 EAST SERIES

KOHINOOR FAULT

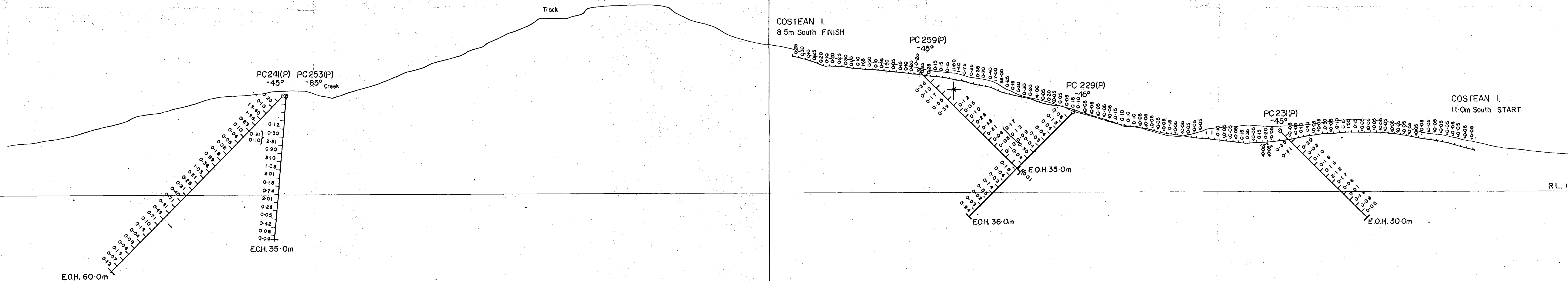


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SCALE: 1:500	 Pine Creek

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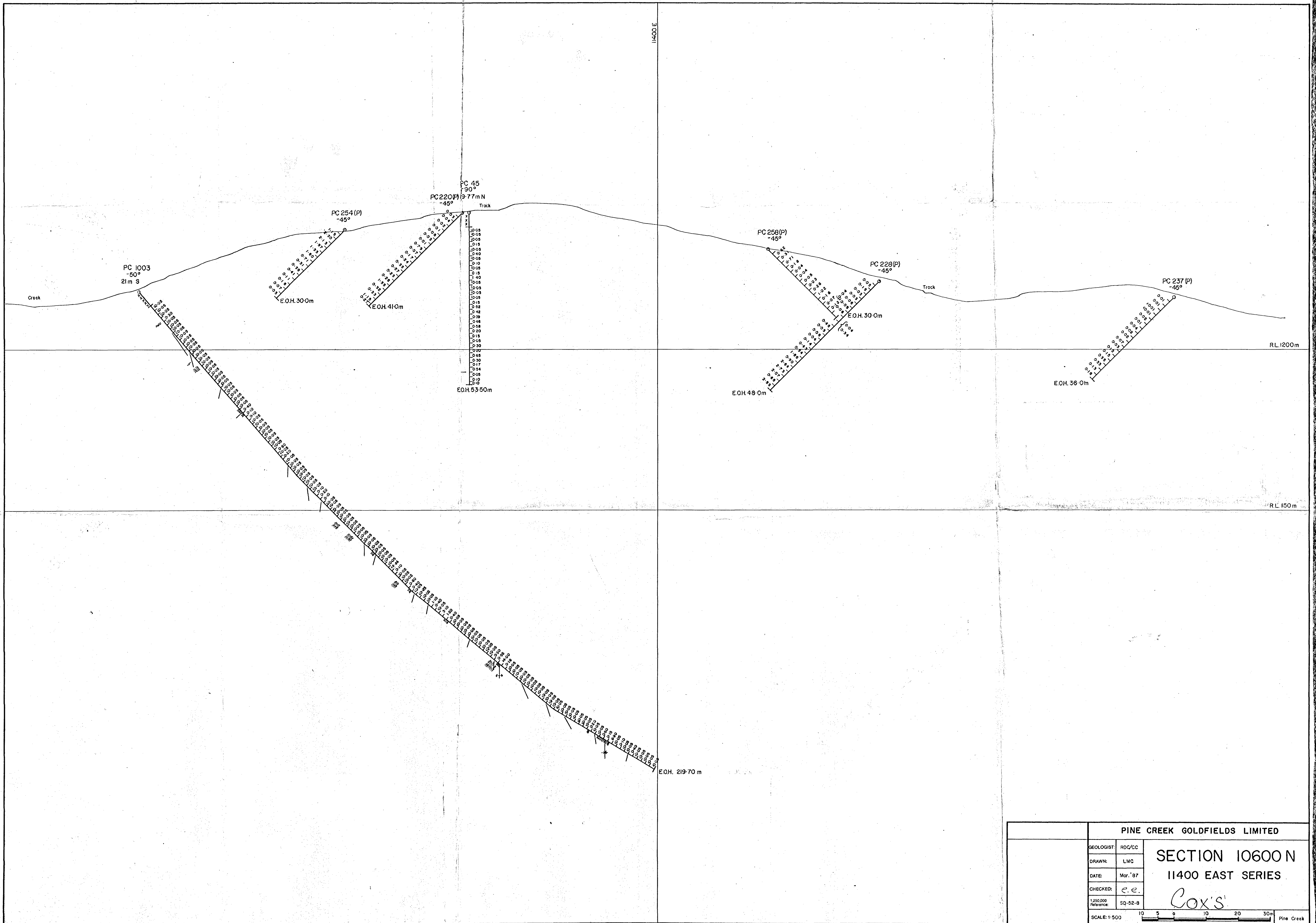
APPENDIX 4

11400 E



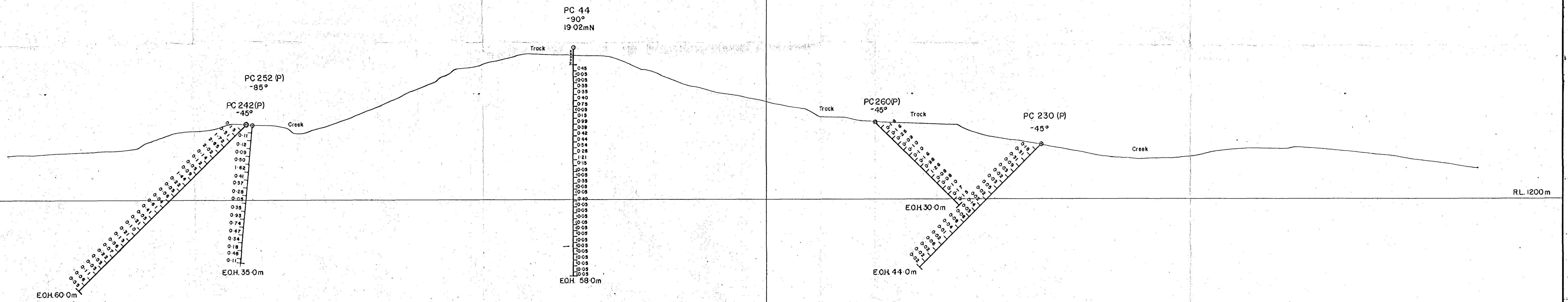
PINE CREEK GOLDFIELDS LIMITED			
GEOLOGIST:	RDC/CC	SECTION 10550 N 11400 EAST SERIES <i>Cox's</i>	
DRAWN:	LMC		
DATE:	Mar '87		
CHECKED:	ee		
1:250,000 Reference:	SD-52-8		
SCALE: 1:500		10 0 10 20 30m Pine Creek	

CR1986 0332



PINE CREEK GOLDFIELDS LIMITED			
GEOLOGIST:	RDG/CC	SECTION 10600 N 11400 EAST SERIES <i>Cox's</i>	
DRAWN:	LMC		
DATE:	Mar. '97		
CHECKED:	<i>e.e.</i>		
1:250,000 Reference:	SD-52-8		
SCALE: 1:500		10 5 0 10 20 30m Pine Creek	

CR1986 0332



PINE CREEK GOLDFIELDS LIMITED			
GEOLOGIST	ROD/CC	SECTION 10500 N 11400 EAST SERIES <i>Cox's</i>	
DRAWN	LMC		
DATE	Mar. '87		
CHECKED	e.e.		
1:250,000 Reference	SD-52-8		
SCALE: 1:500		10 20 30m Pine Creek	

CR 1986 0332