REPORT ON MT. DOUGLAS

EL 3121

END OF 1981 SEASON

INCO AUSTRALASIA LIMITED

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MG

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MT. DOUGLAS REPORT

Introduction

In the period from application for this area until December 1981, Inco Australasia Ltd has undertaken a review of exploration work done by previous tenants together with geological and geochemical field investigations. This work was aimed almost exclusively at base metal and gold mineralisation targets, the evaluation of the uranium potential being undertaken by the joint venture partner, Aquitaine Minerals Australia. This report presents the results of the work carried out by Inco and consequently excludes both the uranium exploration and any consideration of geophysical techniques.

Previous Exploration

Western Geophysical, Geopeko, Comalco, Secured Loans and Developments and Occidental Minerals have previously worked in parts of this area. Of these, the only work of significance to the present base metal and gold search is that carried out by Occidental Minerals. Other work is either uranium oriented, unavailable or mostly off the area of the present EL 3121.

Occidental Minerals carried out an airborne geophysical survey, a track etch survey and a regional stream sediment survey with follow-up in significantly anomalous areas by grid soil sampling, mapping and ground geophysics. Their stream sediment survey was done in areas of outcrop at a sample density of 3 per square kilometer. The -200 mesh fraction of these samples analysed for Mn, Co, Ni, Cu, Zn, Mo, Pb and U, with As being analysed on the -20+40 mesh fraction. In some cases insufficient -200 mesh fraction was available for analysis and the -80+200 mesh fraction was analysed instead.

Several base metal anomalous areas were outlined by the stream sediment survey and the two most significant such areas were followed up with a grid soil sampling survey and geological mapping. Some of the lesser anomalies were given a brief ground inspection in an attempt to explain their source. Both of the areas soil sampled, labelled Prospect 1, and Prospect 2, are over Koolpin Formation outcrop (Craig Creek member in the older terminology).

Geological Mapping

The BMR recently released their field sheets of this area at a scale of 1:25 000. Colour aerial photos at this scale are also available and were used during field inspection and checking of the aspects of the BMR maps more relevant to our base metal exploration.

The ground inspection showed important departures from the BMR mapping and so limited mapping was done in anomalous areas, predominantly in the north west (Prospect 2) but also at Prospect 1 and in the north east of the EL.

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The main difference from the BMR map is due to a difference of opinion on where the Gerowie - Mt. Bonnie (Kapalga) contact is. The BMR map seems to place this boundary near the uppermost tuff layer whereas I have placed it near the lowermost chert layer. The difference in these interpretations is perhaps as much as 1 km in stratigraphic thickness.

Different structural interpretations occur as a consequence of this. Some cases were also observed of misclassification of Koolpin Formation rocks on the BMR sheets.

Consequently 1:25 000 scale photo overlay geological maps have been prepared of the three above areas and these are attached. Remapping the area at the same scale as the BMR was never intended and hence these maps are not intended as BMR replacements. Their purpose is only to show the differences between the two interpretations. During field work it was rapidly recognised that details appropriate to a mineralisation target could not be recorded at such a coarse scale and proper detail mapping at a scale of 1:5 000 was intended for the 1982 field season. The few dips and strikes taken are insufficient to differentiate between the two structural interpretations.

My own interpretation of the geology is based largely on examination of the same stratigraphic units in other areas nearby. In particular the Mt. Bonnie Formation (Kapalga) commonly shows a mottled brown and pale brown to white texture on the photos whereas the Gerowie Tuff shows a more even pale brown colouring. Only limited field traver ng of the Mt. Bonnie (Kapalga) was done on EL 3121 but it does confirm this observation and consequently much of the BMR's Gerowie Tuff is considered to be Mt. Bonnie (Kapalga) in which tuff bands are known to be quite common. The Mt. Bonnie (Kapalga) also includes two known highly ferruginous sections which have elsewhere been confused with Koolpin Formation and similar confusion appears to have occurred on the BMR maps in the extreme south of Prospect 2. There is in fact a difference in degree of contortion of the bedding between the ferruginous Mt. Bonnie (Kapalga) sections and the Koolpin formation. Based on this the Koolpin certainly does not extend as far south at Prospect 2 as is shown by the BMR. Field inspection of this area shows it to be one of the ferruginous Mt. Bonnie (Kapalga) sections, though which one was not determined. (Probably the lower one). The actual southern limit of the Koolpin formation was not observed as it is covered by alluvium and latevite.

The Koolpin formation is not subdivided on the BMR sheets but 4 subdivisions should be mappable at a finer scale. Similarly, two subdivisions of the Gerowie Tuff should be mappable. The stratigraphy observed is:

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Gerowie Tuff	Upper	Tuff and greywacke bands. Tuff generally hard and outcrops well. White to pale grey on surfaces and fresh breaks. Greywacke recessive.
	Lower	Tuff and greywacke bands. Tuff generally hard and outcrops well. Mottled pink and white on weathered surface with concentric colouring from pink to grey in the centre of large fresh lumps. Fairly ferruginous. Greywacke recessive.
Koolpin Formation	Upper	Ferruginous sandstones and siltstones - relatively quartzose. Ferruginous siltstones with some highly ferruginous bands. (Gradational into above strata). Very contorted bedding (soft sediment deformation). Banded ferruginous siltstones and cherts. Bands 2 to 5 cm thick. "Emu Egg" cherts common (nodular cherts with nodules 10 cm across).
	Lower	Highly silicified (post carbonate) horizon(s) within siltstones and sandstones. Uncertain whether there is one or two such carbonate horizons. The silicified cappings are locally continuous (100-200 m) but discontinuous over larger distances.

One sample of the silicified cap rock was submitted to Mintek Services for petrographic description and this showed remnant textures after dolomite, although it is now 100% quartz.

Rock Sampling

The main thrust of the 1982 field work was a rock sampling programme intended to concentrate on gossanous and possible auriferous samples. Most of these samples were collected from the Prospect 2 area with a few from the north east and some also from Prospect 1. A total of 57 samples were collected, 47 for gold and and base metal analysis and 15 for base metals only. All samples were multiple random chip samples from a 1 or 2 metre radius, weighing 2-4 kg, to ensure representative results. Base metal samples were analysed for Cu, Zn, As, Pb by AAS with gold samples being analysed for Cu, Zn, Pb, Ag, by AAS and Au by aqua regia extraction and AAS (method LG40). Analyses were carried out by Analabs, Perth. Sample descriptions and results are appended. Sample locations are shown on the attached photo overlay plans.

None of the samples contained significant Au levels and only a few showed even mildly interesting base metal values. Of these all except one seem to be fault related and hence the moderate levels of Pb and Zn they show are likely to be epigenetic, probably related to the Mt. Bundey granite intrusion.

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Rock Sampling (cont'd)

Only sample 317094, described as a silicified carbonate within the Koolpin and containing 1400 ppm Pb is of any real interest in the search for stratigraphic mineralisation. Further sampling of similar materials to determine whether this stratigraphic horizon is mineralised elsewhere would seem appropriate.

Although no stratigraphic source rock for the soil sample anomalies has been proven there is an indication that the carbonate horizons of the Koolpin are involved. It should be stressed that these horizons were only infrequently sampled in this work, and the recessive siltstone horizons were not sampled at all. Consequently these low results do not necessarily condemn the area entirely, although the failure to find any significant gossanous rocks or auriferous quartz vein stockworked rocks is disappointing.

Stream Sampling

In the Occidental survey it was necessary to strike a compromise between exploration for uranium and base metals and consequently a fine grained sediment fraction was chosen for analysis. While satisfactory for uranium this would be less than optimal for base metals, particularly lead, for which stream transport in the region is predominantly clastic rather than hydromorphic.

Field inspection of the area indicates that, in general, the streams are carrying very little active sediment in the areas of most geological interest. This is because the Koopin Formation is relatively soft and has eroded down close to the local base level. The streams are consequently slow flowing and meandering with little active erosion of the Koolpin Formation rocks.

Although major Pb anomalies were outlined in the stream survey their locations do not correspond with the Pb anomalies located by the grid soil survey at Prospect 2.

Cumulative frequency graphs of the Occidental stream sediment survey results have been plotted according to the method of Le Peltier, 1967. These graphs are appended and lead to the following conclusions:-

1. Lead shows two distinct populations and a major mineralisation anomaly. The two populations overlap considerably. For the lower population the threshold is 30 ppm and for the higher, 90 ppm. Almost all the samples recognizably belonging to the upper population (i.e. Pb 35 ppm) are in the north west of the EL but they are not restricted to one rock type. They occur in drainages over Koolpin, Gerowie and Mt. Bonnie rocks. This lack of relation to bedrock is disturbing and perhaps indicates that the upper lead population is related instead to the nearby Mt. Bundey granite, indicating an epigenetic rather than syngenetic lead source.

2. Copper shows either one skewed population or two intersecting populations. Because of the lack of character in the results, combined with the indeterminate correlative frequency graph it does not seem worthwhile to try and interpret the Cu results other than to say values in excess of 30 or 40 ppm are anomalous.

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Stream Sampling (cont'd)

3. Arsenic shows two completely overlapping populations. The data points are rather irregular due to the coarse reporting interval of the laboratory results and hence the actual population statistics may vary a little due to this. The threshold of the lower population is 7 ppm and of the upper population 50 ppm. Most samples 10 ppm are from the upper population and these occur in two distinct areas - one over the Koolpin Formation at Prospect 2 and the other near the Ringwood gold mines, over Burrell Creek Formation. All of the major anomalous points (50 ppm) are near the Ringwood gold mines, 3 of the 5 points being on ground not included in EL 3121.

Four stream samples were collected near known Pb anomalous areas at Prospect 2 in order to test the dispersion distance and the element behaviour in various particle size fractions.

The samples were all downstream of Pb anomalies outlined in the soil survey but both up and down stream of anomalies found in Occidental's stream survey. The samples (numbered 312183-312186) were sieved to -20+40 mesh, -40+80 mesh and -80 mesh. Sample locations and a plot of the results are appended.

No reliable anomaly train related to the known soil anomalies could be discerned. The lead values seem to substantiate one of the Occidental stream Pb anomalies but best response is in the -20+40 number fraction rather than in fine grained fractions. In general, the fine fractions show uniformly high element levels rather than reflecting the presence of local sources.

From these few samples, taken over a rather unsuitable orientation area, it is not possible to draw any reliable conclusions but it does seem that stream sampling for base metals should utilise the coarser grained fractions in this area.

Occidental carried out soil sampling programmes at Prospects 1 and 2. At Prospect 1 only relatively low contract Pb anomalies were obtained and there were no associated Cu or Pb anomalies. Nor did the high Pb values group together into meaningful anomalies.

At Prospect 2 several very high contrast Pb anomalies occurred which were of significant area, although again there were no associated Cu or Zn anomalies. Consequently the 1981 Inco work focused almost solely on the Prospect 2 area in an attempt to interpret the Occidental results.

The Prospect 2 soil contours in the Occidental report are quite contorted and almost impossible to interpret. They were therefore smoothed using the rolling mean method. Because the sample spacing varies between traverses, a constant length "window" of 100 metres was used during the smoothing. This included 3 samples on traverses with 50 m spacing and 5 samples on traverses with 25 m spacing. All samples within the window were assigned equal weights.

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Stream Sampling (cont'd)

Although a weighting technique is to be preferred, it would have required an undue amount of computational time. Smoothing was carried out for Pb, Cu and Mn and contour plots prepared for each. These are appended.

The Pb plot shows the most character and two main anomalous areas occur, one of which parallels the local strike. However, neither anomalous area is coincident with Cu anomalies.

The smoothed contours clearly show a systematic pinching and swelling between adjacent traverses which is due to analytical errors in the results. This makes interpretation of the contours exceptionally difficult but it is apparent that the main anomaly trends are parallel to strike, indicating a stratigraphic anomaly source. It is also notable that Mn seems to be acting as a lithological guide and may be helpful in the detailed geological mapping of the area.

There is some confusion over the spacing of the soil sample traverses which is shown as being 200 m on the Occidental plans. Field inspection shows that the grid is no longer locatable and it will be necessary to establish a new grid and resample the area in order to evaluate the significance of the soil anomalies at Prospect 2.

In preparation for such a survey a small orientation soil programme was carried out in November 1981. Two representative traverses were chosen, which seemed to cover areas outlined as anomalous in the Occidental work. Orientation line 1 was over Gerowie Tuff outcrop, possibly extending into Koolpin at its eastern end. It crossed a sheared zone and also sampled black soils in the creek and was 250 m long. Orientation line 2 was over Koolpin Formation rocks and was 312.5 m long. Both were pace and compass lines, oriented 060° magnetic, which is approximately perpendicular to the strike. They were sampled at 12.5 m intervals and their locations are shown on the rock sample location map appended. Together they encompass the complete range of conditions expected in the full survey.

Each sample was sieved into three fractions: -20+40 mesh, -40+80 mesh and -80 mesh (approx. -1100+600 microns, -600+200 microns and -200 microns). The fractions were weighed to allow estimation of the ease of collecting these fractions during the full survey. The two coarser fractions were pulverized and all fractions of all samples analysed for Mn, Co, Cu, Zu, Ag and Pb by Analabs, Perth. (Method A1/1). Profile plots of the results are appended.

These plots show that the best fraction to use is the -20+40 mesh fraction. In most cases the anomaly contrast is about double that of using either of the other fractions. However, an even more significant observation is that the anomalies are broader in this fraction than in the finer fractions. This is most noticeable in the Zn plot of line 2 but is also apparent in other elements and on both traverses. Hence by using this coarse fraction a wider sample spacing than 12.5 m would be acceptable, and a sample spacing of 20 or perhaps 25 m could be used.

As with other orientation surveys the fractions analysed have both an upper and lower size limit purely for practical reasons. However, field

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Stream Sampling (cont'd)

surveys generally use only one sieve and take a bulk of all material below that size. Using the weights of each sieve fraction, the analyses have been recalculated to test the efficiency of using bulk -20 mesh and -20+80 mesh samples instead of the -20+40 mesh fraction. These results have been calculated only for lead to date, due to time limitations, but scanning of the other elements indicates that the same conclusions will apply to them. The plots clearly show that the inclusion of more fines in the sample results in progressive dilution. This is because most samples showed very high percentages of -80 mesh material. Note that using the bulk -20 mesh fraction on orientation line 1 (or using -80 mesh fraction) would result in no anomalous response near 25 m east, whereas an anomaly of contrast 2 or more is present at this site in the -20+40# fraction.

It is concluded that any soil survey in this area should use the -20+40 mesh fraction and the bulk -20 mesh sample is not a suitable substitute. Without further field work the significance of this size fraction behaviour cannot be fully understood but it appears initially that the anomalies are caused by coarse mineral grains which are not being chemically weathered to any great extent. Adjacent fine grained, mineralised greywacke and siltstone are contributing large amounts of barren fine materials which dilute the anomalies unless these finds are screened out.

The silver analyses for all samples were below the detection limit and of no use. The cobalt results are quite flat and also of no use. Hence any future survey should omit these elements. Useful elements, in order of importance, are Pb, Mn, Zn and Cu. Vanadium was not analysed in this work and it might be worth checking its response prior to starting a survey.

Lead shows good contrast anomalies with wide dispersion and is the best indicator element in this area. Zn and Cu show much lower contrast anomalies but with slightly wider dispersion. In general these three elements produce coincident anomalies. Note that on orientation line 1, Zn and Cu show double peaked anomalies which straddle the lead anomaly.

This concentric structure could either be due to changes in composition of the mineralisation fluid with time in a syngenetic environment or to differential transport in an epigenetic deposit.

Manganese gives high contrast anomalies but it is important to note that they are not completely coincident with the other element anomalies. Some manganese anomalies have no associated Cu, Pb or Zn anomaly at all. Hence the Cu, Pb or Zn anomalies observed are not merely absorption effects, a fact confirmed by the coarse grainsize behaviour noted previously. The manganese seems to be reflecting different features to the Cu, Pb and Zn. This may either be the geology or different mineralisation and in either case it seems worthwhile analysing for Mn in a full survey.

Comparison of these profiles with profiles of the Occidental data show general agreement. Although Occidental do not state what mesh fraction they used, from their anomaly contrasts it seems they used either the -80 number or an even finer fraction. Hence their soil survey could be improved upon by using the -20+40# fraction.

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Conclusions

The Occidental work, despite its emphasis on Uranium, has outlined significant unexplained Pb anomalies at Prospect 2. The rock sampling programme has given little lead to the cause of these anom 'ies but they may be related to the carbonate horizons in which rock sample 317094 analysed 1400 ppm Pb.

The BMR mapping at 1:25 000 is too coarse for further work in the Prospect 2 area (besides being disputed in places) and furthermore, detailed mapping is required in areas of potential mineralisation.

The orientation soil sampling programme indicates that a full survey should use the following sample specifications:

1. Sample 100 m spaced traverses at 20 or 25 m intervals.

2. Collect samples from a depth of 10 - 20 cm over outcrop or subcrop areas. Omit sampling black soils in creeks.

3. Sieve samples on site to -20+20 number (on site to ensure collection of sufficient sample - this fraction is only a small percentage of the soil)

4. Analyse for Pb, Mn, Cu, Zn by method A1/1 (pechloric, AAS). Consider the analysis of Vanadium. Pulverising of this coarse material is necessary to ensure proper digestion.

APPENDIX 1

SAMPLE DECRIPTIONS & RESULTS

Mt Douglas EL 3121

INTERNATIONAL NICKEL AUSTRALIA LIMITED

AREA Photo Reference

SAMPLE RECORD

SAMPLE No.	LOCATION Point / RON / Photo	DESCRIPTION	ASSAY REQD.	DATE SAMPLED	SAMPLED BY	As	Au	ANALYSIS Cu	Ni	Zn	Pb	Ag	Cr
317059	1 / 1 / 0013	Haem stockwork in fault Breccia	Au	13/10	KGB	-	0.016	35	-	5	35	1.0	-
60	3 / 1 / 0013	Stockwork qtz in fault Kopalga	Au			-	0.032	80	-	160	305	0.5	-
61	4 / 1 / 0013	" " in Koolpin	Au			-	0.028	55	-	90	115	x	-
62	6 / 1 / 0013	Fe/SiO_2 gossan in fault	BM			400	-	30	-	175	530	x	-
63	6 / 1 / 0013	" " " "	Au			-	0.048	60	-	215	405	0.5	-
64	16 / 1 / 0011	Qtz stockwork in chert/gw	Au			-	x	15	-	15	15	x	-
65	18 / 1 / 0011	pyritic siltst & chert Kopalga	BM			150	-	50	-	75	150	x	-
66	19 / 1 / 0011	banded chert ≤ 1% py carb	BM			100	-	40	-	55	45	x	-
67	21 / 1 / 0023	Greenish chert in Kopalga	BM			100	-	15	220	20	35	x	75
68	22 / 1 / 0023	Fe gossan ≤ minor qtz	BM			300	-	165	-	225	240	x	-
69	23 / 1 / 0023	Qtz stockwork in fault breccia	Au			-	x	60	-	15	8500	3.0	-
70	28 / 1 / 0013	Siliceous fault cap	Au			-	x	30	-	10	140	x	-
71	31 / 1 / 0013	Dense Fe breccia in fault	BM			1050	-	145	-	155	445	0.5	-
72	32 / 1 / 0013	Siltst with py casts	BM			250	-	65	-	25	55	1.5	-
73	33 / 1 / 0013	Nodular chert ≤ 5% cavities & qtz	Au			-	0.016	165	-	65	225	1.0	-
74	34 / 1 / 0031	Fe brecciated Koolpin ≤ limon	Au			-	0.008	75	-	155	40	0.5	-
75	35 / 1 / 0013	Fault Breccia Haem ≤ qtz	Au			-	0.012	60	-	450	10	1.0	-
76	36 / 1 / 0013	Dense Fe Koolpin ≤ py	BM			150	-	70	-	305	155	1.5	-
77	37 / 1 / 0013	Fe Koolpin Much limon	BM			500	-	50	-	150	20	1.0	-
78	39 / 1 / 0013	Fe dense ≤ qtz nodules	BM			400	-	120	-	200	100	1.5	-
79	40 / 1 / 0013	py siltst vf grained py	BM	16/10		350	-	30	-	75	25	0.5	-

ANALYSES BY ANALABS

INTERNATIONAL NICKEL AUSTRALIA LIMITED

AREA Mt Douglas EL 3121 — SAMPLE RECORD — Rock Samples

Photo Reference.

SAMPLE No.	LOCATION Point / Run / Photo No	DESCRIPTION	ASSAY REQD.	DATE SAMPLED	SAMPLED BY	ANALYST & DATE	ANALYSIS Cu	Au	Zn	Pb	Ag	As
317080	41 - 2 - 0113	Ferrug. Qtz breccia in Gerowie	Au, BM		KGB		45	x	640	3750	2.5	-
81	42 - 1 - 0013	Ferrug stratig layer in Koolpin	" "				65	x	330	65	x	-
82	42 - 1 - 0013	Ferrug brecciated horizon	" "				70	x	160	15	x	-
83	47 - 1 - 0013	Ferruginous band in Gerowie	BM				400	-	1050	330	x	100
84	51 - 1 - 0013	Ferrug banded chert minor nodules	Au, BM				295	x	1950	590	0.5	-
85	52 - 1 - 0013	Limonitic sltst ± qtz in Gulf	BM				85	-	220	350	x	100
86	52 - 1 - 0013	Ferrug sltst & chert ± qtz stock.	Au BM				40	x	45	125	x	-
87	53 - 1 - 0013	Fe indurated Koolpinunit ± qtz	Au, BM				300	x	425	20	x	-
88	54 - 1 - 0013	Ferrug greywacke in Gerowie ± qtz	Au BM				60	x	85	110	x	-
89	54 - 1 - 0013	Pyritic Gerowie tuff	BM				40	-	115	170	x	150
317090	56 - 1 - 0013	Ferrug. Koolpin ± minor qtz	Au BM				100	x	630	50	x	-
91	58 - 1 - 0013	Ferrug Fault cap in Koolpin	Au BM				50	x	405	35	x	-
92	59 - 1 - 0013	Siliceous caprock after CO_3=	Petrology									
93	61 - 1 - 0013	Ferrug Breccia ± qtz / Gerowie	Au BM				110	0.016	185	150	1.0	
94	62 - 1 - 0013	Ferrug equiv of CO_3= Koolp	BM				35	-	250	1400	x	750
95	63 - 1 - 0013	Qtz stockwork in Gerowie	Au BM				30	x	35	80	x	
96	65 - 1 - 0013	" " " "	Au BM				130	x	60	110	0.5	
97	65 - 1 - 0013	Ferruginous Qtz in Gerowe	Au BM				200	0.008	130	605	2.0	
98	65 - 1 - 0013	Massive Vughy qtz ± breccia	Au BM				50		20	35	x	
99	67 - 1 - 0013	Ferrug Qtz gossan in Gerowie	Au BM				255	0.008	230	2650	1.0	
317100	69 - 1 - 0013	Qtz stockwork in Koolp. SS.	Au BM				30	x	40	645	1.0	

Form 68-6.

AREA Mt Douglas EL 3121

INTERNATIONAL NICKEL AUSTRALIA LIMITED

SAMPLE RECORD

Rock Samples

SAMPLE No.	LOCATION Point / Run / Photo	DESCRIPTION	ASSAY REQD.	DATE SAMPLED	SAMPLED BY	ANALYST & DATE	ANALYSIS Cu	Au	Zn.	Pb	Ag
317547	71 - 1 - 0011	Qtz-Fe in Kapalgq	Au BM		KGB		15	x	30	15	x
48	72 - 1 - 0011	Qtz vein - Brecciated (Kpg)	Au BM		"		10	x	10	10	0·5
49	73 - 1 - 0013	Gossanous Qtz in Koolpin	Au BM		D'Auvegne			SAMPLE	LOST		
317550	74 - 1 - 0013	Qtz stockwork in Kp	Au BM		KGB		15	x	15	15	x
1	75 - 1 - 0013	" " " "	Au BM				90	0·020	120	110	x
2	76 - 1 - 0013	Ferrug Silic Horizon in Koolp	Au BM				15	x	115	75	x
3	77 - 1 - 0013	Silicified carbonate	BM/Au				10	0·016	25	20	x
4	77 - 1 - 0013	Ferrug $CO_3^=$ - brecciated.	Au BM				35	x	220	145	3·5
5	78 - 7 - 0167	Brecciated Koolpin	Au/BM				75	x	15	50	x
6	79 - 7 - 0167	Banded ferrug ≤ chert	Au BM				75	x	10	135	x
7	80 - 7 - 0167	Ferrug bedded Koolpatterca$_3^=$	Au BM				25	0·008	10	10	x
8	81 - 7 - 0167	Ferrug Caprock ≤ qtz	Au BM				35	x	1200	x	x
9	82 - 7 - 0167	" "	Au BM				150	0·025	95	x	x
317560	85 - 1 - 0013	Ferrug Banded ch-siltst Breac	Au BM				95	x	530	25	x
1	86 - 1 - 0013	Breccia fault-cap ≤ qtz	Au BM				100	x	500	170	x
317562	87 - 1 - 0013	Ferrug fault cap in Carowie	Au BM				75	x	155	45	x

Form 6 5.

INTERNATIONAL NIC. (AUSTRALIA) LIMITED

AREA Mount Douglas ELA **SAMPLE RECORD** ppm Au Pb

SAMPLE No.	LOCATION Approx.	DESCRIPTION	ASSAY REQD.	DATE SAMPLED	SAMPLE No.	ANALYST & DATE	% ANALYSIS Co	Ni	Cu	Zn	As
312188	798000E 568000 N	Quartz Breccia - Low Fe		.011	20		90	175	180	40	220
9	"	" " high Fe $S^=$		.009	125		35	60	1500	50	2000
90	"	Ferruginous Gossan (?) in shale		.005	75		120	195	285	100	2500
91	787000E, 566000 N (approx area)	Small quartz veins in shear zone Prospect 2 lead anomaly		.027	105		45	120	190	175	250
	Coordinates UTM	Metric Zone 52 Darwin 1:250 000 sheet									
	NE corner of Mt Douglas ELA Arsenic anomaly area.										

INTERNATIONAL NICKEL AUSTRALIA LIMITED

AREA McKinlay River 1:100000 sheet Stream Sediment Samples. Mt Douglas ELA

SAMPLE RECORD

SAMPLE No.	LOCATION	DESCRIPTION	ASSAY REQD.	DATE SAMPLED	SAMPLED BY	ANALYST & DATE	ANALYSIS Cu	Ni	Zn	Pb	Co	As
312183	83600E 59800N	-20 #	Pb Base Metals				25	35	30	60	25	36
"		-40					15	25	30	45	15	23
"		-60					15	25	25	40	15	16
"		-80					45	40	50	125	30	33
312184	83700E 59900N	-20					30	30	35	60	20	41
		-40					25	30	35	50	20	23
		-60					25	30	30	45	20	19
		-80					45	45	45	90	40	27
312185	83900E 59600N	-20					35	45	40	120	30	55
		-40					20	25	30	70	25	23
		-60					15	25	25	55	20	16
		-80					20	45	35	110	35	21
312186	84100E 58800N	-20					30	45	35	105	35	53
		-40					20	35	30	70	25	20
		-60					20	30	25	65	25	14
		-80					35	35	25	130	40	19

PROJECT: MT Douglas 060 — Previous samples destroyed in Laboratory — SAMPLER: KGB

Sample No.	Coordinate [redacted]/E(m)	Depth Cms.	Colour	Horizon	Slope	Remarks
327414	0	7	DK Bn	C/S	M	-20# - Very wet
15	0	7	"	"	"	Bulk unsieved, over Gerowie tuff
16	12·5	10	"	"	"	Over Gerowie Tuff
17	25	10	"	"	"	"
18	37·5	10	"	"	"	"
19	50	10	Gy Bn	"	"	"
20	62·5	10	"	"	"	"
21	75	10	"	"	G	"
22	87·5	15	"	"	"	"
23	100	15	"	"	"	"
24	112·5	10	Bn	B	F	Clay - No scree
25	125	15	"	B/C	"	Gerowie Tuff
26	137·5	15	Gy Bn	"	"	" & clayey
27	150	15	"	"	"	" clayey, V wet
28	162·5	20	"	"	"	" "
29	175	20	Bn	"	"	Clayey V damp
30	187·5	20	Pl Bn	"	"	Nr. Creek, Fairly damp
31	200	15	"	B	"	Pure clay. In creek
32	212·5	15	Gy	T	"	" " "
33	225	15	Pl Bn	T	"	" "
34	DUPLICATE OF SAMPLE					327429
35	237·5	15	Pl Bn	T	F	Pure clay in ck.
327436	250	15	"	"	"	" "
	END OF TRAVERSE					

Abbreviations: Slope — M=Moderate G=Gentle F=Flat
Horizon — T=Transported, S=skeletal
B, C = Normal Horizon names
Colour — DK-Dark Pl-Pale
Gy Grey Bn Brown

DATE: 23/11/81 Resampling

PROJECT: MT Douglas 060 — First Batch destroyed in Laboratory — SAMPLER: KGB

Sample No.	Coordinate [redacted]/E(m)	Depth Cms.	Colour	Horizon	Slope	Remarks
327437	0	10	Bn	T	F	Creek Bank - Pure Clay
38	12·5	10	"	T	F	" "
39	25	10	"	"	"	" "
40	37·5	15	"	B	"	Clay
41	50	15	"	"	"	"
42	62·5	15	"	"	"	"
43	75	15	"	"	"	"
44	87·5	20	"	"	"	"
45	100	20	"	B	G	" Toe of Hill
46	112·5	20	"	"	"	Hill - Some scree - V clayey
47	125	25	"	"	M	Clay & rocky
48	137·5	30	"	S/B	"	Rocky & clayey
49	150	25	"	B	"	" "
50	162·5	30	"	"	"	" "
51	175	25	"	"	"	"
52	187·5	25	"	"	F	Crest o/c but clayey
53	200	20	"	B/C	G	Rocky
54	212·5	20	"	"	"	" Side slope
55	DUPLICATE OF SAMPLE					327448
56	225	30	R-Bn	"	M	Side slope over o/c
57	DUPLICATE OF SAMPLE					327456
58	237·5	25	R-Bn	B/C	M	Side slope - mostly clay
59	250	30	Bn	C	M	Very Rocky
60	262·5	30	Pl-Bn	C	M	" "
61	275	25	Bn	B/C	"	Rocky
62	287·5	25	Pl-Bn	C	G	Clayey over o/c Near crest
63	300	25	R-Bn	B	"	Crest Pure clay no rock
64	312·5	25	"	"	M	Clayey - Minor scree
		END	OF TRAVERSE			

ABBreviations: T = Transported S = Skeletal
B & C = Soil Horizons
F = Flat G = Gentle slope
M = Moderate slope
Bn = Brown, R-Bn = Red Brown, Pl-Bn = Pale Brown

DATE: 23/11/81 Resampling

MT DOUGLAS SOIL
Arrays 82

ANALABS

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	15.12.81	384	1 OF

TUBE No.	SAMPLE No.	Mn	Co	Cu	Zn	Ag	Pb		
1	327414 -20+40	600	30	25	15	x	85		
2	327414 -40+80	200	20	15	10	x	50		
3	327415 -20+40	525	20	20	10	x	75		
4	327415 -40+80	215	15	15	15	x	60		
5	327416 -20+40	560	25	20	20	x	115		
6	327416 -40+80	200	15	10	10	x	70		
7	327417 -20+40	430	20	25	25	x	110		
8	327417 -40+80	230	15	15	15	x	80		
9	327418 -20+40	680	30	25	25	x	135		
10	327418 -40+80	160	10	10	15	x	60		
11	327419 -20+40	1300	25	25	20	x	90		
12	327419 -40+80	610	20	20	15	x	55		
13	327420 -20+40	300	20	20	15	x	65		
14	327420 -40+80	155	10	15	5	x	40		
15	327421 -20+40	330	20	20	10	x	65		
16	327421 -40+80	100	10	10	10	x	30		
17	327422 -20+40	220	25	15	15	x	75		
18	327422 -40+80	40	10	10	5	x	30		
19	327423 -20+40	40	10	10	10	x	75		
20	327423 -40+80	40	5	5	5	x	15		
21	327424 -20+40	175	15	20	20	x	55		
22	327424 -40+80	100	15	20	10	x	35		
23	327425 -20+40	320	20	45	45	x	110		
24	327425 -40+80	90	10	20	10	x	35		
25	327426 -20+40	90	20	35	25	x	140		

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	15.12.81	384	2 OF

TUBE No.	SAMPLE No.	Mn	Co	Cu	Zn	Ag	Pb		
1	327426 -40+80	30	10	15	10	×	55		
2	327427 -20+40	275	25	35	35	×	320		
3	327427 -40+80	145	10	15	10	×	150		
4	327428 -20+40	110	20	50	30	×	280		
5	327428 -40+80	30	5	20	10	×	125		
6	327429 -20+40	345	30	55	75	×	165		
7	327429 -40+80	130	10	20	25	×	65		
8	327430 -20+40	185	15	20	15	×	65		
9	327430 -40+80	65	10	10	5	×	15		
10	327431 -20+40	220	10	15	10	×	40		
11	327431 -40+80	60	10	10	5	×	10		
12	327432 -20+40	70	5	15	5	×	15		
13	327432 -40+80	20	5	5	5	×	15		
14	327433 -20+40	100	10	15	15	×	15		
15	327433 -40+80	30	10	10	5	×	15		
16	327434 -20+40	290	35	60	85	×	180		
17	327434 -40+80	105	10	20	30	×	55		
18	327435 -20+40	110	15	20	10	×	25		
19	327435 -40+80	25	10	10	5	×	5		
20	327436 -20+40	50	10	10	10	×	15		
21	327436 -40+80	15	10	10	5	×	10		
22	327437 -20+40	1200	40	40	25	×	55		
23	327437 -40+80	1050	35	35	15	×	55		
24	327438 -20+40	1350	35	30	20	×	60		
25	327438 -40+80	1200	30	30	20	×	45		

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	15.12.81	384	3 OF

TUBE No.	SAMPLE No.	Mn	Co	Cu	Zn	Ag	Pb		
1	327439 -20+40	1650	35	35	25	×	70		
2	327439 -40+80	1450	40	40	20	×	50		
3	327440 -20+40	1800	50	45	40	×	85		
4	327440 -40+80	1500	45	45	25	×	50		
5	327441 -20+40	2400	55	45	55	×	160		
6	327441 -40+80	1800	45	45	30	×	80		
7	327442 -20+40	2950	55	50	60	×	190		
8	327442 -40+80	2500	45	50	40	1.0	125		
9	327443 -20+40	3350	60	50	60	×	270		
10	327443 -40+80	2900	45	55	40	×	200		
11	327444 -20+40	3700	65	65	95	×	570		
12	327444 -40+80	2350	45	65	60	×	310		
13	327445 -20+40	4300	75	80	110	×	900		
14	327445 -40+80	2800	60	80	70	×	450		
15	327446 -20+40	6300	85	95	120	×	1350		
16	327446 -40+80	3250	60	90	80	×	600		
17	327447 -20+40	1.8%	90	95	145	×	1900		
18	327447 -40+80	5050	55	80	100	×	715		
19	327448 -20+40	1.8%	95	80	165	×	1600		
20	327448 -40+80	6700	60	65	105	×	675		
21	327449 -20+40	1.0%	85	70	90	×	550		
22	327449 -40+80	7200	65	65	70	×	340		
23	327450 -20+40	6900	90	85	75	×	355		
24	327450 -40+80	4800	60	70	50	×	185		
25	327451 -20+40	6050	80	60	60	×	250		

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	15.12.81	384	4 OF

TUBE No.	SAMPLE No.	Mn	Co	Cu	Zn	Ag	Pb		
1	327451 -40+80	4400	55	55	45	×	180		
2	327452 -20+40	3100	55	45	50	×	440		
3	327452 -40+80	2400	45	35	40	×	305		
4	327453 -20+40	3850	65	35	55	×	340		
5	327453 -40+80	2600	45	30	30	×	180		
6	327454 -20+40	4150	65	40	35	×	125		
7	327454 -40+80	3600	60	40	30	×	85		
8	327455 -20+40	1.9%	100	80	160	×	1600		
9	327455 -40+80	7000	60	65	105	×	670		
10	327456 -20+40	3750	70	60	70	×	210		
11	327456 -40+80	3200	65	60	60	×	160		
12	327457 -20+40	4100	75	55	70	×	200		
13	327457 -40+80	3600	70	60	60	×	160		
14	327458 -20+40	5300	90	85	180	×	440		
15	327458 -40+80	4000	80	85	125	×	285		
16	327459 -20+40	1900	65	115	150	×	240		
17	327459 -40+80	1700	45	75	75	×	180		
18	327460 -20+40	670	30	75	55	×	140		
19	327460 -40+80	340	15	45	25	×	80		
20	327461 -20+40	1700	45	70	45	×	100		
21	327461 -40+80	1400	30	45	25	×			
22	327462 -20+40	1150	30	75	45	×	70		
23	327462 -40+80	1750	25	60	30	×	45		
24	327463 -20+40	800	30	75	70	×	150		
25	327463 -40+80	670	25	55	40	×	100		

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	15.12.81	384	5 OF

TUBE No.	SAMPLE No.	Mn	Co	Cu	Zn	Ag	Pb
1	327464 -20+40	2500	45	70	100	×	320
2	327464 -40+80	2100	35	60	60	×	235
3	327414 -80	125	10	20	20	×	45
4	327415	130	10	20	10	×	20
5	327416	160	10	15	20	×	35
6	327417	170	15	15	15	×	40
7	327418	195	10	20	15	×	35
8	327419	350	15	20	15	×	[illegible]
9	327420 -80	200	10	20	15	×	30
10	327421	200	10	15	15	×	35
11	327422	95	10	15	10	×	25
12	327423	75	10	10	5	×	15
13	327424	195	10	20	15	×	50
14	327425	135	10	25	15	×	55
15	327426	50	10	25	10	×	110
16	327427	190	10	20	10	×	215
17	327428	50	5	40	10	×	225
18	327429	130	10	30	25	×	80
19	327430 -80	165	10	20	10	×	55
20	327431	200	10	10	10	×	35
21	327432	50	10	10	5	×	15
22	327433	60	10	10	5	×	15
23	327434	110	10	30	20	×	70
24	327435	40	10	15	5	×	15
25	327436 -80	30	10	10	10	×	5

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	15.12.81	384	6 OF

TUBE No.	SAMPLE No.	Mn	Co	Cu	Zn	Ag	Pb
1	327437 -80	1050	40	50	20	×	45
2	327438	1200	45	45	20	×	45
3	327439	1500	45	55	20	×	75
4	327440	1550	65	70	35	×	70
5	327441	1650	55	65	30	×	95
6	327442	2200	55	70	30	×	150
7	327443	2500	50	75	35	×	230
8	327444	1800	40	70	40	×	260
9	327445	2400	50	95	55	×	415
10	327446	2650	50	105	70	×	500
11	327447	4300	45	90	75	×	575
12	327448	7200	60	85	100	×	570
13	327449	7600	65	90	70	×	340
14	327450	4650	55	85	45	×	180
15	327451	4050	60	75	45	×	180
16	327452	2000	40	45	35	×	260
17	327453	2000	45	35	30	×	145
18	327454	3400	60	50	30	×	90
19	327455	6700	55	85	105	×	580
20	327456	2800	50	70	45	×	150
21	327457	3200	60	70	50	×	155
22	327458	3400	65	95	100	×	250
23	327459	900	30	90	45	×	145
24	327460	240	15	55	25	×	85
25	327461 -80	405	15	50	20	×	50

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	15.12.81	384	7 OF

TUBE No.	SAMPLE No.		Mn	Co	Cu	Zn	Ag	Pb		
1	327462 -80		1050	25	60	20	x	45		
2	327463		720	30	70	35	x	105		
3	327464 -80		2250	40	75	50	x	235		
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION		5	5	5	5	0.5	5		
24	DIGESTION		A1	A1	A1	A1	A1	A1		
25	METHOD		A1/1	A1/1	A1/1	A1/1	A1/1	A1/1		

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

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MT DOUGLAS

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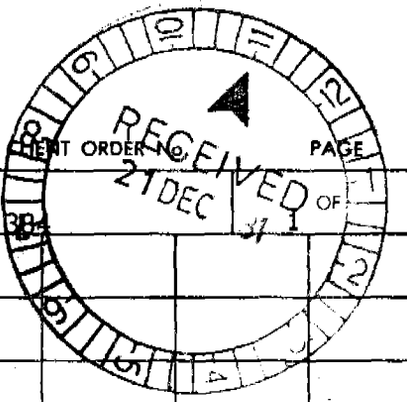
ANALYTICAL DATA



SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	17.12.81		1 OF 1

TUBE No.	SAMPLE No.	+20	-20+40	-40+80						
1	327414	251	15	48						
2	327415	516	47	89						
3	327416	647	57	92						
4	327417	456	51	67						
5	327418	660	62	135						
6	327419	615	66	108						
7	327420	640	60	111						
8	327421	590	32	128						
9	327422	692	27	109						
10	327423	861	46	157						
11	327424	540	19	60						
12	327425	620	13	57						
13	327426	573	17	58						
14	327427	476	13	54						
15	327428	660	20	90						
16	327429	665	45	83						
17	327430	860	21	119						
18	327431	1223	18	129						
19	327432	1820	30	210						
20	327433	1290	4	50						
21	327434	586	26	25						
22	327435	1180	5	52						
23	327436	1339	15	92						
24	327437	562	55	105						
25	327438	635	34	127						

Results in ppm unless otherwise specified
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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	37.0.01.22098	17.12.81	384	2 OF

TUBE No.	SAMPLE No.	+20	-20+40	-40+80						
1	327439	687	50	146						
2	327440	731	63	184						
3	327441	643	66	162						
4	327442	721	128	178						
5	327443	918	175	204						
6	327444	887	93	185						
7	327445	870	72	195						
8	327446	805	68	195						
9	327447	714	49	147						
10	327448	652	38	87						
11	327449	622	47	92						
12	327450	639	32	85						
13	327451	678	55	102						
14	327452	670	56	123						
15	327453	716	69	133						
16	327454	778	89	136						
17	327455	674	38	93						
18	327456	662	107	165						
19	327457	622	98	182						
20	327458	599	97	180						
21	327459	563	75	104						
22	327460	643	30	93						
23	327461	580	43	75						
24										
25										

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

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Recalculated Analyses

Mt Douglas

Sample	Pb Σ -20+80	Pb Σ -20	
27 414	58·3	48·3	
5	65·2	31·9	
6	87·2	47·0	
7	93·0	53·7	
8	83·6	49·5	
9	68·3	40·8	
420	48·8	35·0	
1	37·0	35·5	
2	38·9	27·7	
3	28·6	18·2	
4	39·8	48·5	
5	48·9	54·3	
6	74·3	105·3	
7	183·0	210·5	
8	153·2	213·0	
9	100·2	83·9	
430	22·5	49·7	
1	13·7	32·4	Duplicates
2	15·0	15·0	
3	15·0	15·0	
4	118·7	74·2	
5	6·8	14·6	
6	10·7	5·5	
7	55·0	47·8	
8	48·2	45·8	
9	55·1	55·0	
440	58·9	66·2	
1	103·2	97·9	
2	152·2	150·9	
3	232·3	230·9	
4	397·0	302·9	
5	671·3	493·7	
6	793·9	596·0	
7	1011·3	694·8	
8	956·2	644·0	Duplicate of 327455
9	411·0	355·9	
450	231·5	189·4	

	Pb			
	Σ -20+80	Σ -20		
27451	204.5	185.7		
2	347.2	293.3		
3	234.7	170.3		
4	100.8	93.1		
5	939.8	649.9	Duplicate of 327448	
6	179.7	162.2	Duplicates	
7	174.0	163.6		
8	339.3	291.3		
9	205.1	164.1		
460	94.6	86.8		
7461	87.3	57.6		
2	54.7	47.8		
3	112.0	107.0		
7464	257.1	241.8		

Recalculation Equations

$$Assay_{-20+80} = \left(Assay_{2040} * Wt_{2040} + Assay_{4080} * Wt_{4080}\right) / Wt_{2080}$$

$$Assay\ bulk\ -20 = \left(Assay_{2040} * Wt_{2040} + Assay_{4080} * Wt_{4080} + Assay_{-80} * Wt_{-80}\right) / Total\ Wt$$

$$\equiv \left(Assay_{2080} * Wt_{2080} + Assay_{-80} * Wt_{-80}\right) / Total\ Wt$$

APPENDIX 2

PETROLOGICAL DESCRIPTION

MINTEK SERVICES
27 Burma Road, Lesmurdie W.A. 6076 Telephone 291 7491

PETROGRAPHIC DESCRIPTION

Sample No. 317092 A INTERNATIONAL NICKEL Registered No IL 14626
Thin section

MEGASCOPIC CHARACTERISTICS

Field Name: Not given.
Nature of Sample: Small rock sample.
Minerals Visible: Very fine quartz and opaques.
Texture: Probably finely mosaic textured and granular. Banded.
Colour: Brown.
Grain Size: Very fine-grained.
Other Comments: This rock appears under a binocular microscope to be a laterite profile altered, pervasively silicified, banded pelitic sediment, or carbonate rock in which most relic textures may have been destroyed.

MICROSCOPIC CHARACTERISTICS

Constituents: (Percent visual estimate)

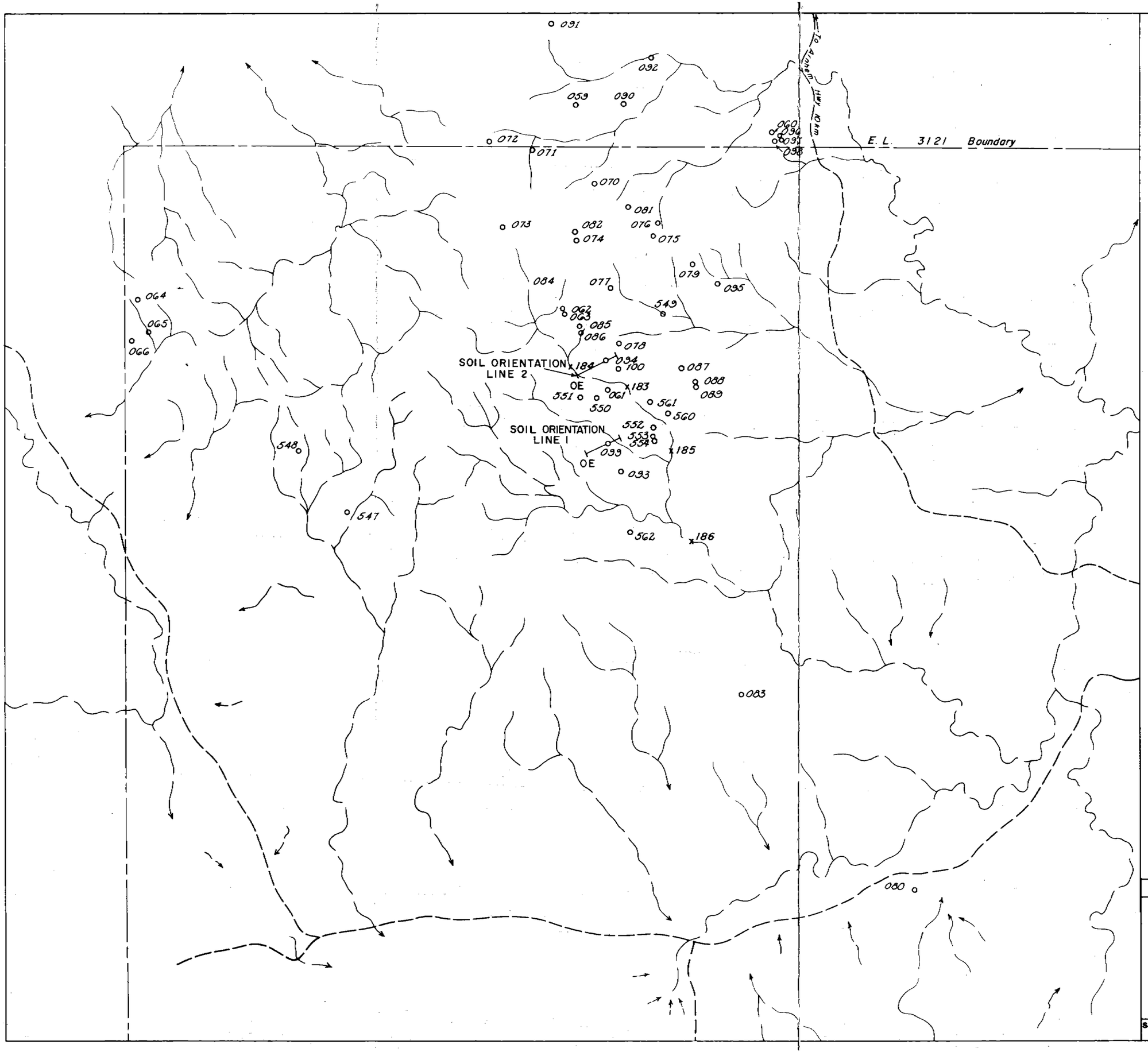
90% Quartz of secondary origin occurs as cryptocrystalline mosaic textured aggregates with granoblastic fabric dusted by opaques, probably mainly exotic Fe-oxides. A search for relic clastic textures proved inconclusive. What appear to be very fine indistinct rhombic pseudomorphs after a carbonate mineral can occasionally be seen.

10% Opaques occur as very fine granules and granular aggregates that exhibit some orientation. Exotic Fe-oxides (goethite-limonite) could be dominant. The interstitial opaque minerals cannot be identified in thin section. Relic sulphide textured aggregates of indigenous Fe-oxides are absent.

Texture: Very finely mosaic textured and banded.
Alteration: Ferruginization and silicification.
Petrogenesis: A ferruginized, banded siliceous (cherty) caprock, possibly ex-fine-grained carbonate rock.
Remarks: The few remaining, and at best indistinct relic textures visible in thin section suggest that the precursor was a fine-grained banded carbonate rock. It is also possible that the original rock was a banded pelitic sediment. The cherty quartz is of secondary origin.

ROCK NAME: FERRUGINIZED, BANDED SILICEOUS (CHERTY) CAPROCK, POSSIBLY EX-FINE-GRAINED CARBONATE ROCK.

CR82/201



o Rock chip sample site A317... series

x Stream sample location 312... series

INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY

E.L. 3121

MT. DOUGLAS

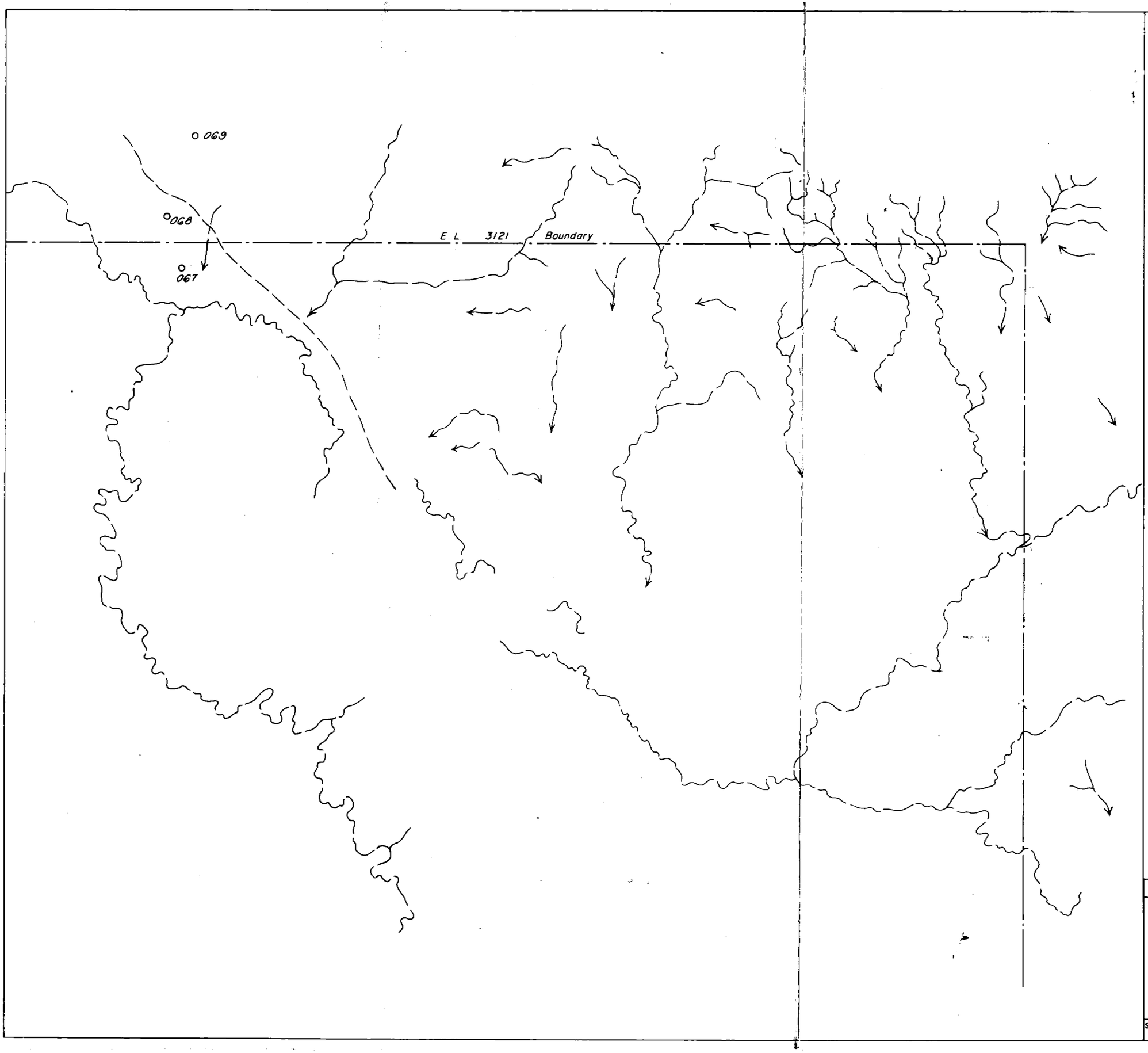
NORTH WESTERN AREA

'PROSPECT 2'

ROCK AND STREAM SAMPLE LOCATIONS

Scale	Date	Dwg No
1:25 000	Jan 1982	M249

CR82/201



N

o Rock chip sample site A317 . . . series

INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY

E.L. 3121

MT. DOUGLAS

NORTH EAST AREA

ROCK SAMPLE LOCATIONS

Scale	Date	Dwg No
1:25 000	Jan 1982	M 247 2

CR 82/201

E. L. 3121 Boundary

0559
0556
0555
0557
0558

E.L. 3121 Boundary

O Rock chip sample site A317 . . . series

INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY

E.L. 3121

MT. DOUGLAS

PROSPECT I AREA

ROCK SAMPLE LOCATIONS

Scale	Date	Dwg No
1 : 25000	Jan. 1982	M 245

CR82/201

Alu

Pso

55

80

E. L. 3121 Boundary

60

60

95

Pso

Alu

track

60

Pso

Alu

Alu

N

LEGEND

Alu	Alluvium
Pso	Mt Bonnie Formation
	Stream
	Trend line
	Geological contact
	Fault

250 0 500 1000 Metres

Compiled from aerial photography
scale approximate

INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY

E.L. 3121

MT. DOUGLAS

NORTH EAST AREA

GEOLOGY

Scale	Date	Dwg No
1:25 000	Jan. 1982	M 246 4

CR82/201

E.L. 3121 Boundary

Phk

Pso

Psk

Psg

Psg?

Pfb?

Alu

E.L. 3121 Boundary

LEGEND:

Alu	Alluvium
Phk	Kombolgie Formation
Pfb	Burrell Creek Formation
Pso	Mt Bonnie Formation
Psg	Gerowie Tuff
Psk	Koolpin Formation

Stream

Trend line

Geological contact

Inferred contact

Fault

250 0 500 1000 Metres

Compiled from aerial photography
scale approximate

INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY

E.L. 3121

MT. DOUGLAS

PROSPECT 1 AREA

GEOLOGY

Scale 1 : 25000 | Date Jan. 1982 | Dwg No M 244 5

CR82/201

E.L. 3121

Boundary

To Adelaide Hwy

Psg

Psk

Pso

Alu

Alu?

Alu (over Pfb?)

Alu (over Pso, Psg?)

track

80

60

85

52

50

65

55

LEGEND

Alu	Alluvium
Pfb	Burrell Creek Formation
Pso	Mt Bonnie Formation
Psg	Gerowie Tuff
Psk	Koolpin Formation

Stream

Trend line

Geological contact

Inferred contact

Fault

Strike and dip

Strike-dip not measured

250 0 500 1000 Metres

Compiled from aerial photography
scale approximate

INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY

E.L. 3121

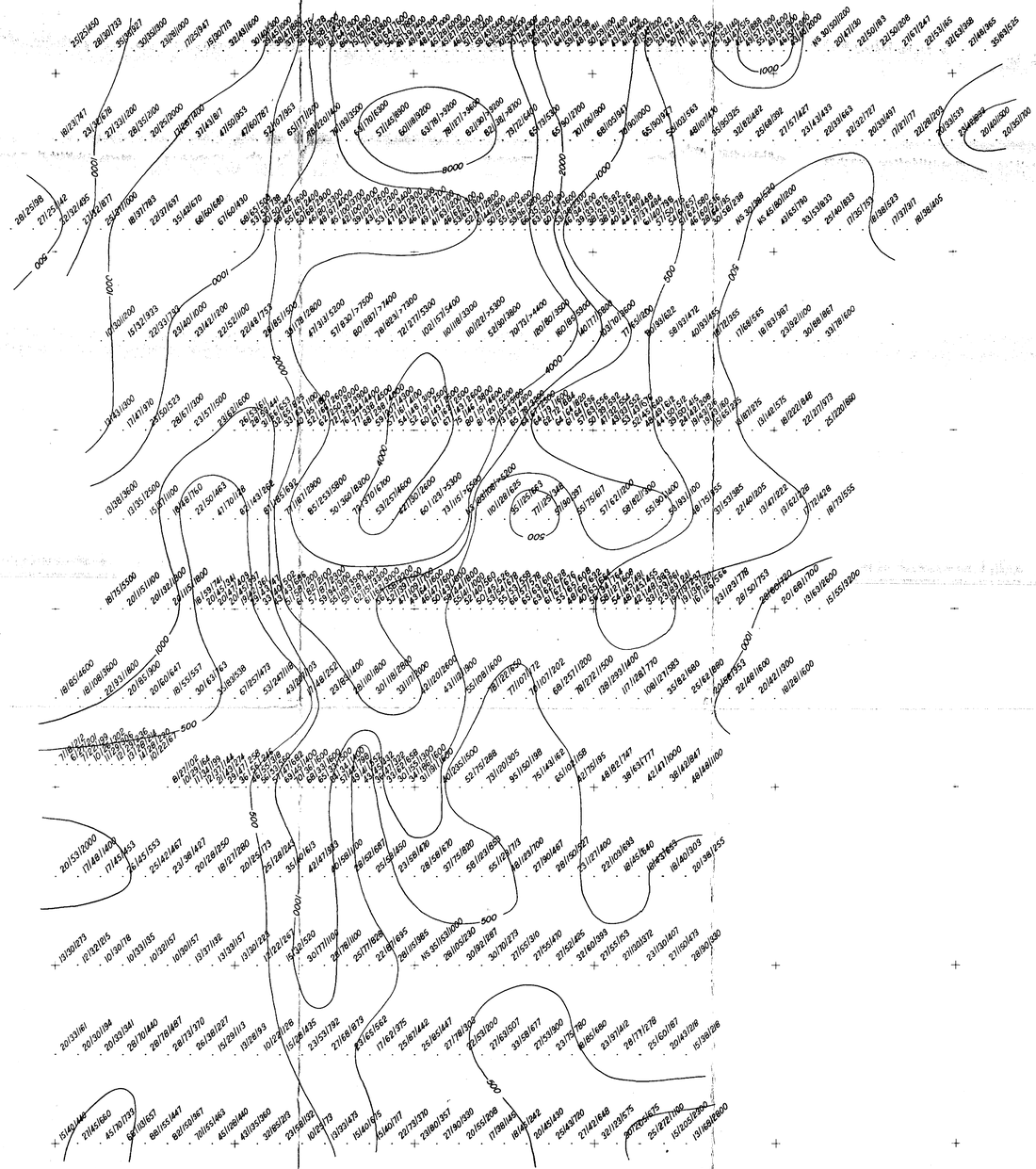
MT. DOUGLAS

NORTH WESTERN AREA

'PROSPECT 2'

GEOLOGY

Scale 1:25 000 | Date Jan 1982 | Dwg No M 248 6



Key to assay results Cu/Pb/Mn

Sampling and analyses carried out by Occidental Minerals

Contours - One dimensional smoothing interval 100 metres
Unweighted rolling mean method

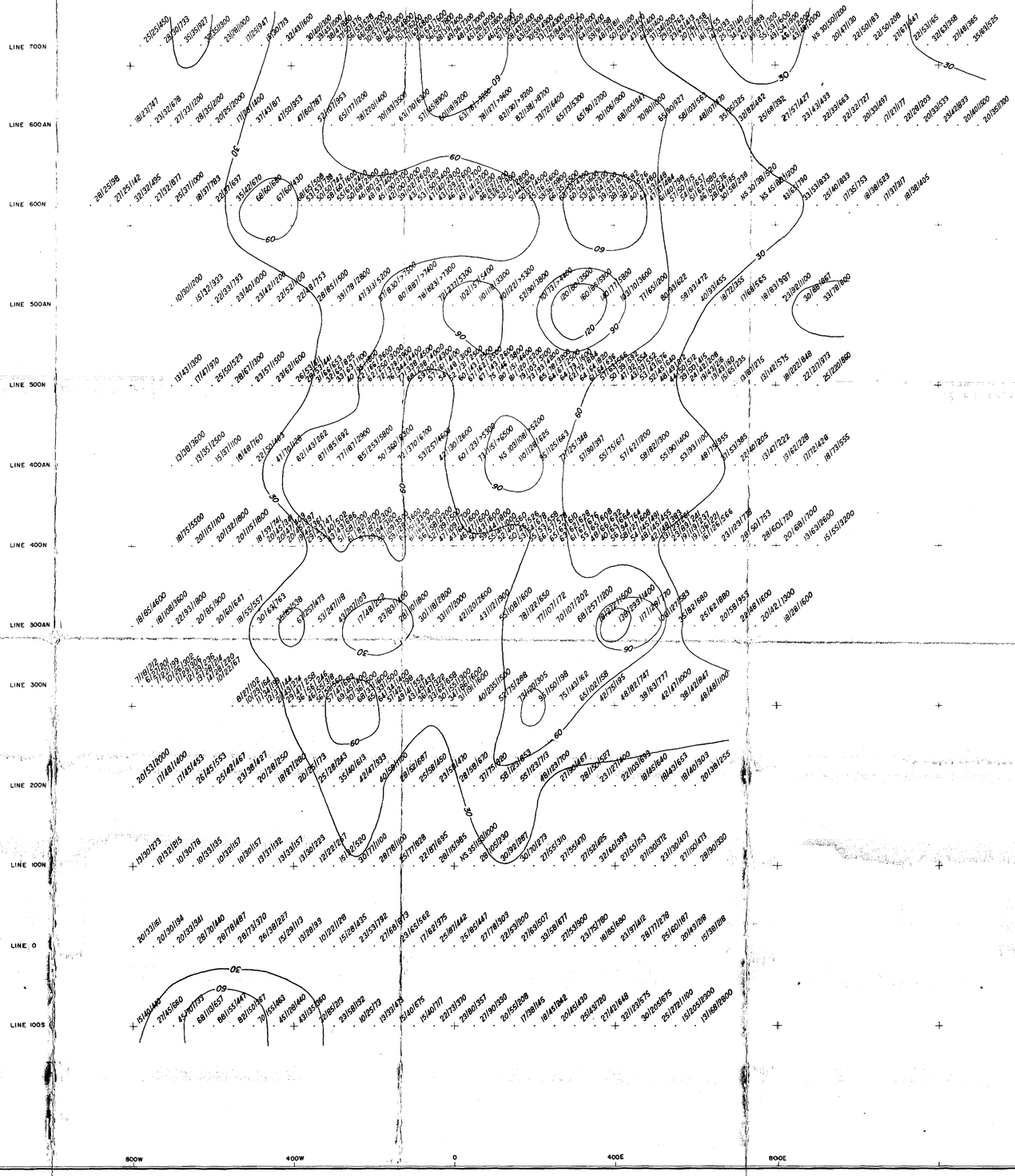
INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY
EL 3121
MT DOUGLAS

PROSPECT 2
SOIL GEOCHEM
SMOOTHED CONTOURS
Mn

Scale	Date	Dwg No.
1:5000	Jan 1982	M254 7

CR82/201



Key to assay results Cu/Pb/Mn

Sampling and analyses carried out by Occidental Minerals

Contours: One dimensional smoothing interval 100 metres
Unweighted rolling mean method

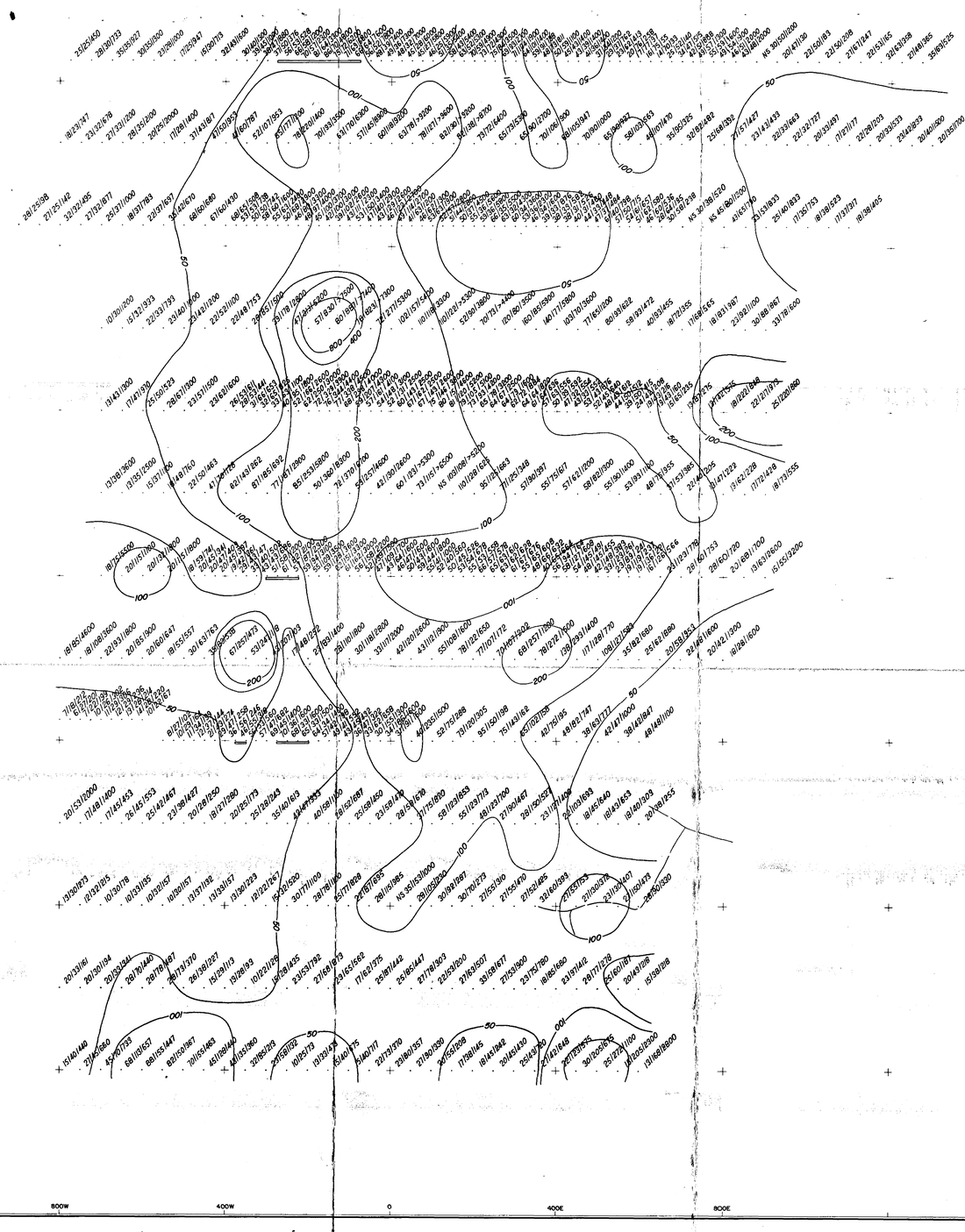
INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY
EL 3121
MT DOUGLAS

PROSPECT 2
SOIL GEOCHEM
SMOOTHED CONTOURS
Cu

Scale	Date	Dwg No
1:5 000	Jan 1982	M255 8

CR82/201



Key to assay results Cu/Pb/Zn

Sampling and analyses carried out by Occidental Minerals

Contours: One dimensional smoothing interval 100 metres
Unweighted rolling mean method

High Zn assays

Stream sediment anomaly source stream

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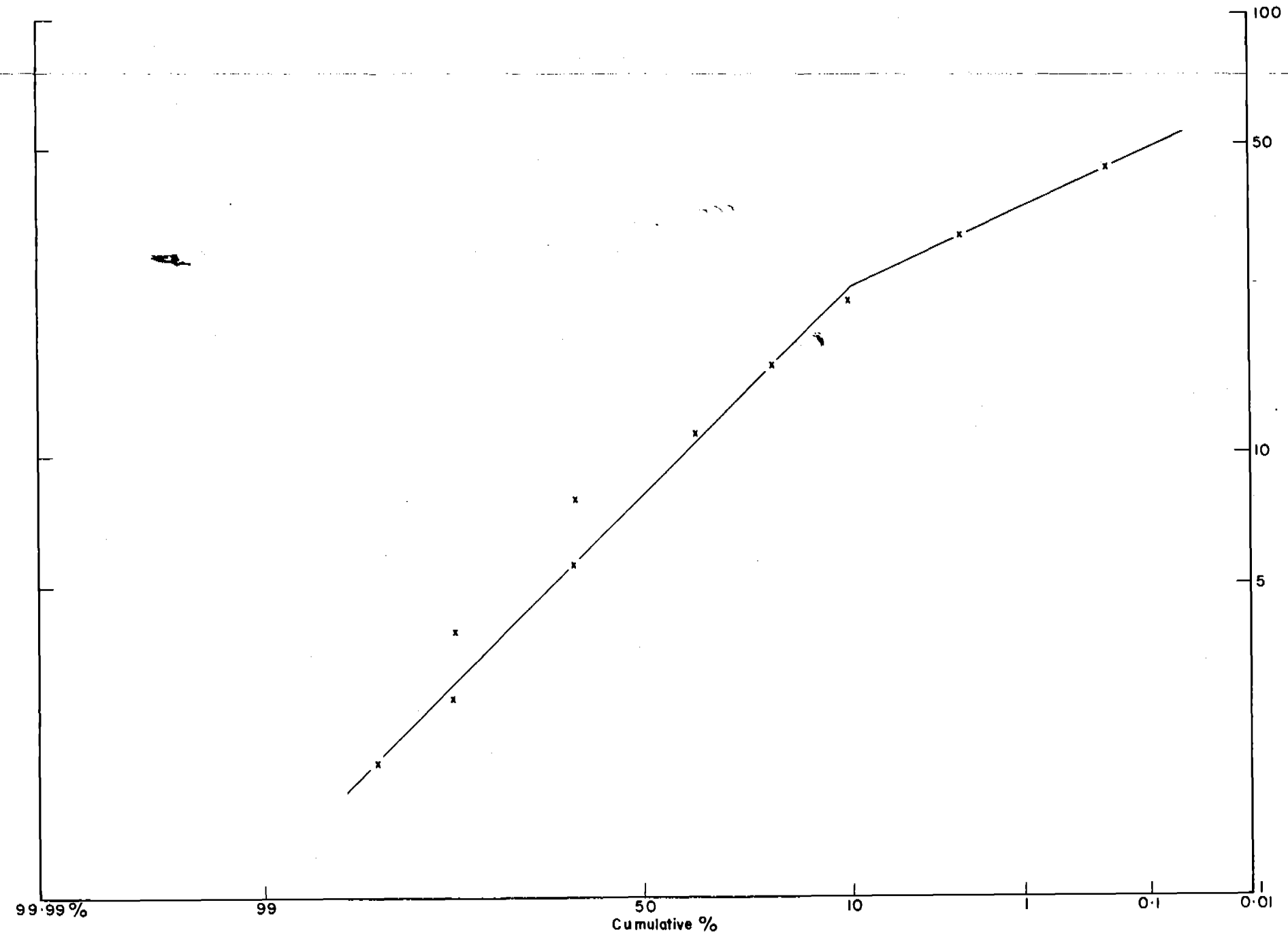
NORTHERN TERRITORY
EL 3121
MT DOUGLAS

PROSPECT 2
SOIL GEOCHEM
SMOOTHED CONTOURS
Pb

Scale	Date	Dwg No
1:5000	Jan 1982	M253 9

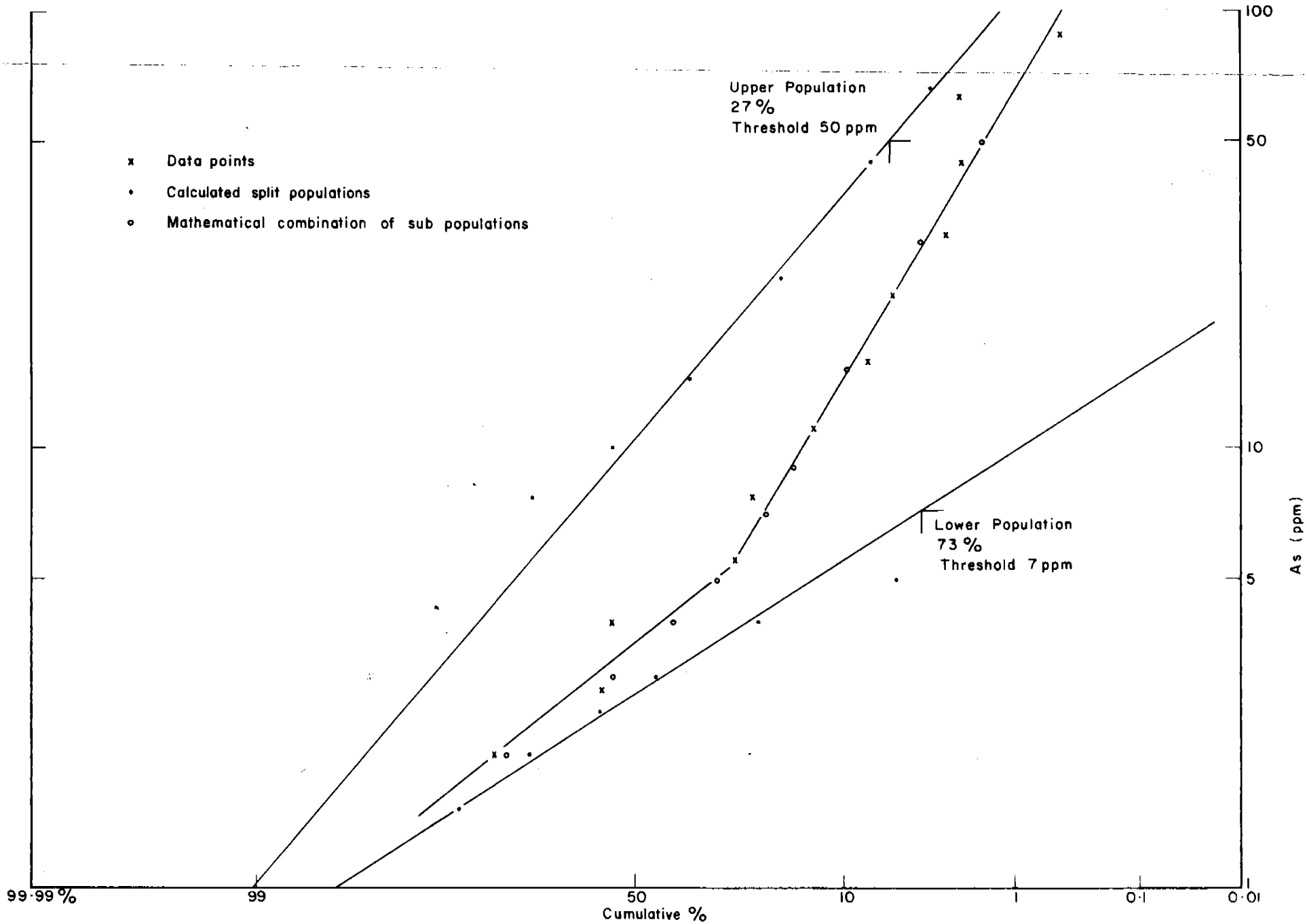
CR82/201

CR82/201



MT DOUGLAS EL 3121· Cu IN 298 STREAM SEDIMENTS · OCCIDENTAL DATA date: Jan 1982· dwg N°: M 273

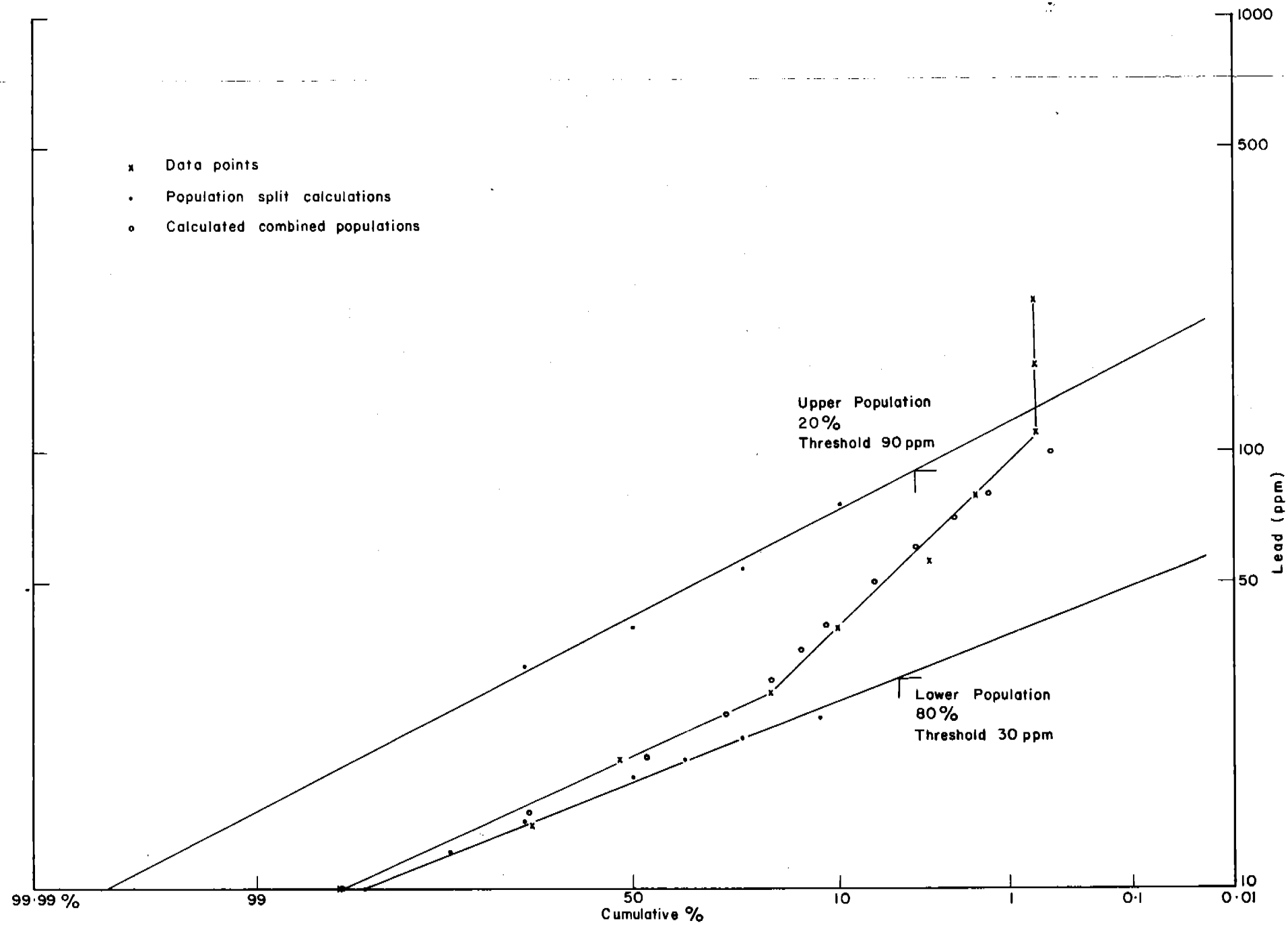
CR82/201



MT DOUGLAS EL 3121· As IN 205 STREAM SEDIMENTS· OCCIDENTAL DATA· date: Jan 1982· dwg N°: M 272

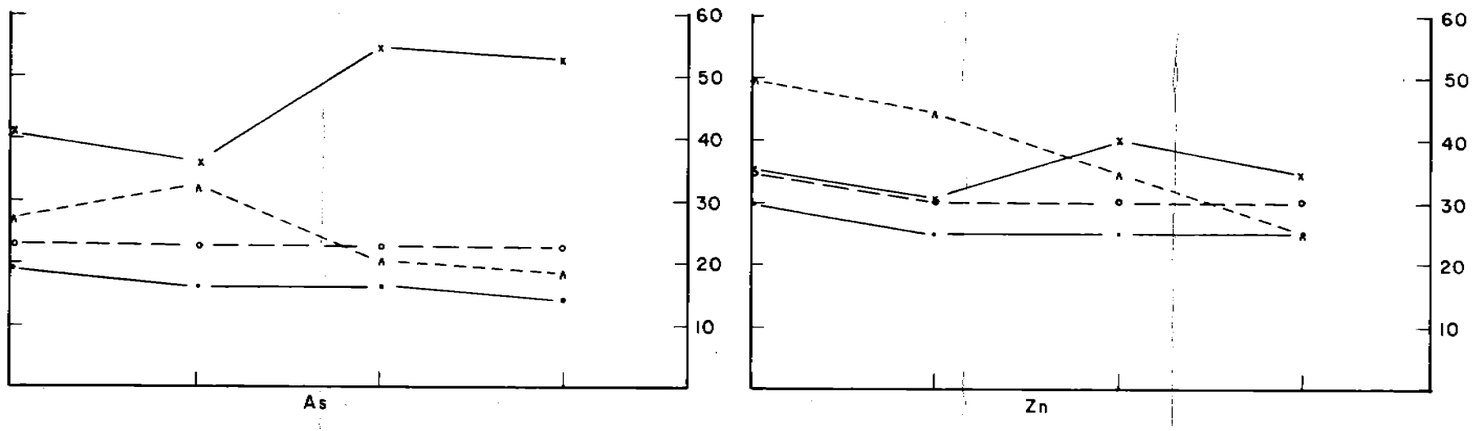
11

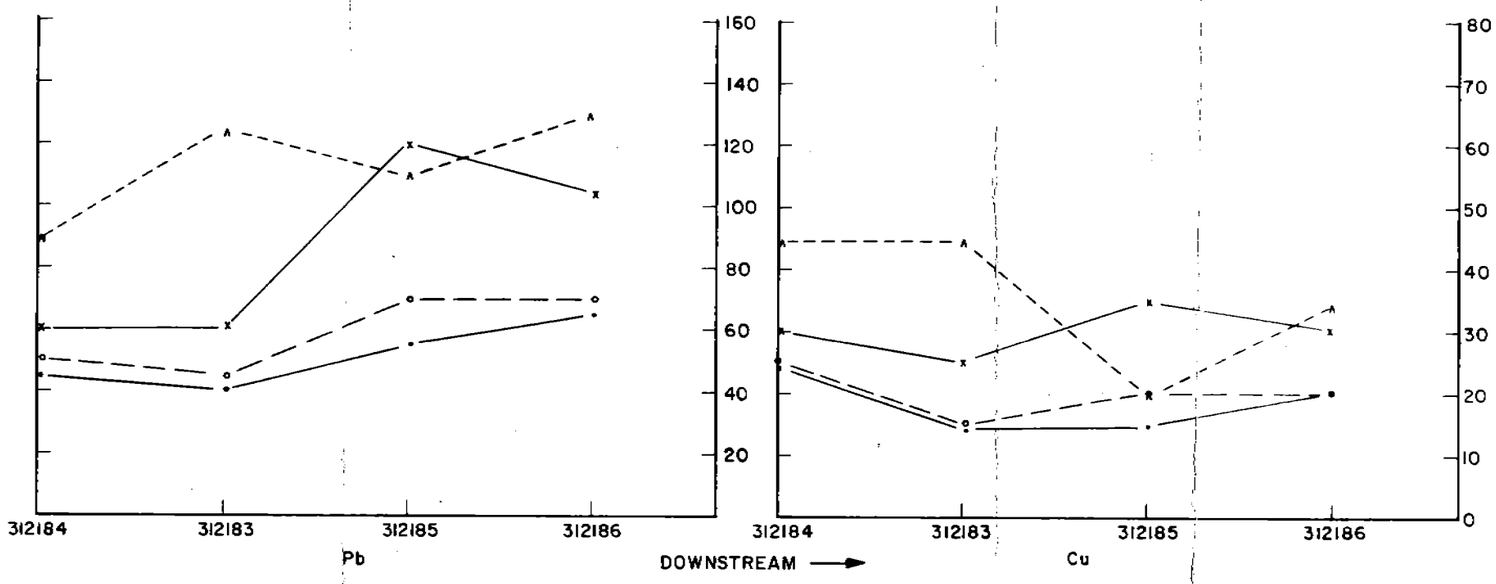
CR82/201



MT DOUGLAS EL 3121· LEAD IN 299 STREAM SAMPLES · OCCIDENTAL DATA · date: Jan 1982· dwg N°: M 271

CR82/201





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NORTHERN TERRITORY

EL 3121

MT DOUGLAS

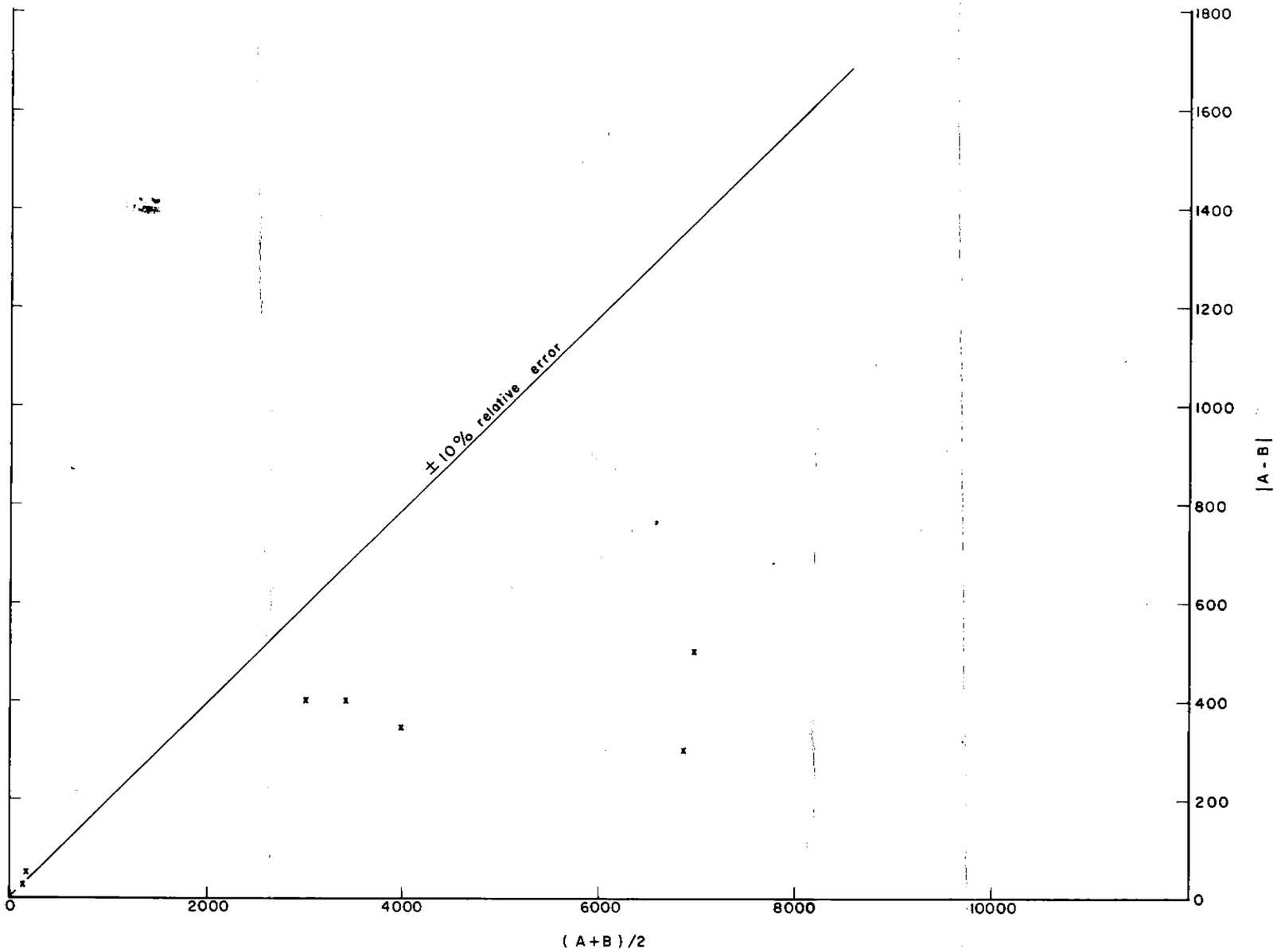
PROSPECT 2

STREAM SEDIMENT SAMPLES

PARTICLE SIZE AND ANOMALY TRAIN TEST

Scale	Date	Dwg No
	Jan 1982	M267 13

CR82/201



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NORTHERN TERRITORY

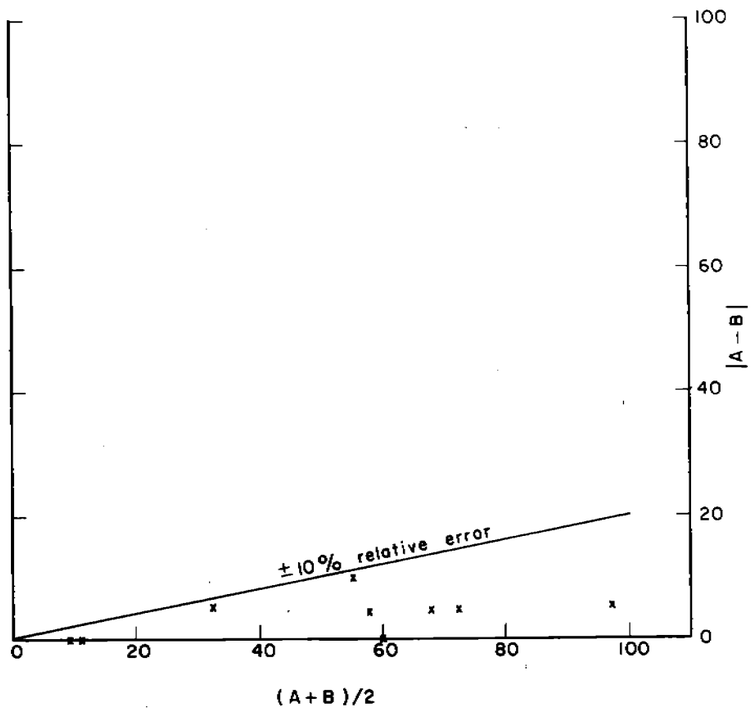
EL 3121
MT DOUGLAS

ORIENTATION SOIL SURVEY

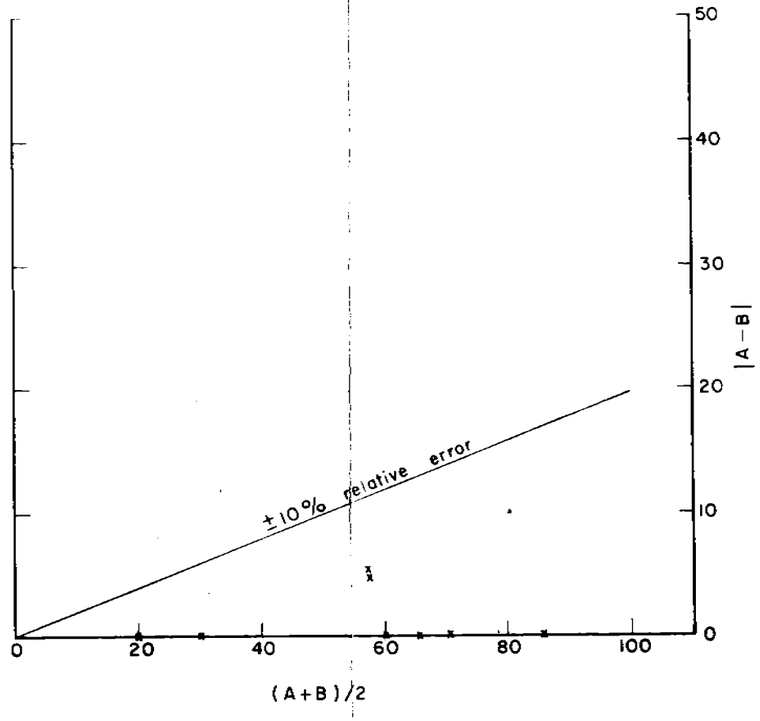
DUPLICATES COMPARISON Mn

Scale	Date	Dwg No
	Jan 1982	M266 14

CR 82/201



Cobalt



Copper

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NORTHERN TERRITORY

EL 3121

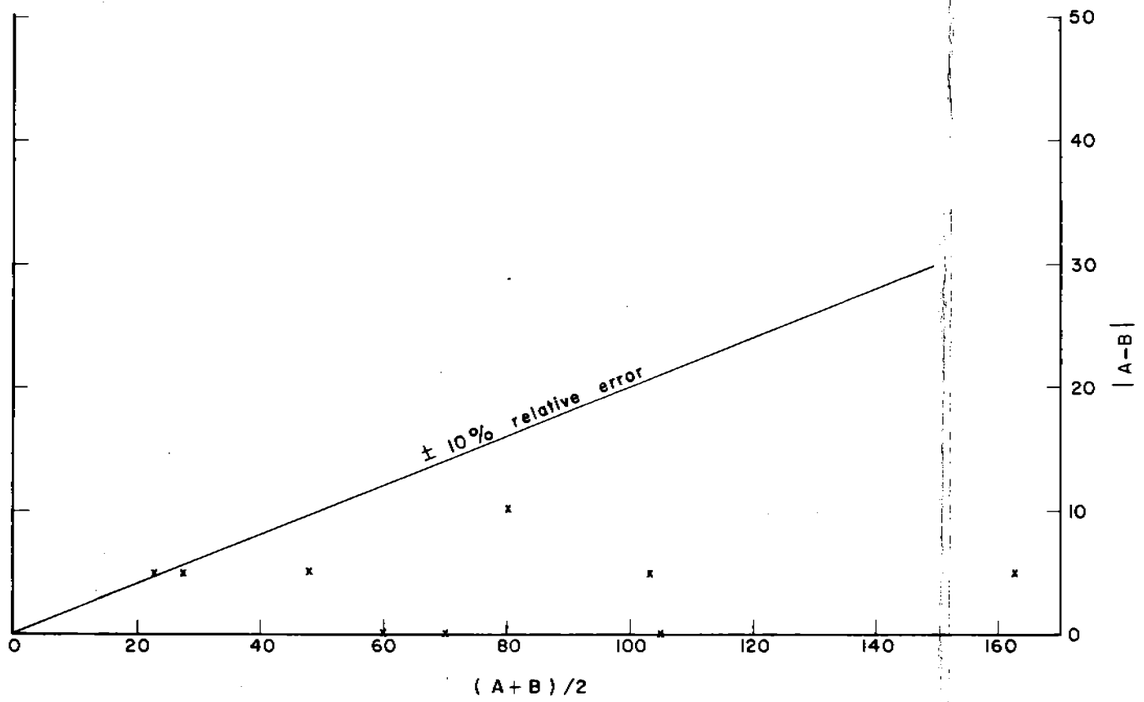
MT DOUGLAS

ORIENTATION SOIL SURVEY

DUPLICATES COMPARISON Co & Cu

Scale	Date	Dwg NO
	Jan 1982	M 270 15

CR82/201



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NORTHERN TERRITORY

EL 3121

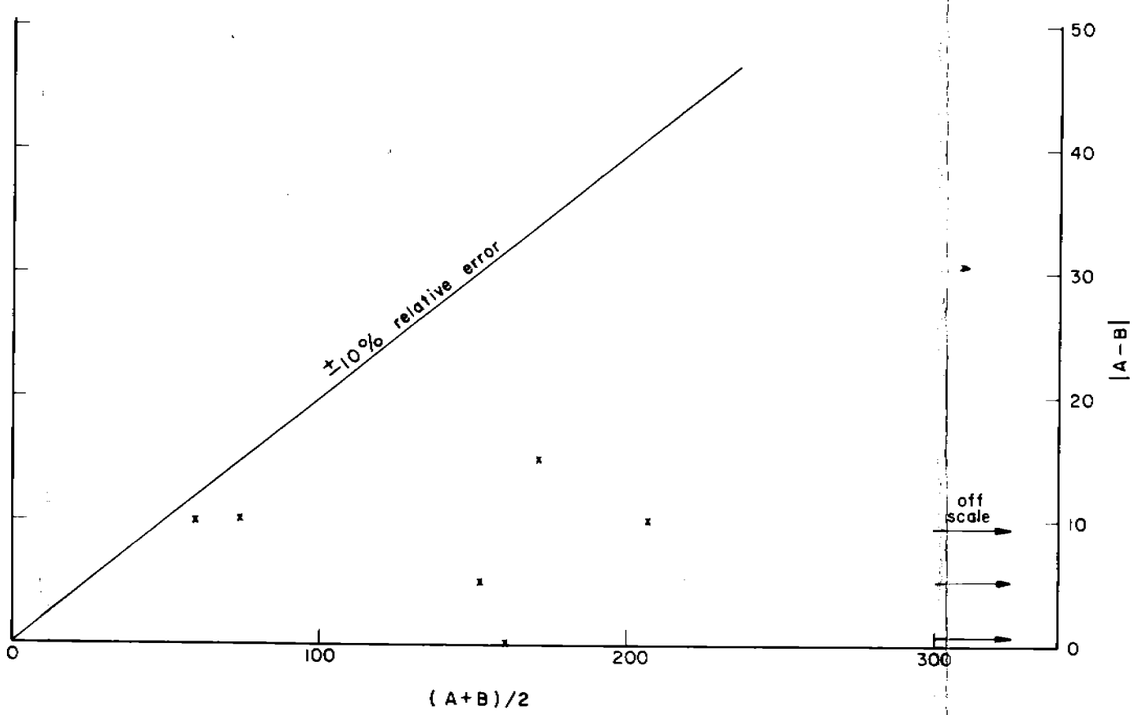
MT DOUGLAS

ORIENTATION SOIL SURVEY

DUPLICATES COMPARISON Zn

Scale	Date	Dwg NO
	Jan 1982	M269 16

CR82/201



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NORTHERN TERRITORY

EL 3121

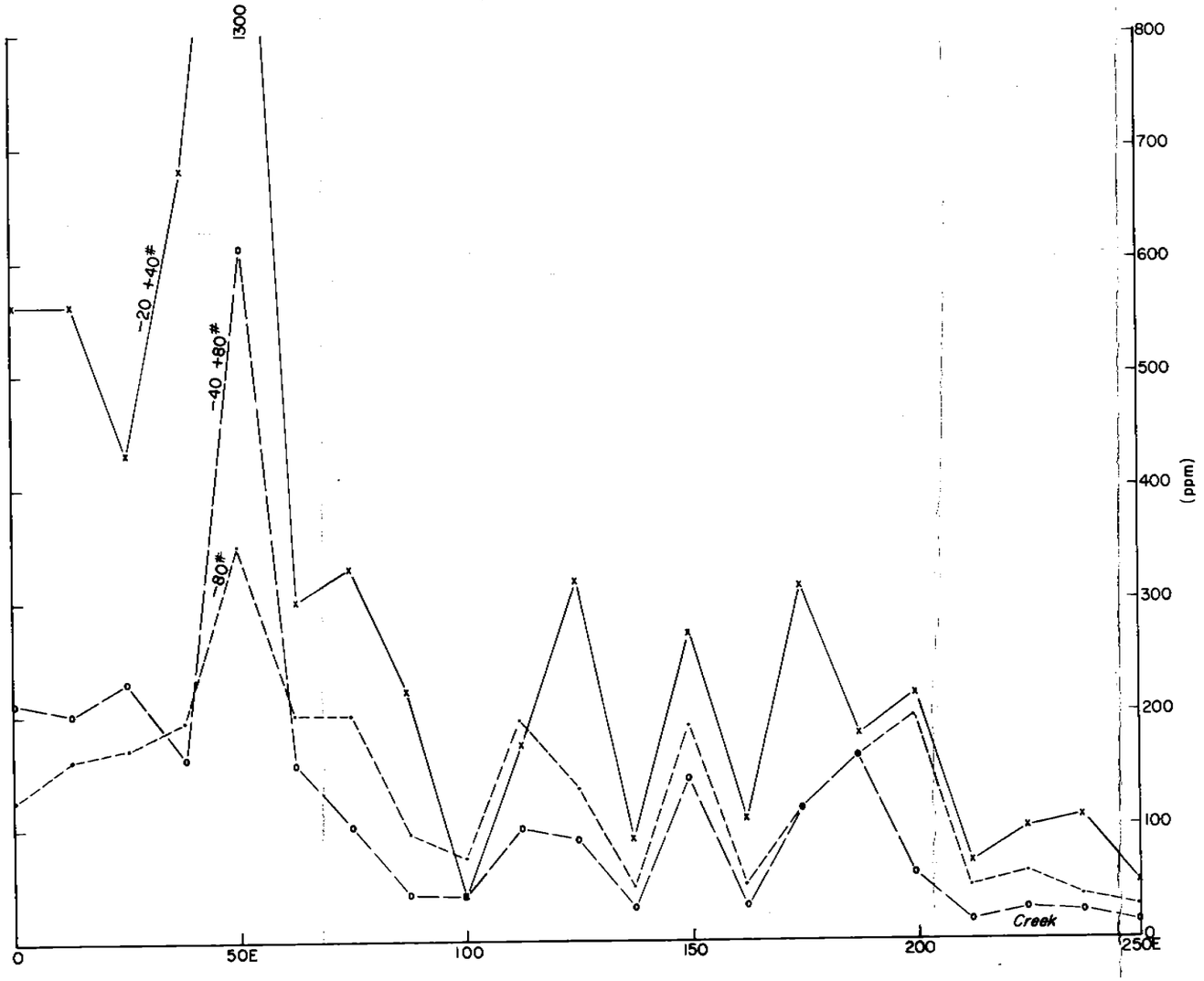
MT DOUGLAS

ORIENTATION SOIL SURVEY

DUPLICATES COMPARISON Pb

Scale	Date	Dwg No
	Jan 1982	M268 17

CR82/201



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NORTHERN TERRITORY

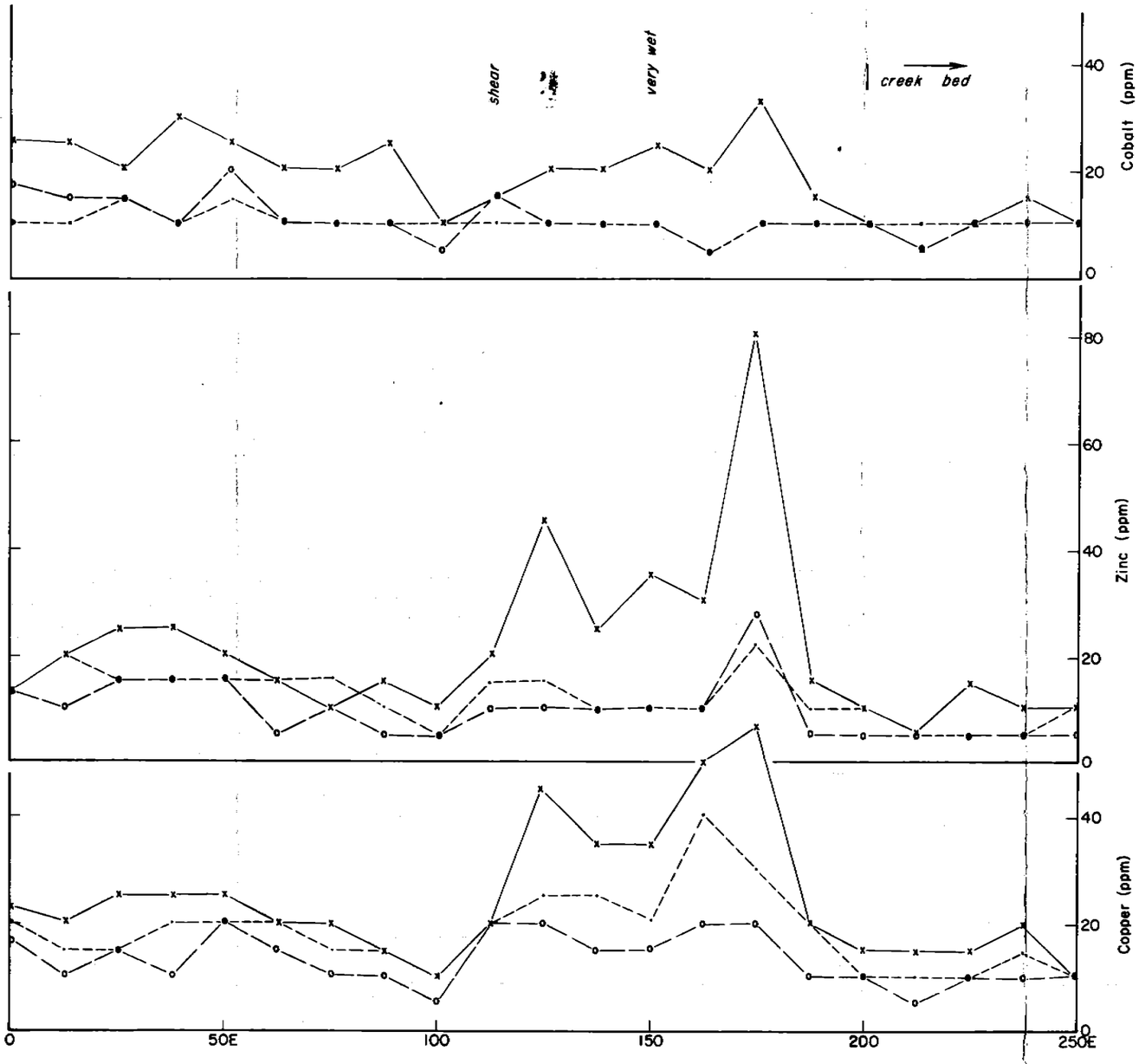
EL 3121
MT DOUGLAS

SOIL ORIENTATION LINE 1

Mn PROFILE

Scale	Date	Dwg No
1:1250	Jan 1982	M238 18

CR82/201



—x— −20 +40 mesh
—o— −40 +80 mesh
---·--- −80 mesh

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NORTHERN TERRITORY

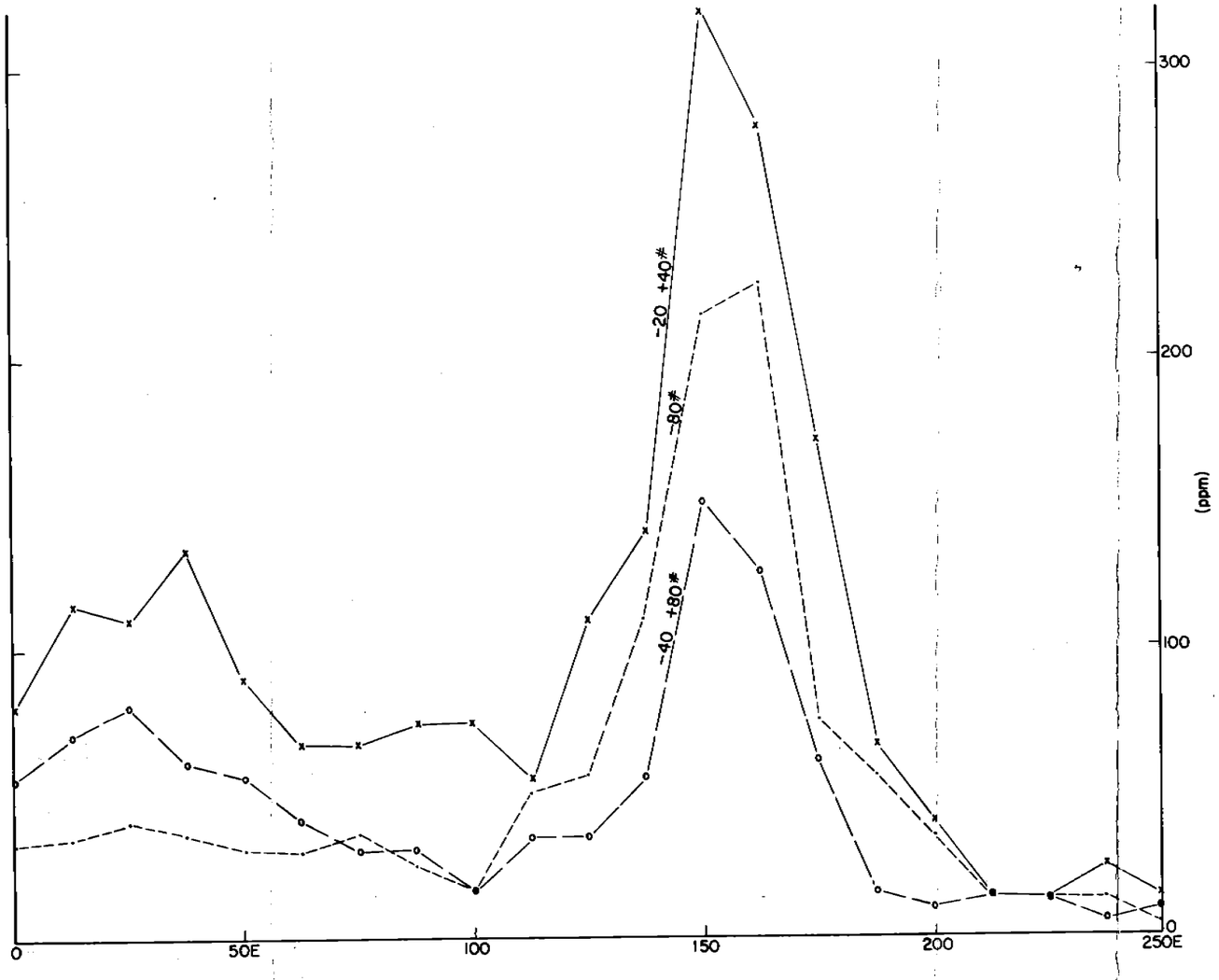
EL 3121
MT DOUGLAS

SOIL ORIENTATION LINE 1

PROFILES FOR Cu Zn Co

Scale	Date	Dwg No
1:1250	Jan 1982	M237 19

CR82/201



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NORTHERN TERRITORY

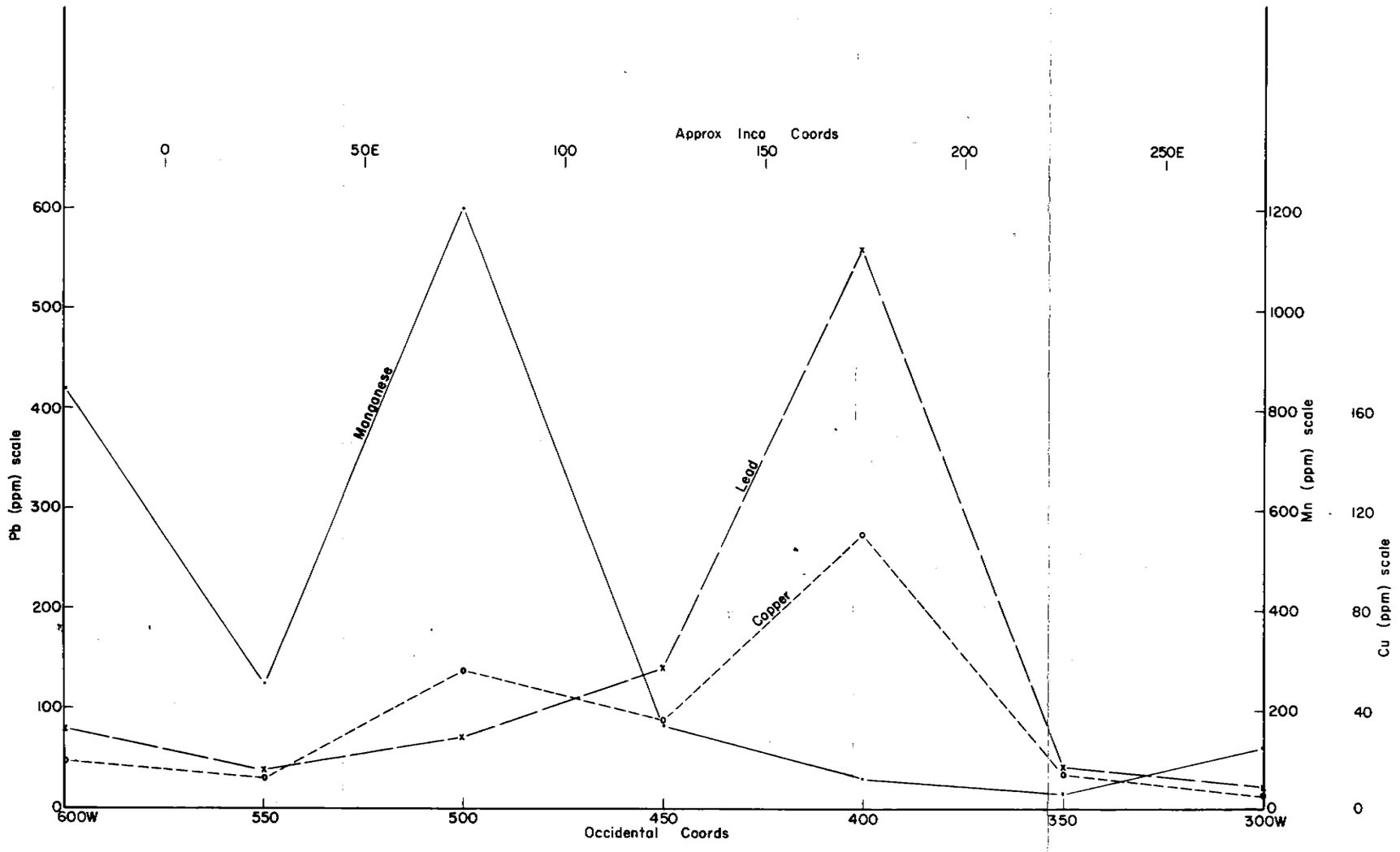
EL 3121
MT DOUGLAS

SOIL ORIENTATION LINE 1

Pb PROFILE

Scale	Date	Dwg No
1:1250	Jan 1982	M236 20

CR82/201



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NORTHERN TERRITORY

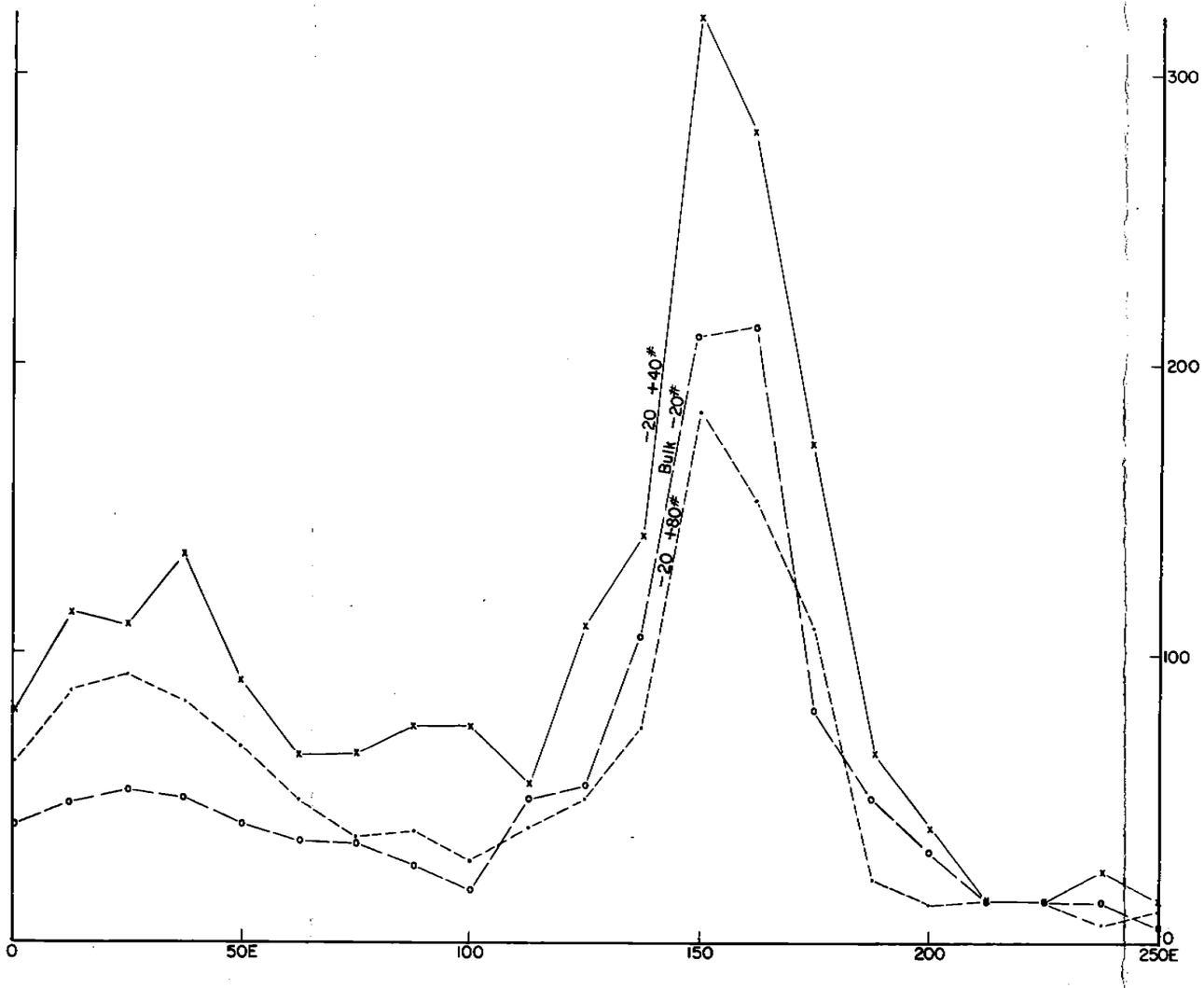
EL 3121

MT DOUGLAS

NEAR SOIL ORIENTATION LINE 1
OCCIDENTAL MINERALS ANALYSES
FOR LINE 300A NORTH

Scale	Date	Dwg No
1:1250	Jan 1982	M234 21

CR82/201



-20 +40# as analysed
-20 +80# } are recalculated values
bulk -20#

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NORTHERN TERRITORY

EL 3121

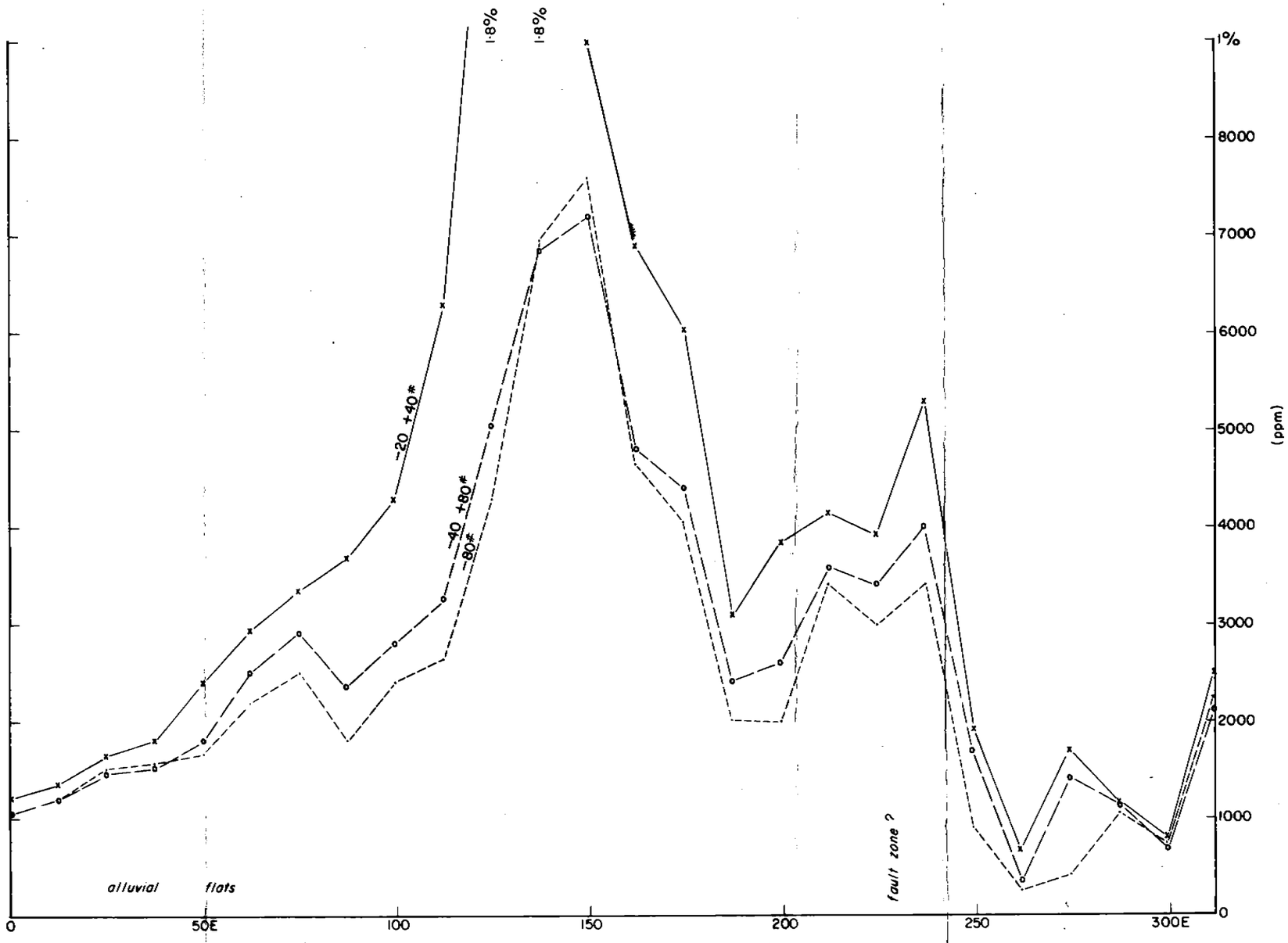
MT DOUGLAS

SOIL ORIENTATION LINE 1

SIZE FRACTION COMPARISON FOR Pb

Scale	Date	Dwg No
1:1250	Jan 1982	M235 22

CR82/201



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NORTHERN TERRITORY

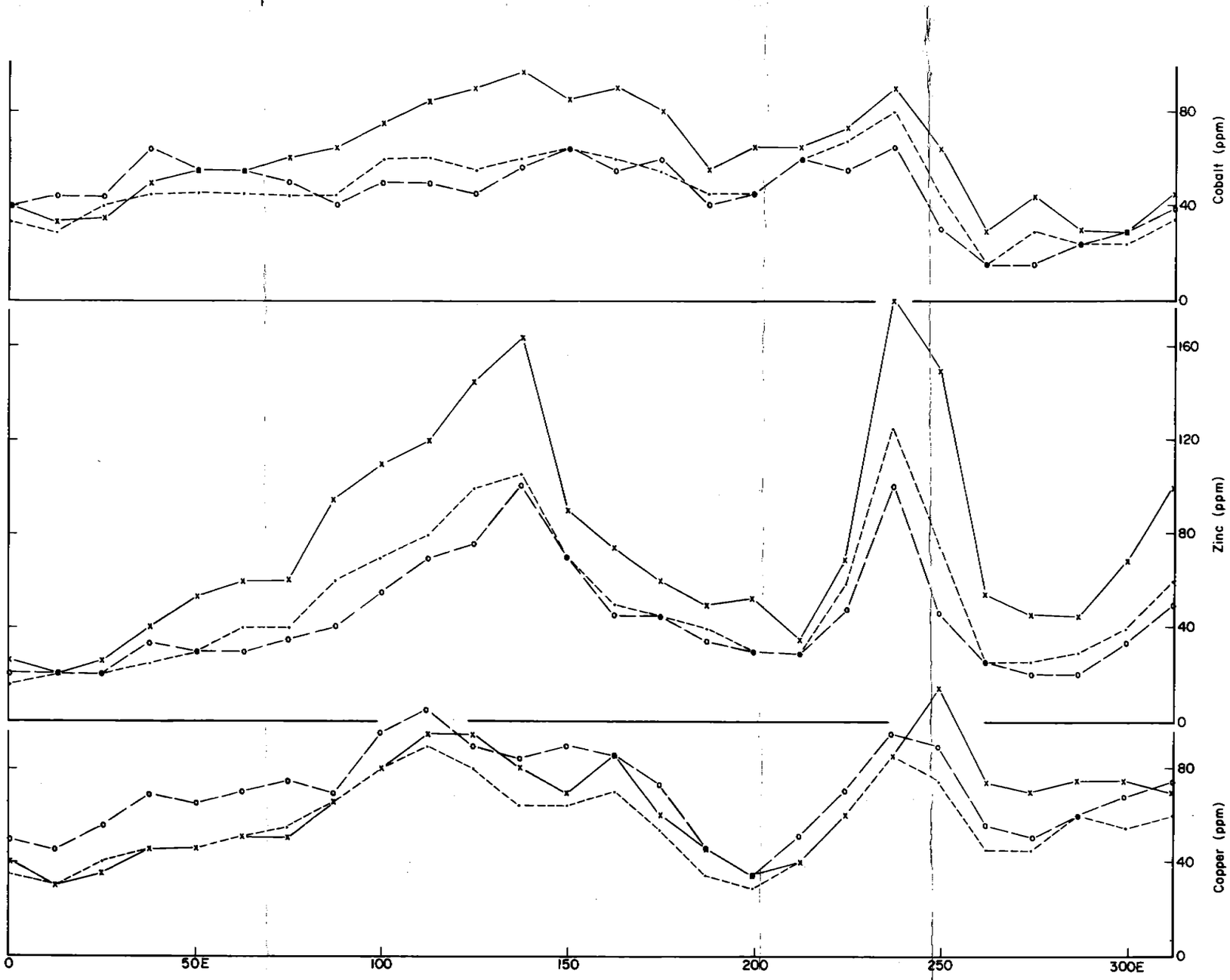
EL 3121
MT DOUGLAS

SOIL ORIENTATION LINE 2

Mn PROFILE

Scale	Date	Dwg No
1:1250	Jan 1982	M243 23

CR82/201



—x— −20 +40 mesh

—o— −40 +80 mesh

– – – −80 mesh

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NORTHERN TERRITORY

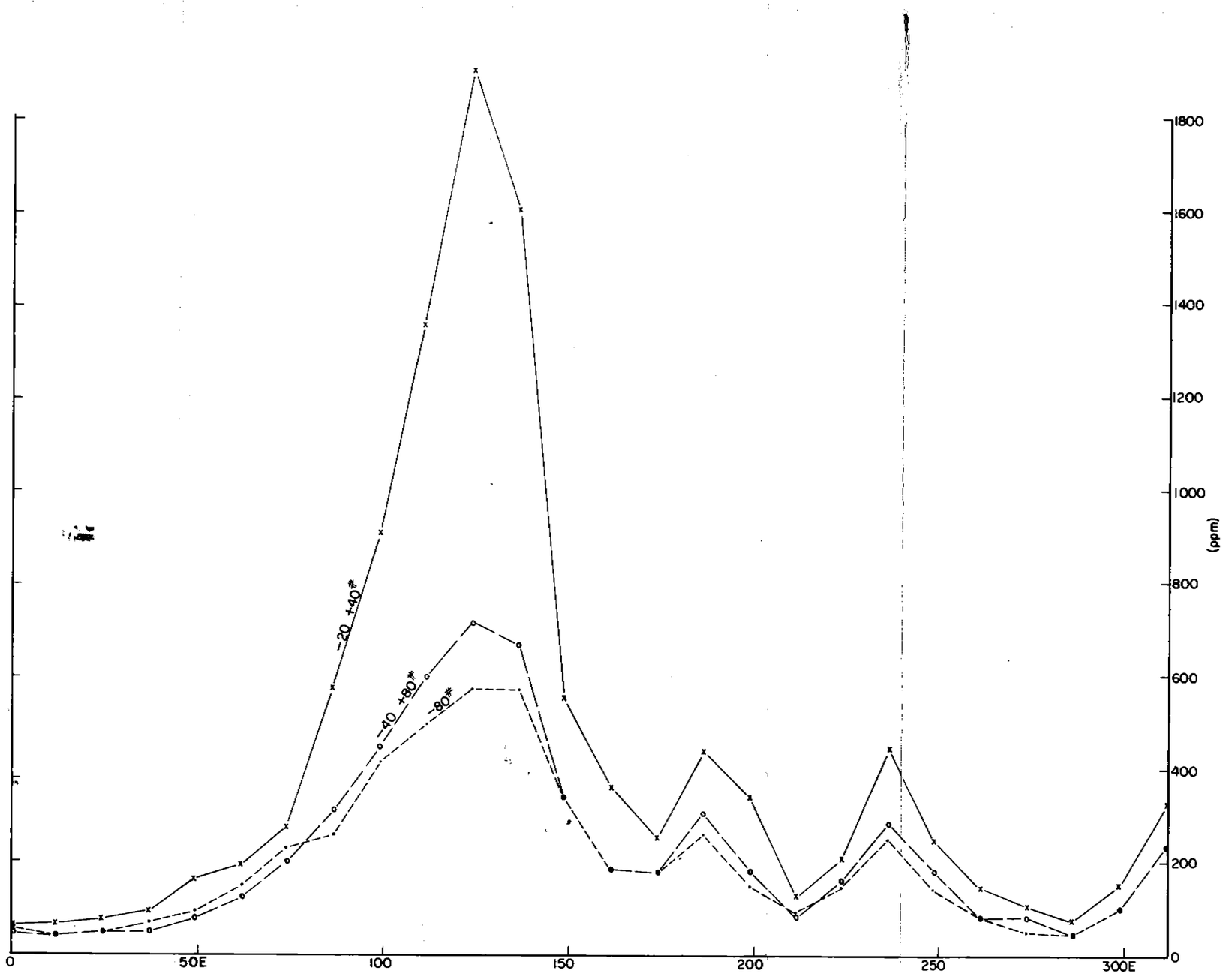
EL 3121
MT DOUGLAS

SOIL ORIENTATION LINE 2

PROFILES FOR Cu Zn Co

Scale	Date	Dwg NO
1:1250	Jan 1982	M242 24

CR82/201



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NORTHERN TERRITORY

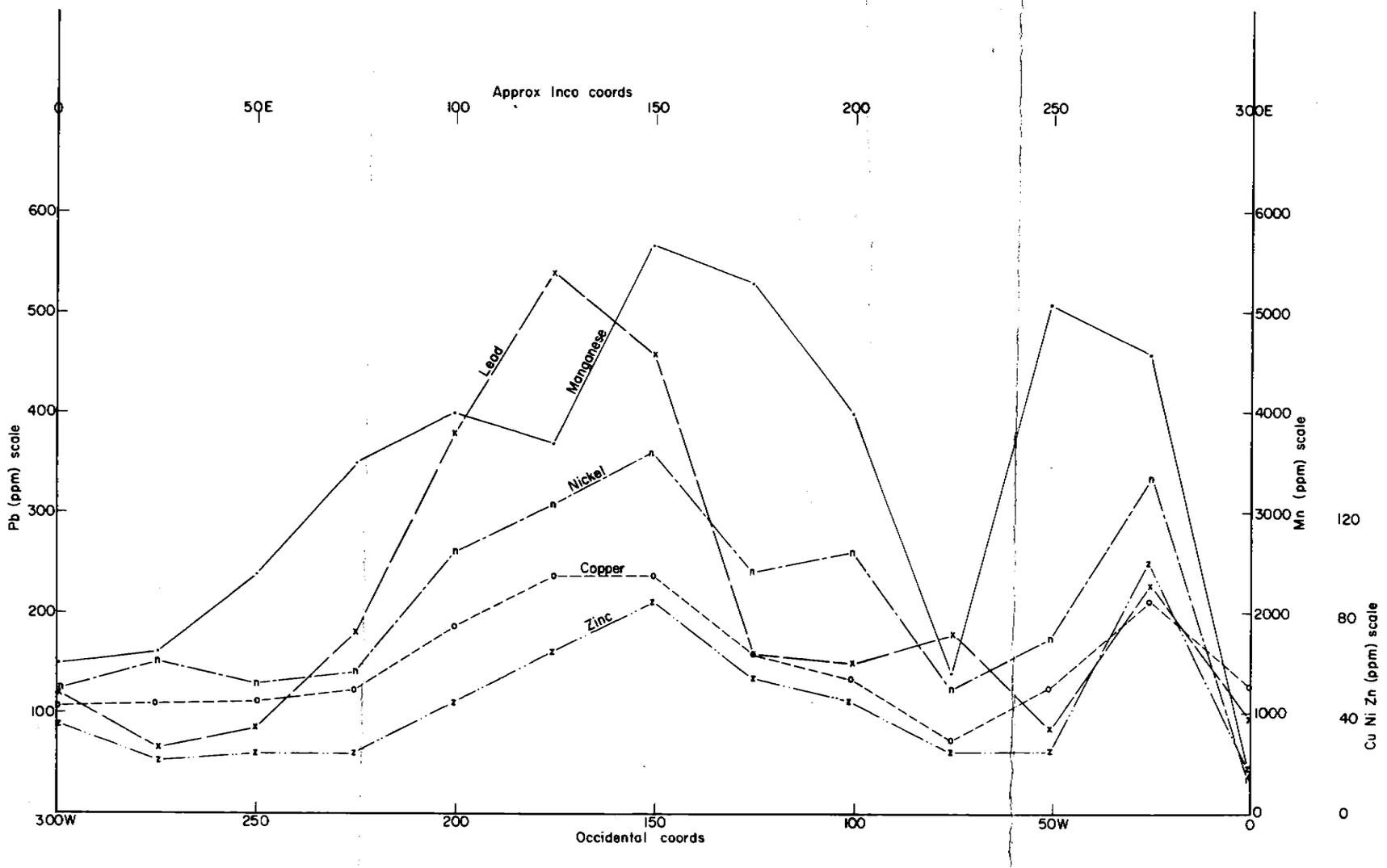
EL 3121
MT DOUGLAS

SOIL ORIENTATION LINE 2

Pb PROFILE

Scale	Date	Dwg No
1:1250	Jan 1982	M240 25

CR82/201



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NORTHERN TERRITORY

EL 3121

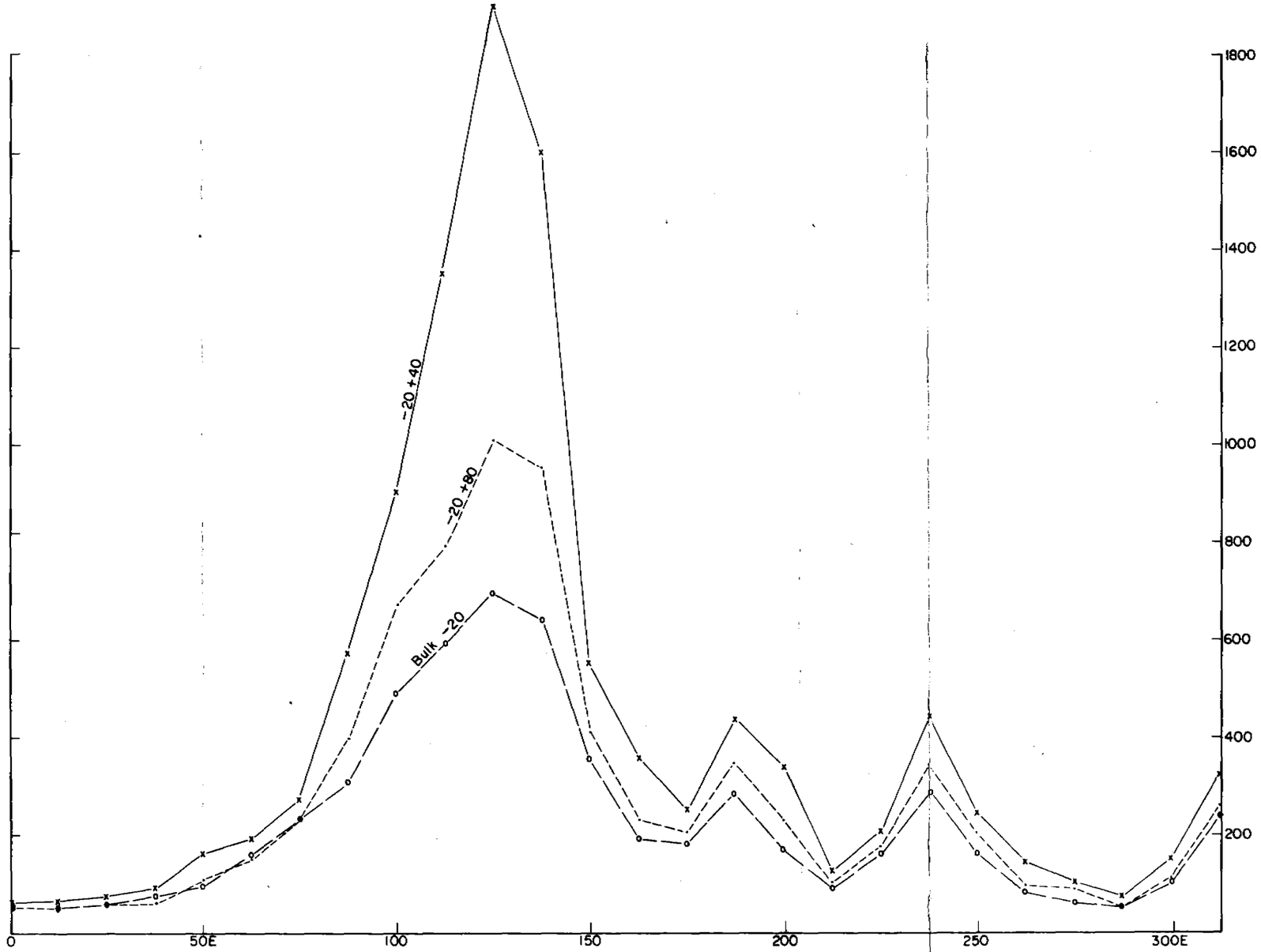
MT DOUGLAS

SOIL ORIENTATION LINE 2

OCCIDENTAL MINERALS ANALYSES

Scale	Date	Dwg No
1:1250	Jan 1982	M239 26

CR82/201.



INCO AUSTRALASIA LIMITED

NORTHERN TERRITORY

EL 3121

MT DOUGLAS

SOIL ORIENTATION LINE 2

SIZE FRACTION COMPARISON FOR Pb

Scale	Date	Dwg NO
1:1250	Jan 1982	M241 27