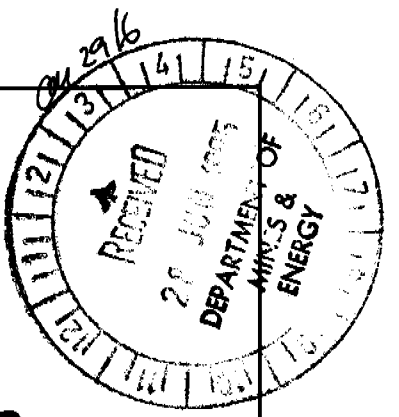
2193



JOINT ANNUAL REPORT

ELs 8076, 8384, 8423

HARTS RANGE REGION, N.T.
NORTHEAST CORNER - ALICE SPRINGS [SF 53-14] 1:250,000
SOUTHEAST CORNER - ALCOOTA [SF 53-10] 1:250,000
SOUTHERN EDGE - HUCKITTA [SF 53-11] 1:250,000

TO N.T. D.M.E
FOR PERIOD TO 19/12/1994

LICENCE HOLDER:

CHAMBIGNE RESOURCES PTY LTD

REPORT COMPILED BY:

S.K. DOBOS
DOBOS & ASSOCIATES, BRISBANE

24-6-1995

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1 SUMMARY

The 3 ELs embodied in this report all lie along the eastward-flowing Plenty River, just to the north of the Strangways and Harts Ranges, and all are focused on alluvial and detrital garnet (and other industrial minerals) in the sands of the riverbed.

Initial random sampling throughout the three ELs, and subsequent detailed and bulk sampling, analysis and testing in part of EL 8076, all demonstrate that the river sands generally contain economic (10.5%) to moderately high (16.9%) grades of garnet. Volumetrically small patches of sub-economic garnet concentrations (down to 7.2%) do occur from place to place, but do not affect the overall economic potential of the Plenty River for garnet.

The 19.5km stretch of the Plenty River from 134°52′ to 134°59′, sampled, analysed and tested in detail, contains 747,868 *measured* tons of garnet; a further 10 contiguous kms is *inferred* to contain an additional 259,262 tons. The combined length of the Plenty River in the three ELs, with substantial widths, exceeds 130km, and a *conservative estimate* for total *extractable* garnet in these ELs yields 4.5 million tons. The Plenty River is thus a world class garnet sand resource.

Mineralogical examination of the garnet in the river sands along the extent of the ELs indicates that the garnet is almost exclusively dominated by almandine (≈60%)-pyrope (≈30%)-grossular (up to 25%, but generally below 10%) solid solutions, and sourced from psammopelitic and pelitic gneisses and granulites and from garnetiferous amphibolites and amphibole granulites.

From the limited garnet hardness testing carried out to date, these garnets are exceptionally hard, with Knoop hardnesses ranging from 1600 to 2000; they are the hardest garnets known to be currently commercially available. Furthermore, the individual grains are quite fresh and show little if any sign of weathering; the grain morphologies are quite favourable, and leaching tests carried out on samples similar to those in the Plenty River yield very low values of leachates. Overall, the garnet concentrates are quite superior to beach sand derived garnet from WA.

2 INTRODUCTION AND TENURE

The three exploration licences, EL8076 (comprising 148 graticular blocks of approximately 477km^2), EL8384 (comprising 12 graticular blocks of approximately 39km^2), and EL8423 (comprising 40 graticular blocks of approximately 129km^2), were granted to Chambigne Resources Pty Ltd on the 20th of December, 1993. The three ELs comprise a total of 200 graticular blocks, covering approximately 645km^2 ; the % ratio of areas is, respectively, 74, 6 and 20.

On the 18-10-94, permission was sought from the N.T. Department of Mines and Energy to submit joint reports for the three ELs, as all share a similar geological framework, and all were taken up principally to explore for and exploit the garnetiferous sands of the Plenty River and its feeders; this was subsequently granted.

3 LOCATION AND ACCESS

All three ELs are centred on the eastwards flowing Plenty River, and where appropriate, a number of its larger tributaries. The westernmost, EL8076, commences at 134° 40′ and runs east to 135° 28′. The middle EL8384 commences at 135° 28′ and runs east to 135° 35′ - it is contiguous with EL8076. The easternmost EL8423 commences at 135° 46′ and runs east to 136° 08′. The precise location of the graticular blocks are shown in **Appendix pages 1 to 3**.

Access to the three ELs is via the Plenty Highway, which runs east from the Stuart Highway, roughly subparallel to the Plenty River, mainly on its southern side. Numerous station roads and tracks run off the Plenty Highway, crossing the Plenty River, and in most

places, rough and rarely used but quite navigable tracks run along parts of the banks of the River.

4 GEOLOGY OF ELs 8076, 8384, and 8423

The ELs lie in the flood plain of the Plenty River, with little in the way of massive outcrops; numerous smaller outcrops and rock bars, however, indicate that for the most part, the riverbed lies in the mid-Proterozoic metamorphic rocks of the Harts Range Group. To the west, some of the shallow feeders cut through deeply weathered and essentially undifferentiated Lower Triassic rocks, but these have no real significance in terms of the garnet genesis or resource volume.

Of the Harts Range Group rocks, the most significant are the Irindina Gneiss, and the Riddock Amphibolite; both are heterogeneous, and may carry from zero to 18 volume% garnet, though the average for the Gneiss is closer to 10%. From a consideration of the regional geology, petrology and topography, it is evident that the sources of most of the garnet in the river sands are the two rock units named previously. There appears to be little if any contribution of grossular-andradite garnet from the rare calc-silicate rocks that are garnetiferous, and similarly, almandine-rich garnets from the weakly garnetiferous lower grade schists to the north of the River have not contributed significantly to the overall garnet composition or grade in the river sands.

The geological-lithological distribution of rocks adjacent to the ELs can be seen on the Alice Srings, Alcoota, Illogwa Creek and Huckitta 1:250,000 Geological maps. For a better appreciation of the distribution of petrological types, refer to the Geology of the Strangways Range Region, the Arltunga-Harts Range Special, and the Quartz 1:100,000 geological maps. No purely geological **mapping** was carried out in any part of the EL in this reporting period. Written summaries of the regional geology of the areas encompassed by the three ELs are presented in the notes to accompany the Geology of the Strangways Range Region, and the Arltunga-Harts Range Special 1:100,000 geological maps. There is no equivalent in print for the Quartz Geological map, however the compilation notes

appear as BMR Record 23, 1982, [Shaw *et al.*]. The previous geological summary was compiled directly from the abovementioned references, which are not presented here.

5 EXPLORATION PROGRAM TO 12/94

The formal exploration of the three ELs began with a helicopter overflight followed by a reasonably detailed ground reconnaissance of the Plenty River sands along the entire extent within the three licence areas (29 sites visited, all accessible from existing roads and tracks). This demonstrated that the sands were everywhere garnetiferous - hand panning, or on-site stereomicroscopic examination at all sites visited indicated garnet grades visually estimated at least 5% by volume or better, generally 10% or better; no systematic sampling was undertaken at this stage.

In general, garnet grades tend to diminish slightly downstream, with dilution by quartz from creeks draining non-garnetiferous flood plains. On the other hand, a number of feeder creeks draining extensive outcrops of the prime source rocks, or their remnant scree, serve to re-enrich the Plenty River sands - examples of the latter are Stones and Eblana Creeks, and especially Entire Creek. Also counteracting the dilution factor is the fact that the specific volume of river sand tends to increase downstream, so that the actual recoverable garnet is to a first approximation constant over the length of the Plenty River.

Panned sands over the extent of the Plenty yielded garnet concentrates that were visually very similar, varying principally in the local ratios of garnet to "blacks" - the latter comprising amphibole, biotite, pyroxene and metal oxides, in that order. No numerical data were generated from this reconnaissance, but these observations, plus a geological and petrological synthesis of garnet sand genesis, plus data from other ELs held by Chambigne, all indicated that the physical and chemical properties of the garnet **separates** should be fairly constant over the sampled extent of the Plenty River. **This latter deduction was the basis of the decision to sample one part of the Plenty systematically, and in detail,**

and to take a 25 ton bulk sample for a comprehensive range of metallurgical, mineralogical and performance tests.

The detailed work was undertaken on a stretch of the Plenty in EL8076, chosen partly for ease of access. and partly for the minimisation of disturbance to the vegetation. This stretch is depicted in **Appendix page 4**, together with the sampling sites. Note that the bulk sample was taken from both side of the track crossing the Plenty, between sample sites 32 and 33. Note in passing that the entire sampling exercise was carried out with permission from the Department of Mines and Energy, was environmentally "neutral", and was followed by appropriate restoration of the creekbed; no significant trees or shrubs were disturbed. The rehabilitation was inspected by a representative of the N.T.D.M.E., and was found to comply with all requirements. Since the flooding of the River in the recent wet period, there remain absolutely no signs of the sampling exercise.

The sampling logs for the systematic sampling are presented in **Appendix pages 5 through 12. Appendix pages 13 and 14** comprise a summary of the "ore" block and grade calculations. **Appendix pages 15 and 16** comprise a summary of the more relevant parts of the individual mineralogical and sizing separations carried out by Readings Metallurgical Service, Lismore N.S.W. (the individual tests are presented in **Appendix pages 16a through 16t**).

6 METALLURGICAL AND ENGINEERING STUDY

The garnet recovered from the bulk sampling was used for a number of application or "performance" tests, and was also used, in part, in the metallurgical and extraction and processing plant engineering and design study undertaken at Readings Metallurgical Services (Lismore), supervised by Chambigne's metallurgist, Kelvin Fiedler. Extracts from the latter are presented in **Appendix A**; this study is ongoing, and subject to further refinement as Chambigne approaches initial production.

The primary part of the study is complete, but a number of changes and innovations over previous test plant designs have already been implemented in the proposed plant. The primary plant as it now stands will occupy only about half an acre of ground, and will be mobile; it is planned that from cessation of operations at one site to commencement of full-scale operations at another will take 3 days plus transport time.

Additionally, the new plant will be largely to entirely dry, relieving the pressure for water, and a water recirculating system. Furthermore, the capital cost of the new plant will be substantially lower, as will be the operating costs. The plant as envisaged will work 20hrs/day, at the rate of 50 tons feed/hour, manned by a staff of 3, and generating its own power requirements.

The proposed plant will be able, with little or no modification, to separate in many cases, a number of other saleable industrial minerals simultaneously with garnet. These may include one or more of magnetite, rutile, ilmenite, muscovite, biotite, the aluminosilicates, corundum, monazite and zircon.

Samples of sized garnet fractions from the bulk sampling, representing "production samples", have been sent to a number of domestic and overseas dealers and end users for their in-house testing and evaluation, and are subject to further detailed mineralogical and chemical testing by Chambigne's specialist consultants.

7 SYNTHESIS

The garnets in the river sands of the three ELs are almost entirely comprised of almandine, pyrope and grossular end-members, approximately in the ratio of 60:30:10 mol percent, but with grossular components rising to 25 mol% for certain amphibolite-derived garnets.
To date, mineralogical, physical, chemical and application testing of variously-sized garnet concentrates from the three ELs embodied in this report, (and from a number of other ELs

and MLs held by Chambigne), have all indicated that Harts Range garnet products are equal to or superior in every way to Western Australian beach-sand derived garnet, the current *de facto* world standard. In general, Harts Range garnet is harder (with Knoop hardnesses ranging from 1600 to 2000 units), fresher (fewer cracks, no alteration rinds or coatings), more angular (with sharper edges and corners), produce cleaner water leachates (lower in salts and with insignificant heavy metal concentrations), sufficiently free of admixed quartz and quartz inclusions to exceed even the DIN and U.S. MIL standards, and sufficiently separable from monazite to fall below all radiation criteria currently (or likely to be) in force. These findings are in agreement with the independent tests of a number of end-users.

The garnet from the three ELs covers a size range from about 1.2mm down to below 100μ, though Chambigne does not intend to separate the ultrafine fraction for technical and environmental reasons (these carry all the free monazite, the principal source of heavy sand radiation). The largest garnet fraction lies in the range 240 to 800μ, with useful concentrations of the larger sizes.

The formal resource evaluation, over a 19.5km stretch of the western riverbed, produced a *measured* resource of 747,868 tons of recovered garnet. With the addition of less detailed sampling over a further contiguous 10 km, producing an *inferred* resource of 259,252 tons, the inferred extractable garnet contained in the Plenty river sands in the three ELs is 4.5 million tons, calculated on a river length of 130km - this is a conservative estimate, which will be tightened by further detailed sampling in the eastern reaches.

Metallurgical and process testing of the bulk sample has demonstrated that a number of alternative techniques may be employed for the production of garnet product. Applicable technologies range from the tried but true conventional, to novel and (so far) untested - Chambigne is testing the latter. All techniques employ garnet's relatively high density (≈4.0 for the Harts Range garnet product), high magnetic susceptibility, and relatively low electrical conductivity (permitting the use of electrosatic separation).

8 EXPENDITURE TO 12/94

For the reasons given in section 5, the bulk sampling, testing and engineering costs incurred in the first annual reporting period apply equally to the three ELs embodied in this report, as well as to a number of other ELs held by Chambigne, having similar geological, topographic and mineralogical characteristics regarding the garnet end product. For this reason, only 60% of the bulk sampling, analyses, testing and engineering studies are charged to the three ELs. These costs (marked with an asterisk *), together with other exploration costs specific to this report, are split in the ratio of the corresponding number of graticular blocks (for ELs 8076, 8384 and 8423, these are 74%, 6% and 20% respectively). The expenditures to 12/94, in whole dollars, are as follows:

ITEM	EL8076	EL8384	EL8423	TOTAL
Travel and accommodation	2,486	201	672	3,359
Helicopter hire	2,035	165	550	2750
Sampling costs	7,112	577	1922	9,611
Bulk sample processing*	17,316	1,404	4,680	23,400
Sample analysis	2,442	198	660	3,300
Engineer-resource measurement	2,368	192	640	3,200
Consultants	5,550	450	1,500	7,500
Metallurgical study*	39,338	3,189	10,632	53,159
Garnet preformance tests*	6,660	540	1,800	9,000
Administration	2,664	216	720	3,600
Totals	**87,971**	**7,132**	**23,776**	**118,879**

Individually, these expenditures all exceed the amounts committed for the first year of exploration (which were $33,000, $6,000 and $9,500 respectively).

9 PROPOSED WORK TO 12/95

The exploration work proposed for the coming reporting period will focus on systematic detailed sampling and analysis of two regions of the Plenty River, one in each of ELs 8384 and 8423. The aims here will be to confirm overall grade, to calculate measured, indicated and inferred resources, and to characterise the garnet concentrates in terms of size distribution, physical and chemical properties, and hardness values.

Additionally, there will be a focus on the evaluation of the economic potential of other industrial minerals in the Plenty River, in light of increasing demand for a number of minerals known to occur in the resource. The metallurgical study will be extended to include these additional minerals, and will treat samples from the eastern reaches of the Plenty River.

10 PROPOSED EXPENDITURE TO 12/95

In light of the above, the following minimum expenditure is proposed for ELs 8076, 8384 and 8423 to 12/95:

Detailed and bulk sampling	$15,000
Sample processing and analysis	$12,000
Metallurgical studies and product characterisation	$8,000
Travel and accommodation	$3,000
Total	**$38,000**

The proposed expenditures are substantially lower than the amounts spent in this reporting period - this does not reflect a lower overall commitment by Chambigne, but is a consequence of cost savings to be effected by utilising existing in-house staff, facilities and

equipment, and additional plant that will be acquired for initial production (expected by September 1995).

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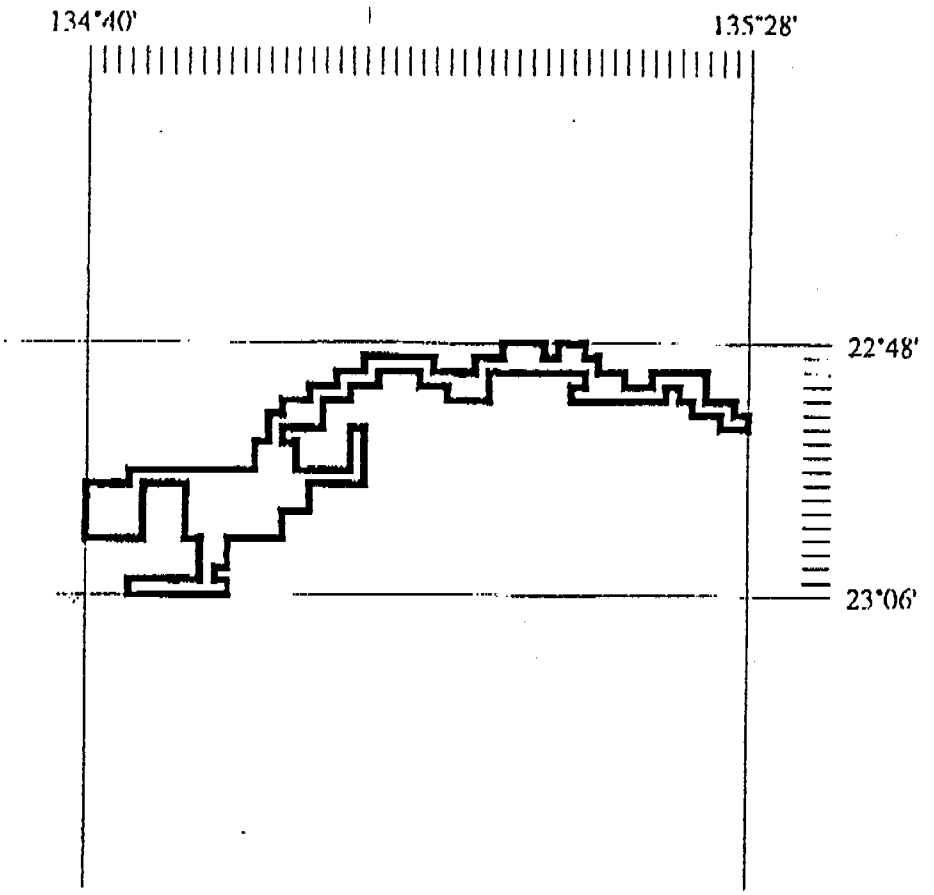
Appendix pages 1 to 16t and Appendix A to follow

SECOND SCHEDULE

(Plan of Area)

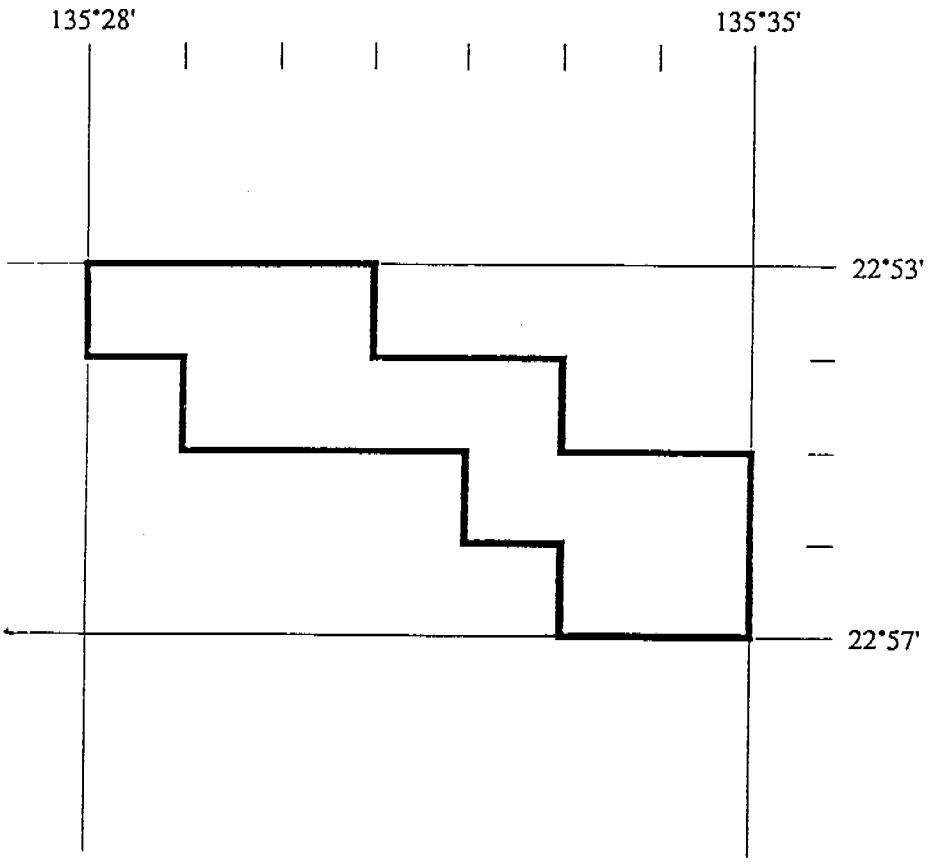


EL8076

148 BLOCKS

477 sq kms

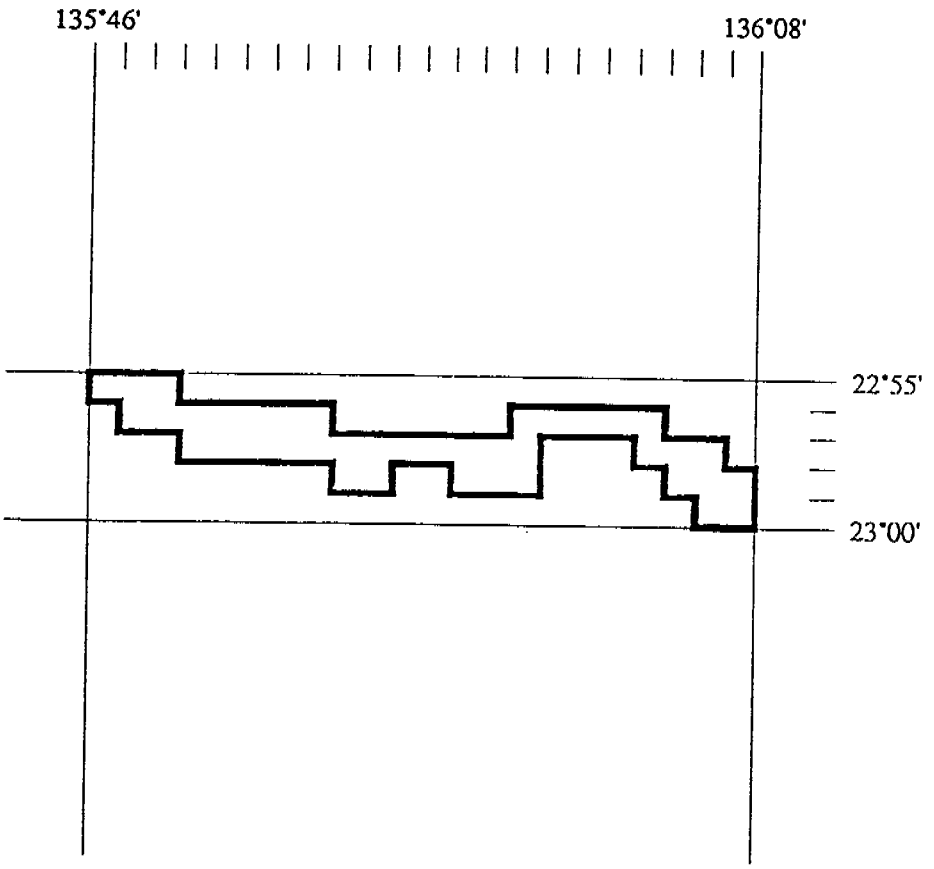
SECOND SCHEDULE
(Plan of Area)



EL8384
12 BLOCKS
39 sq kms

SECOND SCHEDULE

(Plan of Area)



EL8423

40 BLOCKS

129 sq kms

134° 55′ E

22° 50′ S

EL 8076

RIVER

PLENTY

FENCE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

Bulksample

SAMPLE LOCATIONS

SCALE

0 1000 2000 3000

metres

CHAMBIGNE GARNET

PLENTY RIVER

SECTION of PLENTY RIVER, EL 8076 - HARTS RANGE AREA - SAMPLING LOG COMMENCING 11/2/94

Hole No PR*	Location Deg Min Sec	Total Sampled Depth (m)	Dry Depth (m)	Width (m)	Distance (m)	Grade Garnet Total %	Comments
1	134 58 53 E 22 50 57 S	2.4	0.2	98	0	10.16	Very coarse, water at 1.3m. Sampled to 1.3m only as hole kept falling in. Backhoe dug to 2.4m - did not reach bottom. Actual depth of alluvials >2.4m.
2	134 58 37 E 22 51 6 S	0.9	0.2	131	500	9.86	Sample included 80mm red clayey sand above red clay base.
3	134 58 25 E 22 51 11 S	2.2	0.4	145	500	8.75	Coarse gravels to .3m
4	134 58 6 E 22 51 18 S	2	0.5	201	500	11.43	Top .3m very clean of debris. .3m to .6m evenly dispersed small percentage of debris.

CHAMBIGNE GARNET

Hole No PR*	Location Deg	Min	Sec	Total Sampled Depth (m)	Dry Depth (m)	Width (m)	Distance (m)	Grade Garnet Total %	Comments
5	134 22	57 51	51 E 24 S	1.9	0.3	220	500	15.71	Surface enrichment very little gravels grey clay basement. Some gravel at 1m. Coarse gravel at 1m.
6	134 22	57 51	40 E 31 S	1	0.2	90	500	14.1	Very soft driving conditions. Clay bottom - water running into hole at clay interface. Top 0.5m "fine", bottom 0.5m "coarse" sand- very distinct.
7	134 22	57 51	20 E 36 S	1.6	0.2	149	500	14.29	Water seepage, low percentage of evenly dispersed gravels.
8	134 22	57 51	7 E 46 S	1.5	0.2	174	500	16.68	Typical surface enrichment, some coarse garnet below .5m.
9	134 22	57 52	1 E 0 S	2.8	0.4	198	500	9.95	Gravel slight, very coarse at 1.3m.

CHAMBIGNE GARNET

Hole No PR*	Location Deg	Min	Sec	Total Sampled Depth (m)	Dry Depth (m)	Width (m)	Distance (m)	Grade Garnet Total %	Comments
10	134	56	56 E	2.8	0.4	301	500	9.33	Wet hole; higher grade at depth.
	22	52	7 S						
11	134	56	41 E	1.9	0.4	197	500	11.11	Very difficult driving conditions - soft on terraces. Classic "drop point" - river widens out to give "red plain" of garnet on surface. Finer at top, coarse at bottom.
	22	52	23 S						
12	134	56	46 E	0.8	0.6	200	500	11.58	Water coming into hole sample taken in obvious low soak.
	22	52	39 S						
13	134	56	39 E	>2	1	85	500	8.51	Light surface enrichment - even spread of grade. Strong water flow into hole. Centre terrace - rich .3m higher than sample.
	22	52	58 S						
14	134	56	25 E	1.6	0.1	100	500	13.19	Water at 1.5m.
	22	53	2 S						

CHAMBIGNE GARNET

Hole No PR*	Location Deg	Min	Sec	Total Sampled Depth (m)	Dry Depth (m)	Width (m)	Distance (m)	Grade Garnet Total %	Comments
15	134	56	2 E	1.9	0.1	100	500	16.23	Water at 1.3m very rich veins coarser at 1m
	22	52	58 S						
16	134	55	42 E	1.9	0.4	115	500	15.81	Wet hole; high grade
	22	52	57 S						
17	134	55	30 E	2.1	0.3	120	500	8.21	Small coarse sand 450 to 1m.
	22	52	50 S						
18	134	55	15 E	1	0.2	112	500	8.78	Clay base water 800
	22	52	43 S						
19	134	55	0 E	1.4	0.2	96	500	13.92	Water at metre - grade appears good.
	22	52	41 S						

CHAMBIGNE GARNET

Hole No PR*	Location Deg	Min	Sec	Total Sampled Depth (m)	Dry Depth (m)	Width (m)	Distance (m)	Grade Garnet Total %	Comments
20	134	54	52 E	1	0.4	120	500	13.61	Sampled top 1.0m only - underlaid by 0.4m "red clayey" sand. Yellow clay base.
	22	52	38 S						
21	134	54	38 E	1.4	0.2	150	500	8.21	Very rich 1m coarse
	22	52	46 S						
22	134	54	29 E	1.3	0.4	110	500	15.13	Wet hole, only small in flow.
	22	52	55 S						
23	134	54	8 E	0.7	0.4	53	500	11.06	Shallow
	22	53	6 S						
24	134	53	58 E	>2	1	90	500	9.28	Strong water flow at 1.1 mtr. Caving in due to water.
	22	53	24 S						

CHAMBIGNE GARNET

Hole No PR*	Location Deg Min Sec	Total Sampled Depth (m)	Dry Depth (m)	Width (m)	Distance (m)	Grade Garnet Total %	Comments
25	134 53 51 E 22 53 35 S	1.6	0.6	110	500	11.62	Loamy approximately 1m garnet in loam. Top surface rich.
26	134 53 48 E 22 53 53 S	1	0.2	100	500	12.86	Very rich to .2m
27	134 53 46 E 22 54 8 S	0.3	0.3	67	500	18.28	High grade 0.3m Red clayey sand (not sampled) 0.5m Red clay
28	134 53 44 E 22 54 27 S	1.5	0.2	100	500	10.56	Red clay base at 1.5m, coarser grains approximately .5m.
29	134 53 42 E 22 54 44 S	1.8	0.25	105	500	16.07	Coarse garnet on surface, red loamy base concentrate of heavies at top of clay.

CHAMBIGNE GARNET

Hole No PR*	Location Deg	Min	Sec	Total Sampled Depth (m)	Dry Depth (m)	Width (m)	Distance (m)	Grade Garnet Total %	Comments
30	134	53	29 E	1.6	0.2	98	500	13.45	Red loamy base rich in garnet to full depth.
	22	54	53 S						
31	134	53	21 E	>1.8	0.3	80	500	13.09	Appears good grade - to full depth.
	22	55	8 S						
32	134	53	15 E	0.9	0.2	34	500	10.06	"Spinifex Bore" crossing - site of bulk text.
	22	55	22 S						
33	134	53	10 E	0.7	0.3	70	500	14.88	Quite rich full depth several coarser bands generally evenly dissemenated.
	22	55	36 S						
34	134	53	0 E	1.5	0.3	85	500	11.92	High grade full depth small amount hornblende visually rich.
	22	55	50 S						

CHAMBIGNE GARNET

Hole No PR*	Location Deg Min Sec	Total Sampled Depth (m)	Dry Depth (m)	Width (m)	Distance (m)	Grade Garnet Total %	Comments
35	134 52 54 E 22 55 59 S	1.3	0.3	100	500	11.64	Rich appearance full depth.
36	134 52 39 E 22 56 5 S	1.5	0.3	120	500	11.02	Rich in garnet coarser from 1m down. At 1.3m 3/8" to 1/2" gravel.
37	134 52 20 E 22 56 8 S	1.2	0.3	85	500	11.28	Even mix of fine and coarse particles. Appears rich in garnet.
38	134 52 8 E 22 56 5 S	1.6	0.3	45	500	9.83	Some coarse garnet higher percentage of coarser material.
39	134 52 1 E 22 56 7 S	1.8	0.4	36	500	9.7	Heavily vegetated terrace with grade (~30m wide) Coarse rocky layer near bottom ~200mm thick.

CHAMBIGNE GARNET

BLOCK NO	WIDTH 1 M	WIDTH 2 M	AV WIDTH M	LENGTH M	DEPTH 1 M	DEPTH 2 M	AV DEPTH M	BULK DENSITY	GRADE 1 %	GRADE 2 %	AV GRADE %	TONNES ORE	TONNES GARNET
1	98	131	114.50	500	> 2.40	0.90	> 1.65	1.7	10.16	9.86	10.01	> 160,586.25	> 16,074.68
2	131	145	138.00	500	0.90	2.20	1.55	1.7	9.86	8.75	9.31	181,815.00	16,917.89
3	145	201	173.00	500	2.20	2.00	2.10	1.7	8.75	11.43	10.09	308,805.00	31,158.42
4	201	220	210.50	500	2.00	1.90	1.95	1.7	11.43	15.71	13.57	348,903.75	47,346.24
5	220	90	155.00	500	1.90	1.00	1.45	1.7	15.71	14.10	14.91	191,037.50	28,474.14
6	90	149	119.50	500	1.00	1.60	1.30	1.7	14.10	14.29	14.20	132,047.50	18,744.14
7	149	174	161.50	500	1.60	1.50	1.55	1.7	14.29	16.68	15.49	212,776.25	32,948.40
8	174	198	186.00	500	1.50	2.80	2.15	1.7	16.68	9.95	13.32	339,915.00	45,259.68
9	198	301	249.50	500	2.80	2.80	2.80	1.7	9.95	9.33	9.64	593,810.00	57,243.28
10	301	197	249.00	500	2.80	1.90	2.35	1.7	9.33	11.11	10.22	497,377.50	50,831.98
11	197	200	198.50	500	1.90	0.80	1.35	1.7	11.11	11.58	11.35	227,778.75	25,841.50
12	200	85	142.50	500	0.80	> 2.00	> 1.40	1.7	11.58	8.51	10.05	> 169,575.00	> 17,033.81
13	85	100	92.50	500	> 2.00	1.60	> 1.80	1.7	8.51	13.19	10.85	> 141,525.00	> 15,355.46
14	100	100	100.00	500	1.60	1.90	1.75	1.7	13.19	16.23	14.71	148,750.00	21,881.13
15	100	115	107.50	500	1.90	1.90	1.90	1.7	16.23	15.81	16.02	173,612.50	27,812.72
16	115	120	117.50	500	1.90	2.10	2.00	1.7	15.81	8.21	12.01	199,750.00	23,989.98
17	120	112	116.00	500	2.10	1.00	1.55	1.7	8.21	8.78	8.50	152,830.00	12,982.91
18	112	96	104.00	500	1.00	1.40	1.20	1.7	8.78	13.92	11.35	106,080.00	12,040.08
19	96	120	108.00	500	1.40	1.00	1.20	1.7	13.92	13.61	13.77	110,160.00	15,163.52
20	120	150	135.00	500	1.00	1.40	1.20	1.7	13.61	8.21	10.91	137,700.00	15,023.07
21	150	110	130.00	500	1.40	1.30	1.35	1.7	8.21	15.13	11.67	149,175.00	17,408.72
22	110	53	81.50	500	1.30	0.70	1.00	1.7	15.13	11.06	13.10	69,275.00	9,071.56
23	53	90	71.50	500	0.70	> 2.00	> 1.35	1.7	11.06	9.28	10.17	> 82,046.25	> 8,344.10
24	90	110	100.00	500	> 2.00	1.60	> 1.80	1.7	9.28	11.62	10.45	> 153,000.00	> 15,988.50
25	110	100	105.00	500	1.60	1.00	1.30	1.7	11.62	12.86	12.24	116,025.00	14,201.46
26	100	67	83.50	500	1.00	0.30	0.65	1.7	12.86	18.28	15.57	46,133.75	7,183.02
27	67	100	83.50	500	0.30	1.50	0.90	1.7	18.28	10.56	14.42	63,877.50	9,211.14
28	100	105	102.50	500	1.50	1.80	1.65	1.7	10.56	16.07	13.32	143,756.25	19,141.14

CHAMBIGNE GARNET

BLOCK NO	WIDTH 1 M	WIDTH 2 M	AV WIDTH M	LENGTH M	DEPTH 1 M	DEPTH 2 M	AV DEPTH M	BULK DENSITY	GRADE 1 %	GRADE 2 %	AV GRADE %	TONNES ORE	TONNES GARNET
29	105	98	101.50	500	1.80	1.60	1.70	1.7	16.07	13.45	14.76	146,667.50	21,648.12
30	98	80	89.00	500	1.60	> 1.80	> 1.70	1.7	13.45	13.09	13.27	> 128,605.00	> 17,065.88
31	80	34	57.00	500	> 1.80	0.90	> 1.35	1.7	13.09	10.06	11.58	> 65,407.50	> 7,570.92
32	34	70	52.00	500	0.90	0.70	0.80	1.7	10.06	14.88	12.47	35,360.00	4,409.39
33	70	85	77.50	500	0.70	1.50	1.10	1.7	14.88	11.92	13.40	72,462.50	9,709.98
34	85	100	92.50	500	1.50	1.30	1.40	1.7	11.92	11.64	11.78	110,075.00	12,966.84
35	100	120	110.00	500	1.30	1.50	1.40	1.7	11.64	11.02	11.33	130,900.00	14,830.97
36	120	85	102.50	500	1.50	1.20	1.35	1.7	11.02	11.28	11.15	117,618.75	13,114.49
37	85	45	65.00	500	1.20	1.60	1.40	1.7	11.28	9.83	10.56	77,350.00	8,164.29
38	45	36	40.50	500	1.60	1.80	1.70	1.7	9.83	9.70	9.77	58,522.50	5,714.72
Ave.	119.84	118.21	119.03	500	> 1.54	> 1.52	> 1.53	1.7	12.14	12.13	12.14		

80570 Tonnes of -212µ Garnet	Calculations on 19.5 kms as a measured resource	> 6,301,092.50	747,868.29
592092 Tonnes of +212-600µ Garnet	There is a further +10 kms within this lease (inferred catagory)	> 2,136,070.36	259,262.73
334367 Tonnes of -1.55MM +600µ Garnet	Measured and inferred resource calculation	> 8,437,162.86	1,007,131.02

CHAMBIGNE GARNET

Smpl.	Garnet % in µ					Hornblende % in µ					Opaques % in µ					Others % in µ					O/size	Qtz	Total
No.	1000	600	425	212	-212	1000	600	425	212	-212	1000	600	425	212	-212	1000	600	425	212	-212	%	%	%
1	1.51	1.84	1.85	4.34	0.62	0.66	1.36	1.41	4.34	1.50	0.47	0.10	0.07	0.67	0.39	0.11	0.10	0.10	0.29	0.08	16.42	61.78	100.01
2	2.01	2.16	1.74	3.00	0.95	0.79	1.21	1.56	4.75	1.73	0.99	0.14	0.07	0.42	0.74	0.16	0.04	0.10	0.17	0.11	10.61	66.56	100.01
3	1.42	1.99	2.05	2.78	0.51	0.46	1.11	1.89	4.74	1.33	0.48	0.10	0.08	0.33	0.44	0.05	0.07	0.08	0.33	0.15	9.33	70.31	100.03
4	1.09	1.64	1.78	4.58	2.34	0.41	0.89	1.82	6.46	4.52	0.15	0.11	0.04	0.35	0.81	0.05	0.05	0.07	0.35	0.40	5.71	66.36	99.98
5	1.34	2.30	3.83	6.43	1.81	0.22	1.21	2.26	8.26	3.11	0.22	0.11	0.06	0.31	0.62	0.04	0.04	0.13	0.31	0.11	2.61	64.69	100.02
6	1.01	1.90	2.97	7.12	1.10	0.41	0.77	2.09	7.78	2.49	0.26	0.06	0.10	0.99	0.51	0.03	0.03	0.05	0.66	0.13	6.24	63.30	100.00
7	2.39	3.78	3.22	3.97	0.93	0.92	1.89	2.13	5.13	1.38	0.50	0.18	0.05	0.48	0.54	0.04	0.06	0.05	0.10	0.15	5.59	66.52	100.00
8	2.14	2.63	2.78	7.62	1.52	0.51	1.36	2.50	11.23	1.42	0.37	0.21	0.11	1.00	1.76	0.03	0.11	0.17	0.20	0.20	3.35	58.78	100.00
9	1.03	1.51	1.76	3.41	2.24	0.30	0.56	0.98	9.15	3.54	0.30	0.04	0.06	0.55	2.50	0.03	0.04	0.09	0.55	0.34	6.17	64.86	100.01
10	1.55	2.02	1.93	2.75	1.08	0.47	1.13	1.35	4.61	3.39	0.20	0.10	0.07	0.49	0.51	0.02	0.07	0.10	0.24	0.15	3.16	74.60	99.99
11	0.71	1.33	2.01	5.24	1.82	0.33	0.85	1.70	8.98	3.83	0.19	0.07	0.08	0.45	0.58	0.04	0.05	0.08	0.30	0.26	3.69	67.44	100.03
12	1.43	3.05	3.14	3.53	0.43	0.73	1.70	2.39	4.73	0.77	0.36	0.15	0.06	0.26	0.42	0.08	0.10	0.11	0.09	0.05	6.91	69.53	100.02
13	0.32	0.53	1.06	5.01	1.60	0.22	0.68	1.36	8.40	2.81	0.15	0.07	0.05	0.59	1.60	0.05	0.05	0.05	0.74	0.38	2.66	71.63	100.01
14	1.29	2.93	3.44	4.76	0.77	0.61	1.76	2.32	5.31	0.89	0.24	0.15	0.12	0.55	0.65	0.04	0.05	0.06	0.44	0.10	5.66	67.86	100.00
15	0.63	2.37	4.68	7.47	1.08	0.28	0.66	2.37	8.33	1.95	0.13	0.13	0.22	1.04	0.91	0.03	0.00	0.15	0.52	0.21	2.88	63.96	100.00
16	1.25	2.59	3.34	7.03	1.60	0.23	0.86	2.61	9.31	2.32	0.17	0.11	0.06	0.70	1.33	0.02	0.04	0.06	0.53	0.28	4.21	61.35	100.00
17	1.62	1.72	1.37	2.77	0.73	0.74	1.22	1.76	6.11	1.33	0.40	0.13	0.10	0.29	0.38	0.09	0.06	0.10	0.38	0.08	4.48	74.15	100.01
18	1.04	1.14	0.82	4.50	1.28	0.34	0.70	1.03	6.93	2.16	0.23	0.06	0.08	0.49	0.75	0.02	0.04	0.06	0.24	0.22	3.24	74.64	100.01
19	0.99	2.51	3.74	6.05	0.63	0.43	1.53	2.45	4.25	1.31	0.34	0.13	0.06	0.56	0.28	0.02	0.09	0.19	0.34	0.12	3.11	70.89	100.02
20	1.50	3.18	3.30	5.26	0.37	0.61	1.69	3.23	3.82	0.37	0.19	0.21	0.07	0.83	0.70	0.05	0.05	0.13	0.41	0.04	4.45	69.53	99.99
21	1.64	2.13	1.81	2.13	0.50	0.96	2.09	1.85	3.41	1.37	0.40	0.13	0.08	0.37	0.43	0.09	0.09	0.04	0.18	0.07	7.58	72.66	100.01
22	4.38	4.22	2.77	3.44	0.31	1.24	1.58	1.79	2.52	0.56	0.73	0.13	0.09	0.46	0.38	0.36	0.10	0.05	0.20	0.05	13.99	60.64	99.99
23	1.60	2.58	2.46	4.08	0.34	0.69	1.92	3.30	4.08	0.54	0.41	0.09	0.12	0.44	0.43	0.06	0.09	0.12	0.27	0.04	7.03	69.32	100.01
24	1.05	2.32	1.93	3.31	0.67	0.29	0.75	2.02	3.87	0.70	0.64	0.18	0.08	0.47	0.84	0.09	0.04	0.17	0.24	0.19	5.73	74.41	99.99
25	1.79	2.35	2.85	3.77	0.86	0.62	1.56	2.23	7.54	2.59	0.13	0.08	0.05	0.50	0.27	0.05	0.12	0.05	0.75	0.20	6.63	64.99	99.98
26	2.77	2.81	2.65	3.81	0.82	0.82	1.52	1.70	5.31	1.68	0.41	0.09	0.55	0.40	0.66	0.08	0.04	0.10	0.50	0.13	12.22	60.91	99.98
27	4.94	5.77	3.70	3.29	0.58	1.70	2.29	1.91	3.98	1.01	0.59	0.34	0.12	0.23	0.49	0.15	0.08	0.06	0.15	0.06	15.45	53.11	100.00
28	1.42	2.41	2.20	3.50	1.03	0.62	1.74	2.44	6.88	3.04	0.31	0.22	0.10	0.34	0.42	0.05	0.09	0.15	0.56	0.19	5.21	67.10	100.02

CHAMBIGNE GARNET

ample	Garnet % in µ					Hornblende % in µ					Opaques % in µ					Others % in µ					O/size	Qtz	Total
No.	1000	600	425	212	-212	1000	600	425	212	-212	1000	600	425	212	-212	1000	600	425	212	-212	%	%	%
29	1.81	4.22	3.90	5.06	1.08	0.84	1.92	2.62	5.51	1.71	0.33	0.19	0.07	0.34	0.44	0.03	0.06	0.13	0.34	0.13	4.60	64.65	99.98
30	1.39	2.71	3.07	5.25	1.03	0.66	1.84	3.01	6.35	1.68	0.34	0.15	0.00	0.37	0.71	0.05	0.15	0.19	0.24	0.14	5.40	65.29	100.02
31	1.30	2.27	2.56	5.79	1.17	0.74	1.61	2.03	9.17	2.30	0.31	0.17	0.15	0.80	1.08	0.05	0.08	0.10	0.32	0.14	6.49	61.36	99.99
32	2.33	2.79	1.55	2.59	0.80	0.67	1.91	2.27	6.57	1.72	0.27	0.15	0.04	0.40	0.03	0.07	0.05	0.12	0.40	0.11	3.10	72.09	100.03
33	1.40	2.66	3.01	7.06	0.75	0.76	1.37	2.50	7.21	1.48	0.20	0.08	0.00	0.46	0.95	0.10	0.04	0.17	0.61	0.10	4.75	64.31	99.97
34	0.51	1.40	2.70	6.16	1.15	0.44	1.69	2.59	9.24	1.52	0.11	0.10	0.06	0.65	0.85	0.10	0.06	0.17	0.16	0.19	2.10	68.15	100.10
35	0.77	1.71	2.42	5.93	0.81	0.62	1.51	2.80	7.06	0.69	0.14	0.14	0.05	0.85	1.17	0.05	0.07	0.11	0.28	0.11	3.19	69.54	100.02
36	1.18	2.47	2.40	4.43	0.54	0.83	1.66	2.55	5.76	1.06	0.37	0.04	0.16	0.55	0.34	0.07	0.09	0.10	0.33	0.06	8.79	66.22	100.00
37	1.24	2.27	2.71	4.41	0.65	0.77	1.68	1.95	5.76	0.79	0.18	0.17	0.00	0.68	0.86	0.07	0.08	0.10	0.45	0.02	6.86	68.30	100.00
38	2.36	2.87	2.12	2.06	0.42	1.42	2.09	1.76	3.58	0.53	0.62	0.16	0.12	0.24	0.35	0.04	0.10	0.08	0.18	0.05	16.03	62.79	99.97
AVE	1.58	2.45	2.57	4.57	0.97	0.64	1.42	2.12	6.22	1.77	0.34	0.13	0.09	0.52	0.71	0.07	0.07	0.10	0.35	0.15	6.46	66.70	100.01

				12.1	Garnet Head Grade %
13	20.2	21.2	37.6	8	Percentages of total garnet
13	20.2	sum>	58.8	8	
1.63	2.52	sum>	7.35	1	Blending Ratios

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 200 SAMPLE : 1

DATE 3 JUNE 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	16.42	-	-	-	-	61.78	78.20
+1000	-	1.51	0.66	0.47	0.11	-	2.75
+600	-	1.84	1.36	0.10	0.10	-	3.40
+425	-	1.85	1.41	0.07	0.10	-	3.43
+212	-	4.34	4.34	0.67	0.29	-	9.64
-212	-	0.62	1.50	0.39	0.08	-	2.59
TOTAL	16.42	10.16	9.27	1.70	0.68	61.78	100.01

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 201 SAMPLE : 2

DATE 3 JUNE 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	10.61	-	-	-	-	66.56	77.17
+1000	-	2.01	0.79	0.99	0.16	-	3.95
+600	-	2.16	1.21	0.14	0.04	-	3.55
+425	-	1.74	1.56	0.07	0.10	-	3.47
+212	-	3.00	4.75	0.42	0.17	-	8.34
-212	-	0.95	1.73	0.74	0.11	-	3.53
TOTAL	10.61	9.86	10.04	2.36	0.58	66.56	100.01

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 202 SAMPLE : 3 2\1

DATE 3 JUNE 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	9.33	-	-	-	-	70.31	79.64
+1000	-	1.42	0.46	0.48	0.05	-	2.41
+600	-	1.99	1.11	0.10	0.07	-	3.27
+425	-	2.05	1.89	0.08	0.08	-	4.10
+212	-	2.78	4.74	0.33	0.33	-	8.18
-212	-	0.51	1.33	0.44	0.15	-	2.43
TOTAL	9.33	8.75	9.53	1.43	0.68	70.31	100.03

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 203 SAMPLE : 4 2\2

DATE 3 JUNE 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	5.71	-	-	-	-	66.36	72.07
+1000	-	1.09	0.41	0.15	0.05	-	1.70
+600	-	1.64	0.89	0.11	0.05	-	2.69
+425	-	1.78	1.82	0.04	0.07	-	3.71
+212	-	4.58	6.46	0.35	0.35	-	11.74
-212	-	2.34	4.52	0.81	0.40	-	8.07
TOTAL	5.71	11.43	14.10	1.46	0.92	66.36	99.98

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 204 SAMPLE : 5 2\3

DATE 3 JUNE 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	2.61	-	-	-	-	64.69	67.30
+1000	-	1.34	0.22	0.22	0.04	-	1.82
+600	-	2.30	1.21	0.11	0.04	-	3.66
+425	-	3.83	2.26	0.06	0.13	-	6.28
+212	-	6.43	8.26	0.31	0.31	-	15.31
-212	-	1.81	3.11	0.62	0.11	-	5.65
TOTAL	2.61	15.71	15.06	1.32	0.63	64.69	100.02

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 205 SAMPLE : 6 5

DATE 3 JUNE 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	6.24	-	-	-	-	63.30	69.54
+1000	-	1.01	0.41	0.26	0.03	-	1.71
+600	-	1.90	0.77	0.06	0.03	-	2.76
+425	-	2.97	2.09	0.10	0.05	-	5.21
+212	-	7.12	7.78	0.99	0.66	-	16.55
-212	-	1.10	2.49	0.51	0.13	-	4.23
TOTAL	6.24	14.10	13.54	1.92	0.90	63.30	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 206 SAMPLE 7 2\4

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	5.59	-	-	-	-	66.52	72.11
+1000	-	2.39	0.92	0.50	0.04	-	3.85
+600	-	3.78	1.89	0.18	0.06	-	5.91
+425	-	3.22	2.13	0.05	0.05	-	5.45
+212	-	3.97	5.13	0.48	0.10	-	9.68
-212	-	0.93	1.38	0.54	0.15	-	3.00
TOTAL	5.59	14.29	11.45	1.75	0.40	66.52	100.00

SENT BY: 10-11-94 : 15:56 : READINGS LISMORE→ 61 7 831 3122:# 2/ 6

CHAMBIGNE GARNET DRILLING SAMPLES

HIGH GRADE SAMPLE No.8 2/5

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	3.35						3.35
+1500		0.67	0.13	0.20	0.01	2.12	3.13
+1250		0.48	0.10	0.07	0.01	1.15	1.81
+1000		0.99	0.28	0.10	0.01	2.98	4.36
+850		0.75	0.28	0.08	0.01	2.60	3.72
+600		1.88	1.08	0.13	0.10	8.58	11.77
+425		2.78	2.50	0.11	0.17	17.28	22.84
+212		7.62	11.23	1.00	0.20	22.95	43.00
-212		1.52	1.42	1.76	0.20	1.12	6.02
TOTAL	3.35	16.68	17.02	3.45	0.71	58.78	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 208 SAMPLE 9 2\6

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	6.17	-	-	-	-	64.86	71.03
+1000	-	1.03	0.30	0.30	0.03	-	1.66
+600	-	1.51	0.56	0.04	0.04	-	2.15
+425	-	1.76	0.98	0.06	0.09	-	2.89
+212	-	3.41	9.15	0.55	0.55	-	13.66
-212	-	2.24	3.54	2.50	0.34	-	8.62
TOTAL	6.17	9.95	14.53	3.45	1.05	64.86	100.01

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 209 SAMPLE 10 8

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	3.16	-	-	-	-	74.60	77.76
+1000	-	1.55	0.47	0.20	0.02	-	2.24
+600	-	2.02	1.13	0.10	0.07	-	3.32
+425	-	1.93	1.35	0.07	0.10	-	3.45
+212	-	2.75	4.61	0.49	0.24	-	8.09
-212	-	1.08	3.39	0.51	0.15	-	5.13
TOTAL	3.16	9.33	10.95	1.37	0.58	74.60	99.99

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 210 SAMPLE 11 2\7

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	3.69	-	-	-	-	67.44	71.13
+1000	-	0.71	0.33	0.19	0.04	-	1.27
+600	-	1.33	0.85	0.07	0.05	-	2.30
+425	-	2.01	1.70	0.08	0.08	-	3.87
+212	-	5.24	8.98	0.45	0.30	-	14.97
-212	-	1.82	3.83	0.58	0.26	-	6.49
TOTAL	3.69	11.11	15.69	1.37	0.73	67.44	100.03

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 211 SAMPLE 12 2\8

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	6.91	-	-	-	-	69.53	76.44
+1000	-	1.43	0.73	0.36	0.08	-	2.60
+600	-	3.05	1.70	0.15	0.10	-	5.00
+425	-	3.14	2.39	0.06	0.11	-	5.70
+212	-	3.53	4.73	0.26	0.09	-	8.61
-212	-	0.43	0.77	0.42	0.05	-	1.67
TOTAL	6.91	11.58	10.32	1.25	0.43	69.53	100.02

CHAMBIGNE GARNET DRILLING SAMPLES

FINE SAMPLE No.13 2/9

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	2.66						2.66
+1500		0.07	0.07	0.08	0.02	1.87	2.11
+1250		0.10	0.07	0.03	0.02	1.83	2.05
+1000		0.15	0.08	0.04	0.01	2.47	2.75
+850		0.18	0.12	0.02	0.01	2.43	2.76
+600		0.35	0.56	0.05	0.04	8.22	9.22
+425		1.06	1.36	0.05	0.05	18.56	21.08
+212		5.01	8.40	0.59	0.74	33.16	47.90
-212		1.60	2.81	1.60	0.38	3.11	9.50
TOTAL	2.66	8.51	13.46	2.47	1.26	71.63	100.03

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 213 SAMPLE 14 2\10

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	5.66	-	-	-	-	67.86	73.52
+1000	-	1.29	0.61	0.24	0.04	-	2.18
+600	-	2.93	1.76	0.15	0.05	-	4.89
+425	-	3.44	2.32	0.12	0.06	-	5.94
+212	-	4.76	5.31	0.55	0.44	-	11.06
-212	-	0.77	0.89	0.65	0.10	-	2.41
TOTAL	5.66	13.19	10.89	1.71	0.69	67.86	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 214 SAMPLE 15 2\11

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	2.88	-	-	-	-	63.96	66.84
+1000	-	0.63	0.28	0.13	0.03	-	1.07
+600	-	2.37	0.66	0.13	0.00	-	3.16
+425	-	4.68	2.37	0.22	0.15	-	7.42
+212	-	7.47	8.33	1.04	0.52	-	17.36
-212	-	1.08	1.95	0.91	0.21	-	4.15
TOTAL	2.88	16.23	13.59	2.43	0.91	63.96	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 215 SAMPLE 16 13

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	4.21	-	-	-	-	61.35	65.56
+1000	-	1.25	0.23	0.17	0.02	-	1.67
+600	-	2.59	0.86	0.11	0.04	-	3.60
+425	-	3.34	2.61	0.06	0.06	-	6.07
+212	-	7.03	9.31	0.70	0.53	-	17.57
-212	-	1.60	2.32	1.33	0.28	-	5.53
TOTAL	4.21	15.81	15.33	2.37	0.93	61.35	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 216 SAMPLE 17 2/12

DATE 12 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	4.48	-	-	-	-	74.15	78.63
+1000	-	1.62	0.74	0.40	0.09	-	2.85
+600	-	1.72	1.22	0.13	0.06	-	3.13
+425	-	1.37	1.76	0.10	0.10	-	3.33
+212	-	2.77	6.11	0.29	0.38	-	9.55
-212	-	0.73	1.33	0.38	0.08	-	2.52
TOTAL	4.48	8.21	11.16	1.30	0.71	74.15	100.01

READINGS 066219384 P.02

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 217 SAMPLE 18 2/13

DATE 27 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	3.24	-	-	-	-	74.64	77.88
+1000	-	1.04	0.34	0.23	0.02	-	1.63
+600	-	1.14	0.70	0.06	0.04	-	1.94
+425	-	0.82	1.03	0.08	0.06	-	1.99
+212	-	4.50	6.93	0.49	0.24	-	12.16
-212	-	1.28	2.16	0.75	0.22	-	4.41
TOTAL	3.24	8.78	11.16	1.61	0.58	74.64	100.01

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 218 SAMPLE 19 2/14

DATE 27 JULY 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	3.11	-	-	-	-	70.89	74.00
+1000	-	0.99	0.43	0.34	0.02	-	1.78
+600	-	2.51	1.53	0.13	0.09	-	4.26
+425	-	3.74	2.45	0.06	0.19	-	6.44
+212	-	6.05	4.25	0.56	0.34	-	11.20
-212	-	0.63	1.31	0.28	0.12	-	2.34
TOTAL	3.11	13.92	9.97	1.37	0.76	70.89	100.02

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 219 SAMPLE 20 16

DATE 27 JULY 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	4.45	-	-	-	-	69.53	73.98
+1000	-	1.50	0.61	0.19	0.05	-	2.35
+600		3.18	1.69	0.21	0.05	-	5.13
+425	-	3.30	3.23	0.07	0.13	-	6.73
+212	-	5.26	3.82	0.83	0.41	-	10.32
-212	-	0.37	0.37	0.70	0.04	-	1.48
TOTAL	4.45	13.61	9.72	2.00	0.68	69.53	99.99

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 220 SAMPLE 21 2/15

DATE 27 JULY 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	7.58	-	-	-	-	72.66	80.24
+1000	-	1.64	0.96	0.40	0.09	-	3.09
+600	-	2.13	2.09	0.13	0.09	-	4.44
+425	-	1.81	1.85	0.08	0.04	-	3.78
+212	-	2.13	3.41	0.37	0.18	-	6.09
-212	-	0.50	1.37	0.43	0.07	-	2.37
TOTAL	7.58	8.21	9.68	1.41	0.47	72.66	100.01

CHAMBIGNE GARNET DRILLING SAMPLES

COARSE SAMPLE No.22 17

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	13.99						
+1500		1.57	0.38	0.49	0.27	7.87	13.99
+1250		1.23	0.41	0.15	0.07	4.95	10.58
+1000		1.58	0.45	0.09	0.02	6.97	6.81
+850		1.34	0.41	0.09	0.02	5.61	9.11
+600		2.88	1.17	0.04	0.08	13.38	7.47
+425		2.77	1.79	0.09	0.05	11.74	17.55
+212		3.44	2.52	0.46	0.20	9.27	16.44
-212		0.31	0.56	0.38	0.05	0.87	15.89
TOTAL	13.99	15.13	7.68	1.79	0.77	60.64	2.17
							100.01

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 222 SAMPLE 23 18

DATE 27 JULY 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	7.03	-	-	-	-	69.32	76.35
+1000	-	1.60	0.69	0.41	0.06	-	2.76
+600	-	2.58	1.92	0.09	0.09	-	4.68
+425	-	2.46	3.30	0.12	0.12	-	6.00
+212	-	4.08	4.08	0.44	0.27	-	8.87
-212	-	0.34	0.54	0.43	0.04	-	1.35
TOTAL	7.03	11.06	10.53	1.49	0.58	69.32	100.01

CHAMBIGNE GARNET DRILLING SAMPLES

LOW GRADE SAMPLE No.24 2/16

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	5.73						5.73
+1500		0.22	0.07	0.34	0.04	3.80	4.47
+1250		0.32	0.09	0.19	0.03	3.67	4.30
+1000		0.51	0.13	0.11	0.02	4.67	5.44
+850		0.58	0.15	0.06	0.02	4.62	5.43
+600		1.74	0.60	0.12	0.02	14.09	16.57
+425		1.93	2.02	0.08	0.17	20.06	24.26
+212		3.31	3.87	0.47	0.24	22.38	30.27
-212		0.67	0.70	0.84	0.19	1.13	3.53
TOTAL	5.73	9.28	7.62	2.22	0.73	74.41	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 224 SAMPLE 25 2/17

DATE 27 JULY 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	6.63	-	-	-	-	64.99	71.62
+1000	-	1.79	0.62	0.13	0.05	-	2.59
+600	-	2.35	1.56	0.08	0.12	-	4.11
+425	-	2.85	2.23	0.05	0.05	-	5.18
+212	-	3.77	7.54	0.50	0.75	-	12.56
-212	-	0.86	2.59	0.27	0.20	-	3.92
TOTAL	6.63	11.62	14.54	1.03	1.17	64.99	99.98

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 225 SAMPLE 26 2/18

DATE 27 JULY 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	12.22	-	-	-	-	60.91	73.13
+1000	-	2.77	0.82	0.41	0.08	-	4.08
+600	-	2.81	1.52	0.09	0.04	-	4.46
+425	-	2.65	1.70	0.55	0.10	-	5.00
+212	-	3.81	5.31	0.40	0.50	-	10.02
-212	-	0.82	1.68	0.66	0.13	-	3.29
TOTAL	12.22	12.86	11.03	2.11	0.85	60.91	99.98

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 226 SAMPLE 27 21

DATE 27 JULY 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	15.45	-	-	-	-	53.11	68.56
+1000	-	4.94	1.70	0.59	0.15	-	7.38
+600	-	5.77	2.29	0.34	0.08	-	8.48
+425	-	3.70	1.91	0.12	0.06	-	5.79
+212	-	3.29	3.98	0.23	0.15	-	7.65
-212	-	0.58	1.01	0.49	0.06	-	2.14
TOTAL	15.45	18.28	10.89	1.77	0.50	53.11	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 227 SAMPLE 28 2/19

DATE 27 JULY 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	5.21	-	-	-	-	67.10	72.31
+1000	-	1.42	0.62	0.31	0.05	-	2.40
+600	-	2.41	1.74	0.22	0.09	-	4.46
+425	-	2.20	2.44	0.10	0.15	-	4.89
+212	-	3.50	6.88	0.34	0.56	-	11.28
-212	-	1.03	3.04	0.42	0.19	-	4.68
TOTAL	5.21	10.56	14.72	1.39	1.04	67.10	100.02

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 228 SAMPLE 29 2/20

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	4.60	-	-	-	-	64.65	69.25
+1000	-	1.81	0.84	0.33	0.03	-	3.01
+600	-	4.22	1.92	0.19	0.06	-	6.39
+425	-	3.90	2.62	0.07	0.13	-	6.72
+212	-	5.06	5.51	0.34	0.34	-	11.25
-212	-	1.08	1.71	0.44	0.13	-	3.36
TOTAL	4.60	16.07	12.60	1.37	0.69	64.65	99.98

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 229 SAMPLE 30 2/21

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	5.40	-	-	-	-	65.29	70.69
+1000	-	1.39	0.66	0.34	0.05	-	2.44
+600	-	2.71	1.84	0.15	0.15	-	4.85
+425	-	3.07	3.01	0.00	0.19	-	6.27
+212	-	5.25	6.35	0.37	0.24	-	12.21
-212	-	1.03	1.68	0.71	0.14	-	3.56
TOTAL	5.40	13.45	13.54	1.57	0.77	65.29	100.02

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 230 SAMPLE 31 2/22

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	6.49	-	-	-	-	61.36	67.85
+1000	-	1.30	0.74	0.31	0.05	-	2.40
+600	-	2.27	1.61	0.17	0.08	-	4.13
+425	-	2.56	2.03	0.15	0.10	-	4.84
+212	-	5.79	9.17	0.80	0.32	-	16.08
-212	-	1.17	2.30	1.08	0.14	-	4.69
TOTAL	6.49	13.09	15.85	2.51	0.69	61.36	99.99

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 231 SAMPLE 32 25

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	3.10	-	-	-	-	72.09	75.19
+1000	-	2.33	0.67	0.27	0.07	-	3.34
+600	-	2.79	1.91	0.15	0.05	-	4.90
+425	-	1.55	2.27	0.04	0.12	-	3.98
+212	-	2.59	6.57	0.40	0.40	-	9.96
-212	-	0.80	1.72	0.03	0.11	-	2.66
TOTAL	3.10	10.06	13.14	0.89	0.75	72.09	100.03

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 232 SAMPLE 33 2/23

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	4.75	-	-	-	-	64.31	69.06
+1000	-	1.40	0.76	0.20	0.10	-	2.46
+600	-	2.66	1.37	0.08	0.04	-	4.15
+425	-	3.01	2.50	0.00	0.17	-	5.68
+212	-	7.06	7.21	0.46	0.61	-	15.34
-212	-	0.75	1.48	0.95	0.10	-	3.28
TOTAL	4.75	14.88	13.32	1.69	1.02	64.31	99.97

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 233 SAMPLE 34 2/24

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	2.10	-	-	-	-	68.15	70.25
+1000	-	0.51	0.44	0.11	0.01	-	1.07
+600	-	1.40	1.69	0.10	0.06	-	3.25
+425	-	2.70	2.59	0.06	0.17	-	5.52
+212	-	6.16	9.24	0.65	0.16	-	16.21
-212	-	1.15	1.52	0.85	0.19	-	3.71
TOTAL	2.10	11.92	15.48	1.77	0.59	68.15	100.01

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 234 SAMPLE 35 2/25

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	3.19	-	-	-	-	69.54	72.73
+1000	-	0.77	0.62	0.14	0.05	-	1.58
+600	-	1.71	1.51	0.14	0.07	-	3.43
+425	-	2.42	2.80	0.05	0.11	-	5.38
+212	-	5.93	7.06	0.85	0.28	-	14.12
-212	-	0.81	0.69	1.17	0.11	-	2.78
TOTAL	3.19	11.64	12.68	2.35	0.62	69.54	100.02

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 235 SAMPLE 36 2/26

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	8.79	-	-	-	-	66.22	75.01
+1000	-	1.18	0.83	0.37	0.07	-	2.45
+600	-	2.47	1.66	0.04	0.09	-	4.26
+425	-	2.40	2.55	0.16	0.10	-	5.21
+212	-	4.43	5.76	0.55	0.33	-	11.07
-212	-	0.54	1.06	0.34	0.06	-	2.00
TOTAL	8.79	11.02	11.86	1.46	0.65	66.22	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 236 SAMPLE 37 2/27

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	6.86	-	-	-	-	68.30	75.16
+1000	-	1.24	0.77	0.18	0.07	-	2.26
+600	-	2.27	1.68	0.17	0.08	-	4.20
+425	-	2.71	1.95	0.00	0.10	-	4.76
+212	-	4.41	5.76	0.68	0.45	-	11.30
-212	-	0.65	0.79	0.86	0.02	-	2.32
TOTAL	6.86	11.28	10.95	1.89	0.72	68.30	100.00

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 237 SAMPLE 38 2/28

DATE 3 AUGUST 1994

Fraction	Oversize	**Garnet**	Horn.	Opaques	Others	Quartz	TOTAL
+3000	16.03	-	-	-	-	62.79	78.82
+1000	-	2.36	1.42	0.62	0.04	-	4.44
+600	-	2.87	2.09	0.16	0.10	-	5.22
+425	-	2.12	1.76	0.12	0.08	-	4.08
+212	-	2.06	3.58	0.24	0.18	-	6.06
-212	-	0.42	0.53	0.35	0.05	-	1.35
TOTAL	16.03	9.83	9.38	1.49	0.45	62.79	99.97

CHAMBIGNE GARNET DRILLING SAMPLES

TEST : 250 SAMPLE 39 29

DATE 10 NOVEMBER 1994

Fraction	Oversize	Garnet	Horn.	Opaques	Others	Quartz	TOTAL
+3000	15.57	-	-	-	-	60.06	75.63
	-					-	0.00
	-					-	0.00
+106	-	9.70	13.34	0.49	0.73	-	24.26
+45	-	0.00	0.02	0.01	0.00	-	0.03
-45	-	0.00	0.00	0.00	0.08	-	0.08
TOTAL	15.57	9.70	13.36	0.50	0.81	60.06	100.00

APPENDIX A

EXTRACTS FROM

METALLURGICAL STUDY OF GARNET
&
ENGINEERING STUDY OF PROCESSING PLANT

READINGS METALLURGICAL SERVICES, LISMORE
SUPERVISED BY KELVIN FIEDLER

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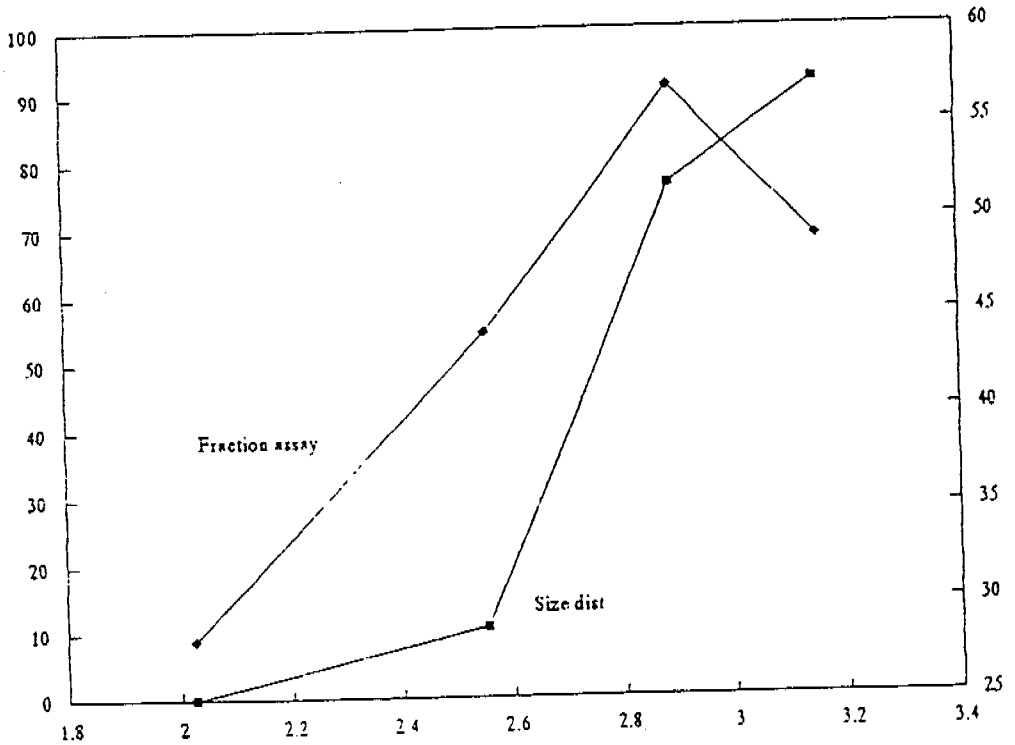
This spreadsheet uses the existing sink/float data and size analysis to estimate the grades and size distribution of intermediate fractions as is required for mass balancing. The intermediate geometric means are used to estimate a cumulative percent passing and grade from the graphs. These estimates are then adjusted to ensure the grade of the recombined sinks is retained and the grade of the −200 um fraction is only slightly lower than the original −212 um fraction.

Sample 0

	Size	Geo mean	Wt % sinks/total	Wt % of sinks	Cum % passing	Log geo mean	Grade Wt % G	Relative fraction assay %G
+	2000							
+	1000	1414	2	8.1	91.9	3.15	0.98	49.0
+	600	775	3.8	15.5	76.4	2.89	2.16	56.8
+	212	357	16.15	65.8	10.6	2.55	7.11	44.0
−	212	106	2.6	10.6	0.0	2.03	0.73	28.1
			24.55	100			10.98	

Plot of Log Geometric Mean vs Cumulative % Passing and Relative Fraction Assay



Geometric mean of 600−400 um range is 490 um The log is 2.69
Geometric mean of 400−200 um range is 283 um The log is 2.45

The data in the following table forms the basis of the weights and grades of each fraction as used in the mass balance.

Estimated Distribution and Grades of Intermediate Fractions

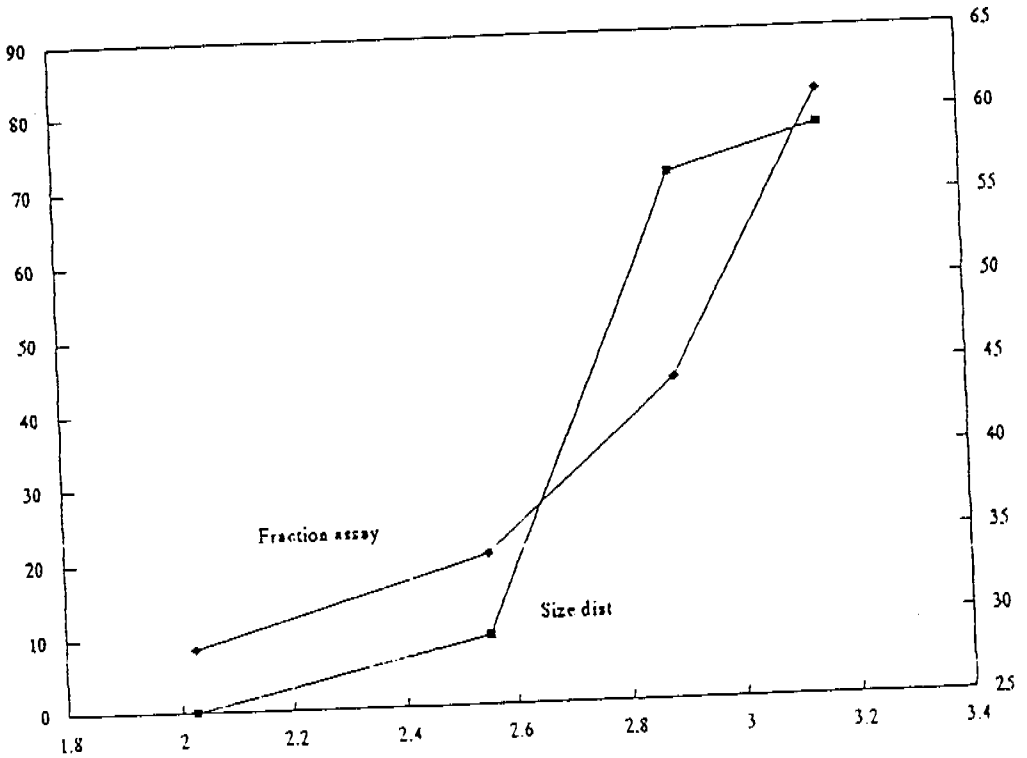
	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	91.9	2.0	8.1	0.98	49.00
+	600	76.4	3.8	15.5	2.16	56.84
+	400	41.0	8.7	35.4	4.08	47.00
+	200	10.0	7.6	31.0	3.08	40.50
−	200	0.0	2.5	10.0	0.68	27.54
			24.55	100	10.98	

This spreadsheet uses the existing sink/float data and size analysis to estimate the grades and size distribution of intermediate fractions as is required for mass balancing. The intermediate geometric means are used to estimate a cumulative percent passing and grade from the graphs. These estimates are then adjusted to ensure the grade of the recombined sinks is retained and the grade of the −200 um fraction is only slightly lower than the original −212 um fraction.

Sample 1

	Size	Geo mean	Wt % of sinks/total	Wt % of sinks	Cum % passing	Log geo mean	Grade Wt % G	Relative fraction assay %G
+	2000							
+	1000	1414	6.01	23.3	76.7	3.15	3.67	61.1
+	600	775	1.54	6.0	70.7	2.89	0.68	44.2
+	212	357	15.82	61.4	9.3	2.55	5.39	34.0
−	212	106	2.40	9.3	0.0	2.03	0.69	29.6
			25.77	100			10.42	

Plot of Log Geometric Mean vs Cumulative % Passing and Relative Fraction Assay



Geometric mean of 600−400 um range is	490 um	The log is	2.69
Geometric mean of 400−200 um range is	283 um	The log is	2.45

The data in the following table forms the basis of the weights and grades of each fraction as used in the mass balance.

Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	76.7	6.0	23.3	3.67	61.06
+	600	70.7	1.5	6.0	0.68	44.16
+	400	39.0	8.2	31.7	2.94	36.00
+	200	9.0	7.7	30.0	2.47	32.00
−	200	0.0	2.3	9.0	0.65	28.24
			25.77	100	10.42	

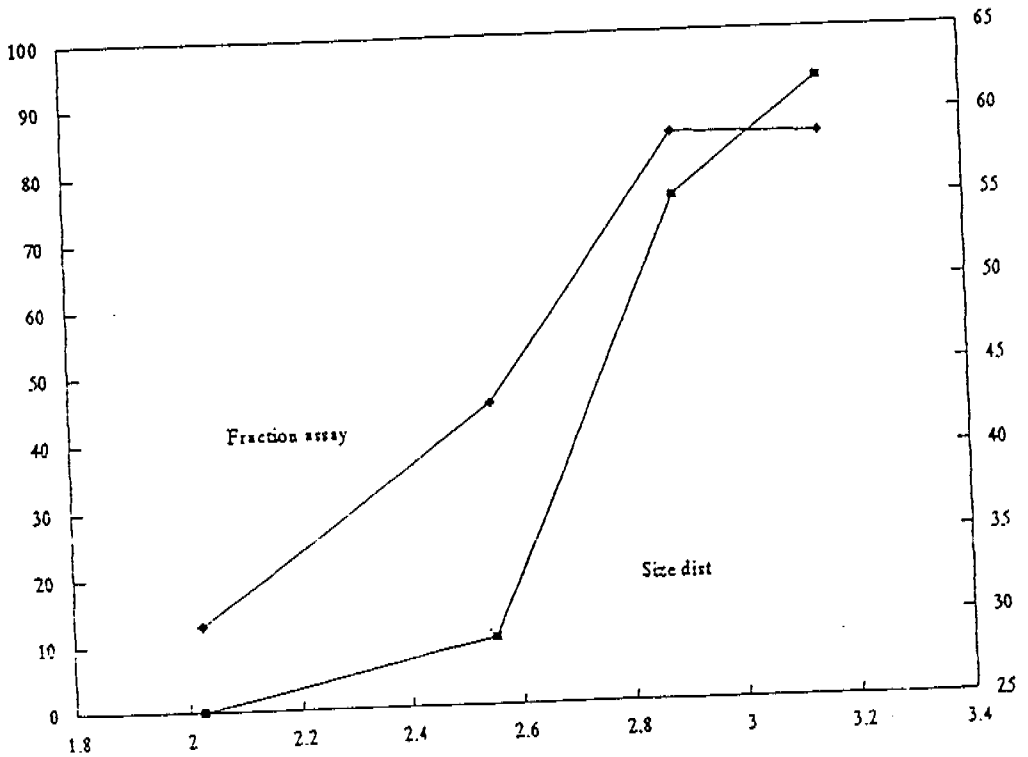
file: c:\cham135\dis2.wk3 rev: 27/01/94 13:09:25
date: 091293 print

This spreadsheet uses the existing sink/float data and size analysis to estimate the grades and size distribution of intermediate fractions as is required for mass balancing. The intermediate geometric means are used to estimate a cumulative percent passing and grade from the graphs. These estimates are then adjusted to ensure the grade of the recombined sinks is retained and the grade of the -200 um fraction is only slightly lower than the original -212 um fraction.

Sample 2

	Size	Geo mean	Wt % of sinks/total	Wt % of sinks	Cum % passing	Log geo mean	Grade Wt % G	Relative fraction assay %G
+	2000							
+	1000	1414	2.59	7.5	92.5	3.15	1.52	58.7
+	600	775	5.96	17.2	75.4	2.89	3.51	58.9
+	212	357	22.65	65.2	10.1	2.55	9.74	43.0
-	212	106	3.52	10.1	0.0	2.03	1.06	30.1
			34.72	100			15.83	

Plot of Log Geometric Mean vs Cumulative % Passing and Relative Fraction Assay



Geometric mean of 600-400 um range is 490 um The log is 2.69
Geometric mean of 400-200 um range is 283 um The log is 2.45

The data in the following table forms the basis of the weights and grades of each fraction as used in the mass balance.

Estimated Distribution and Grades of Intermediate Fractions

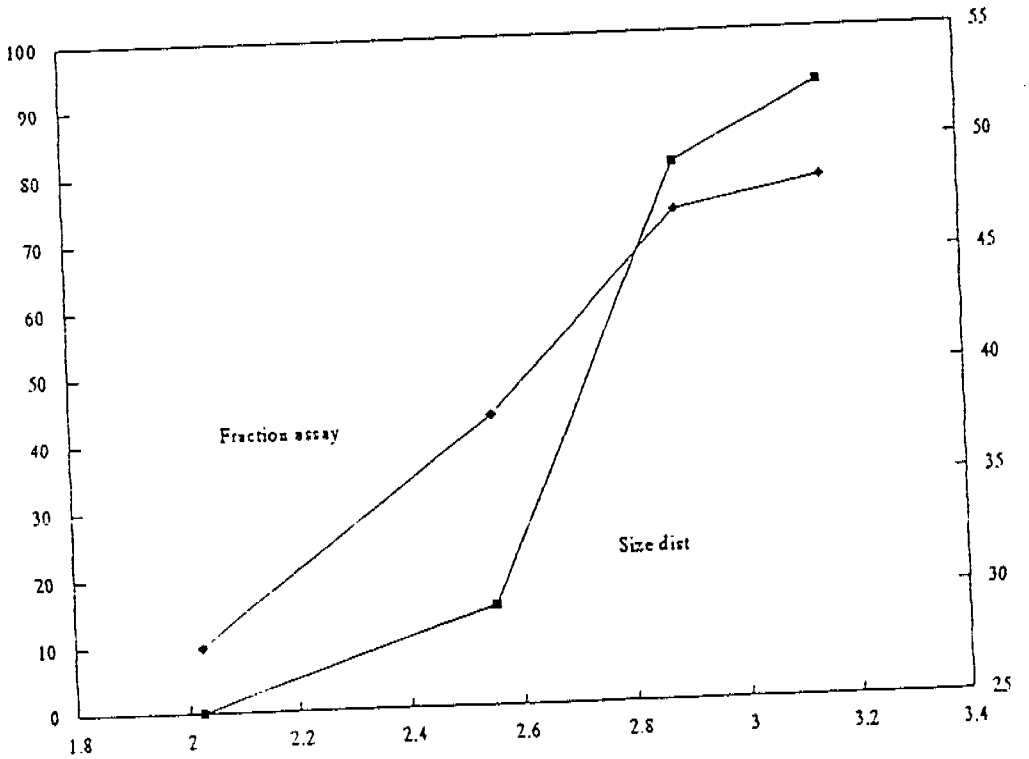
	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	92.5	2.6	7.5	1.52	58.69
+	600	75.4	6.0	17.2	3.51	58.69
+	400	39.5	12.5	35.9	5.85	47.00
+	200	9.5	10.4	30.0	3.96	38.00
-	200	0.0	3.3	9.5	0.99	29.95
			34.72	100	15.83	

This spreadsheet uses the existing sink/float data and size analysis to estimate the grades and size distribution of intermediate fractions as is required for mass balancing. The intermediate geometric means are used to estimate a cumulative percent passing and grade from the graphs. These estimates are then adjusted to ensure the grade of the recombined sinks is retained and the grade of the −200 um fraction is only slightly lower than the original −212 um fraction.

Sample 3

	Size	Geo mean	Wt % of sinks/total	Wt % of sinks	Cum % passing	Log geo mean	Grade Wt % G	Relative fraction assay %G
+	2000							
+	1000	1414	2.34	8.1	91.9	3.15	1.13	48.3
+	600	775	3.32	11.5	80.3	2.89	1.56	47.0
+	212	357	18.8	65.4	15.0	2.55	7.14	38.0
−	212	106	4.30	15.0	0.0	2.03	1.2	27.9
			29.76	100			11.03	

Plot of Log Geometric Mean vs Cumulative % Passing and Relative Fraction Assay



Geometric mean of 600−400 um range is	490 um	The log is	2.69
Geometric mean of 400−200 um range is	283 um	The log is	2.45

The data in the following table forms the basis of the weights and grades of each fraction as used in the mass balance.

Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	91.9	2.3	8.1	1.13	48.29
+	600	80.3	3.3	11.5	1.56	46.99
+	400	44.0	10.4	36.3	4.23	40.50
+	200	14.1	8.6	29.9	2.97	34.50
−	200	0.0	4.1	14.1	1.14	28.18
			29.76	100	11.03	

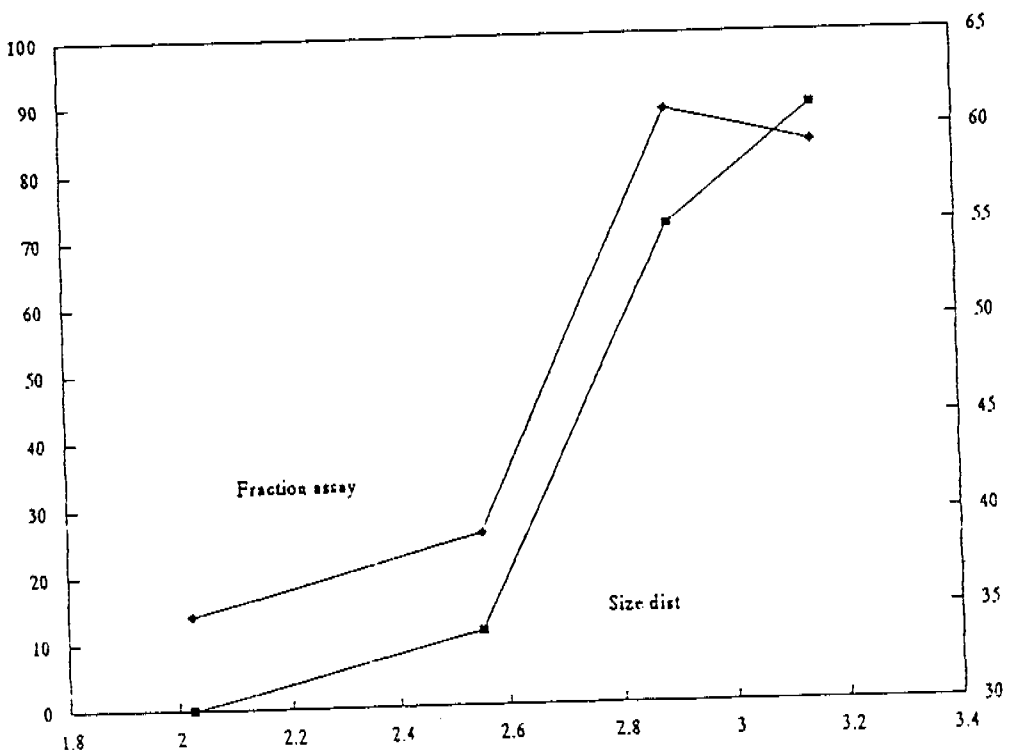
file: c:\cham135\dist4.wk3 rev: 1
date: 091293 print: 27/01/94 13:12:45

This spreadsheet uses the existing sink/float data and size analysis to estimate the grades and size distribution of intermediate fractions as is required for mass balancing. The intermediate geometric means are used to estimate a cumulative percent passing and grade from the graphs. These estimates are then adjusted to ensure the grade of the recombined sinks is retained and the grade of the −200 um fraction is only slightly lower than the original −212 um fraction. Manual smoothing of the size distribution has been employed.

Sample 4

	Size	Geo mean	Wt % of sinks/total	Wt % of sinks	Cum % passing	Log geo mean	Grade Wt % G	Relative fraction assay %G
+	2000							
+	1000	1414	3.21	11.1	88.9	3.15	1.9	59.2
+	600	775	5.02	17.4	71.5	2.89	3.06	61.0
+	212	357	17.43	60.4	11.1	2.55	6.8	39.0
−	212	106	3.21	11.1	0.0	2.03	1.12	34.9
			28.87	100			12.88	

Plot of Log Geometric Mean vs Cumulative % Passing and Relative Fraction Assay



Geometric mean of 600−400 um range is 490 um The log is 2.69
Geometric mean of 400−200 um range is 293 um The log is 2.45

The data in the following table forms the basis of the weights and grades of each fraction as used in the mass balance.

Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	88.9	3.2	11.1	1.90	59.19
+	600	71.5	5.0	17.4	3.06	60.96
+	400	40.0	9.1	31.5	3.82	42.00
+	200	10.4	8.5	29.6	3.08	36.00
−	200	0.0	3.0	10.4	1.02	34.14
			28.87	100	12.88	

file: c:\cham135\distf.wk3 rev: 1
date: 091293 print: 27/01/94 13:19:05

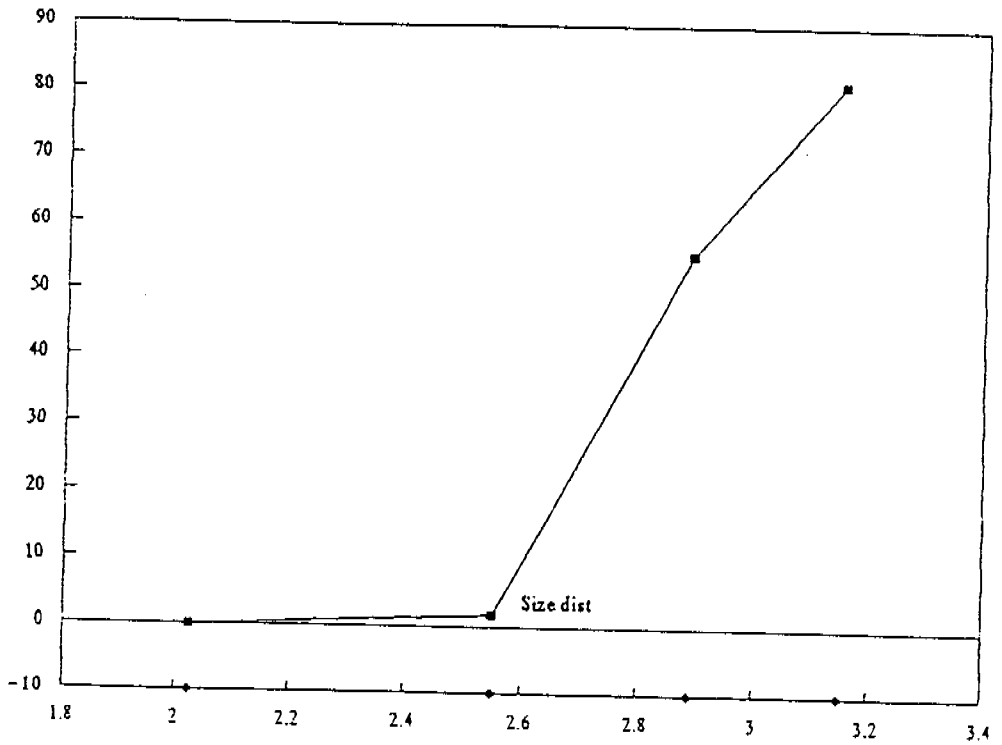
FLOATS

This spreadsheet uses the existing sink/float data and size analysis to estimate the size distribution of intermediate fractions as is required for mass balancing. The intermediate geometric means are used to estimate a cumulative percent passing from the graphs.

Sample 0

	Size	Geo mean	Wt % of float/total	Wt % of floats only	Cum % passing	Log geo mean	Grade Wt % G	Relative fraction assay %G
+	2000							
+	1000	1414	11.3	18.6	81.4	3.15	0	0.0
+	600	775	15.65	25.8	55.7	2.89	0	0.0
+	212	357	32.79	54.0	1.7	2.55	0	0.0
-	212	106	1.03	1.7	-0.0	2.03	0	0.0
			60.77	100			0	

Plot of Log Geometric Mean vs Cumulative % Passing and Relative Fraction Assay



Geometric mean of 600-400 um range is 490 um The log is 2.69
Geometric mean of 400-200 um range is 283 um The log is 2.45

The data in the following table forms the basis of the weights and grades of each fraction as used in the mass balance.

Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of floats/total	Wt % of floats	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	81.4	11.3	18.6	0.00	0.00
+	600	55.7	15.7	25.8	0.00	0.00
+	400	25.0	18.6	30.7	0.00	0.00
+	200	1.5	14.3	23.5	0.00	0.00
-	200	0.0	0.9	1.5	0.00	0.00
			60.77	100	0	

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date: 101293 print: 27/01/94 13:27:18

Sample 0
Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	91.9	2.0	8.1	0.98	49.00
+	600	76.4	3.8	15.5	2.16	56.84
+	400	41.0	8.7	35.4	4.08	47.00
+	200	10.0	7.6	31.0	3.08	40.50
-	200	0.0	2.5	10.0	0.68	27.54
			24.55	100	10.98	

Sample 1
Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	76.7	6.0	23.3	3.67	61.06
+	600	70.7	1.5	6.0	0.68	44.16
+	400	39.0	8.2	31.7	2.94	36.00
+	200	9.0	7.7	30.0	2.47	32.00
-	200	0.0	2.3	9.0	0.65	28.24
			25.77	100	10.42	

Sample2
Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	92.5	2.6	7.5	1.52	58.69
+	600	75.4	6.0	17.2	3.51	58.89
+	400	39.5	12.5	35.9	5.85	47.00
+	200	9.5	10.4	30.0	3.96	38.00
-	200	0.0	3.3	9.5	0.99	29.95
			34.72	100	15.83	

Sample 3
Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	91.9	2.3	8.1	1.13	48.29
+	600	80.3	3.3	11.5	1.56	46.99
+	400	44.0	10.4	36.3	4.23	40.50
+	200	14.1	8.6	29.9	2.97	34.50
-	200	0.0	4.1	14.1	1.14	28.18
			28.76	100	11.03	

Sample 4
Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	88.9	3.2	11.1	1.90	59.19
+	600	71.5	5.0	17.4	3.06	60.96
+	400	40.0	9.1	31.5	3.82	42.00
+	200	10.4	8.5	29.6	3.08	36.00
-	200	0.0	3.0	10.4	1.02	34.14
			29.87	100	12.88	

Mean of all five samples — Sinks

Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	88.7	3.2	11.3	1.84	56.97
+	600	74.9	3.9	13.8	2.19	55.86
+	400	40.7	9.8	34.2	4.19	42.64
+	200	10.6	8.6	30.1	3.11	36.26
−	200	−0.0	3.0	10.6	0.90	29.65
			28.53	100	12.23	

Floats

Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of floats/total	Wt % of floats	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	81.4	11.3	18.6	0.00	0.00
+	600	55.7	15.7	25.8	0.00	0.00
+	400	25.0	18.6	30.7	0.00	0.00
+	200	1.5	14.3	23.5	0.00	0.00
−	200	0.0	0.9	1.5	0.00	0.00
			60.77	100	0	

Total − 2 mm

	Size	Cum % passing	Wt % of −2mm/tot	Wt % of −2mm	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	85.5	14.53	16.3	1.84	12.66
+	600	65.9	19.58	21.9	2.19	11.21
+	400	37.5	28.40	31.8	4.19	14.74
+	200	14.6	22.86	25.6	3.11	13.61
−	200	10.7	3.94	4.4	0.90	22.79
			89.30	100	12.23	

Magnetic separations of + and − 1 mm feed.

Sample	Size Fraction	H/S	Mag1	Mag2	N/Mag
0	+1	0.03	1.64	1.04	14.33
0	−1	0.26	15.33	6.79	48.84
1	+1	0.01	1.57	0.98	9.41
1	−1	0.39	17.15	6.25	56.88
2	+1	0.01	1.86	1.05	8.99
2	−1	0.54	21.5	8.82	50.36
3	+1	0.01	1.51	1	10.13
3	−1	0.42	17.24	7.09	45.02
4	+1	0.04	2.14	1.37	11.76
4	−1	0.46	16.94	7.4	49.92
Mean	+1	0.02	1.74	1.09	10.92
	−1	0.41	17.63	7.27	50.21
Total mags	+1		2.83		
	−1		24.90		
Total			27.73		

Total	H/S Total	Mag1 Total	Mag2 Total	N/Mag Total	Sample Total
17.04	0.29	16.97	7.83	63.17	88.26
71.22					
11.97	0.4	18.72	7.23	66.29	92.64
80.67					
11.91	0.55	23.36	9.87	59.37	93.15
81.24					
12.65	0.43	18.75	8.09	55.15	82.42
69.77					
15.31	0.5	19.08	8.77	61.68	90.03
74.72					
Averages	0.43	19.38	8.36	61.13	89.30
Therefore the +2mm sink and float is					10.70
Combined Mags (not H/S)					27.73

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date: 101293
rev: 1
print: 27/01/94 13:22:11

Mean of all five samples
Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	88.7	3.2	11.3	1.84	56.97
+	600	74.9	3.9	13.8	2.19	55.86
+	400	40.7	9.8	34.2	4.19	42.84
+	200	10.6	8.6	30.1	3.11	36.25
-	200	-0.0	3.0	10.6	0.90	29.65
			29.53	100	12.23	

Basis for different feed grades to plant 10 % Garnet
Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	88.7	2.6	11.3	1.50	56.97
+	600	74.9	3.2	13.8	1.79	55.86
+	400	40.7	8.0	34.2	3.42	42.84
+	200	10.6	7.0	30.1	2.54	36.26
-	200	-0.0	2.5	10.6	0.73	29.65
			23.33	100	10.00	

Basis for different feed grades to plant 15 % Garnet
Estimated Distribution and Grades of Intermediate Fractions

	Size	Cum % passing	Wt % of sinks/total	Wt % of sinks	Grade Wt % G	Relative fraction assay %G
+	2000					
+	1000	88.7	4.0	11.3	2.26	56.97
+	600	74.9	4.8	13.8	2.69	55.86
+	400	40.7	12.0	34.2	5.13	42.84
+	200	10.6	10.5	30.1	3.82	36.26
-	200	-0.0	3.7	10.6	1.10	29.65
			35.00	100	15.00	

Mass balance for the Primary Plant and the magnetic separator and screen station for the Secondary Plant for the proposed Chambigne Garnet Project.

Mean Grade Case, 12.23% garnet

P R I M A R Y P L A N T – A R E A 1

Stream		1	2	3	4	6	7	20	8	9	23	24	26	27	18
Description		Primary screen feed	Primary screen +2 mm reject	Primary screen –2 mm product	Primary screen dust	CC drum HS reject	CC drum product	RE seps feed	RE seps non mag reject	RE seps magnetic product (Sec feed)	RE seps dust	Primary baghouse feed	Primary baghouse vent to atmsphre	Primary baghouse dust	Primary plant rejects
Solids flowrate	tph	150.00	16.05	133.86	0.18	0.65	133.22	133.22	91.89	41.33	0.11	0.29	0.00	0.29	108.88
Size dist															
+2 mm	tph	16.05	16.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.05
–2 + 1mm	tph	21.79	0.00	21.79	0.00	0.03	21.76	21.76	17.52	4.24	0.00	0.00	0.00	0.00	17.55
–1mm + 600um	tph	29.42	0.00	29.42	0.00	0.16	29.26	29.26	19.53	9.74	0.00	0.00	0.00	0.00	19.69
–600um + 400um	tph	42.62	0.00	42.62	0.00	0.23	42.39	42.39	28.28	14.10	0.00	0.00	0.00	0.00	28.52
–400um + 200um	tph	34.30	0.00	34.30	0.00	0.19	34.11	34.11	22.76	11.35	0.00	0.00	0.00	0.00	22.95
–200um	tph	5.90	0.00	5.73	0.18	0.03	5.69	5.69	3.80	1.89	0.11	0.29	0.00	0.29	4.12

S E C O N D A R Y P L A N T – A R E A 2

Stream		28	29	33	31	11	12	5	13	10	14	15	16	17	32
Description		RE seps feed	RE seps dust	RE seps non mag reject	RE seps magnetic product	Screen house dust	–2 + 1mm screen product	–1 mm cumultve screen product	–1 mm + 600um screen product	–600 um cumultve screen product	–600 um + 400 um screen product	– 400 um cumultve screen product	– 400 um + 200 um screen product	– 200 um screen product	Secondary baghouse feed from Area 2
Solids flowrate	tph	41.33	0.02	1.24	40.07	0.02	4.11	35.94	9.44	26.49	13.68	12.81	11.01	1.80	0.04
Size dist															
+2 mm	tph	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
–2 + 1mm	tph	4.24	0.00	0.13	4.11	0.00	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
–1mm + 600um	tph	9.74	0.00	0.29	9.44	0.00	0.00	9.44	9.44	0.00	0.00	0.00	0.00	0.00	0.00
–600um + 400um	tph	14.10	0.00	0.42	13.68	0.00	0.00	13.68	0.00	13.68	13.68	0.00	0.00	0.00	0.00
–400um + 200um	tph	11.35	0.00	0.34	11.01	0.00	0.00	11.01	0.00	11.01	0.00	11.01	11.01	0.00	0.00
–200um	tph	1.89	0.02	0.06	1.82	0.02	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.04

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Mass balance for the Primary Plant and the magnetic separator and screen station for the Secondary Plant for the proposed Chambigne Garnet Project.

High Grade Case, 15% garnet

		P R I M A R Y P L A N T – A R E A 1													
Stream		1	2	3	4	6	7	20	8	9	23	24	26	27	18
Description		Primary screen feed	Primary screen +2 mm reject	Primary screen −2 mm product	Primary screen dust	CC drum HS reject	CC drum product	RE seps feed	RE seps non mag reject	RE seps magnetic product (Sec feed)	RE seps dust	Primary baghouse feed	Primary baghouse vent to atmsphre	Primary baghouse dust	Primary plant rejects
Solids flowrate	tph	150.00	16.05	133.86	0.18	0.65	133.22	133.22	82.53	50.68	0.11	0.29	0.00	0.29	99.52
Size dist															
+2 mm	tph	16.05	16.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.05
−2 + 1mm	tph	21.79	0.00	21.79	0.00	0.03	21.76	21.76	16.56	5.20	0.00	0.00	0.00	0.00	16.59
−1mm + 600um	tph	29.42	0.00	29.42	0.00	0.16	29.26	29.26	17.32	11.94	0.00	0.00	0.00	0.00	17.48
−600um + 400um	tph	42.62	0.00	42.62	0.00	0.23	42.39	42.39	25.09	17.30	0.00	0.00	0.00	0.00	25.32
−400um + 200um	tph	34.30	0.00	34.30	0.00	0.19	34.11	34.11	20.19	13.92	0.00	0.00	0.00	0.00	20.38
−200um	tph	5.90	0.00	5.73	0.18	0.03	5.69	5.69	3.37	2.32	0.11	0.29	0.00	0.29	3.69

		S E C O N D A R Y P L A N T – A R E A 2													
Stream		28	29	33	31	11	12	5	13	10	14	15	16	17	32
Description		RE seps feed	RE seps dust	RE seps non mag reject	RE seps magnetic product	Screen house dust	−2 + 1mm screen product	−1 mm cumultve screen product	−1 mm + 600um screen product	−600 um cumultve screen product	−600 um + 400 um screen product	− 400 um cumultve screen product	− 400 um + 200 um screen product	− 200 um screen product	Secondary baghouse feed from Area 2
Solids flowrate	tph	50.68	0.02	1.52	49.14	0.02	5.04	44.08	11.58	32.49	16.78	15.71	13.50	2.21	0.05
Size dist															
+2 mm	tph	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
−2 + 1mm	tph	5.20	0.00	0.16	5.04	0.00	5.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
−1mm + 600um	tph	11.94	0.00	0.36	11.58	0.00	0.00	11.58	11.58	0.00	0.00	0.00	0.00	0.00	0.00
−600um + 400um	tph	17.30	0.00	0.52	16.78	0.00	0.00	16.78	0.00	16.78	16.78	0.00	0.00	0.00	0.00
−400um + 200um	tph	13.92	0.00	0.42	13.50	0.00	0.00	13.50	0.00	13.50	0.00	13.50	13.50	0.00	0.00
−200um	tph	2.32	0.02	0.07	2.23	0.02	0.00	2.21	0.00	2.21	0.00	2.21	0.00	2.21	0.05

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Mass balance for the Primary Plant and the magnetic separator and screen station for the Secondary Plant for the proposed Chambigne Garnet Project.

Low Grade Case, 10% garnet

P R I M A R Y P L A N T – A R E A 1

Stream		1	2	3	4	6	7	20	8	9	23	24	26	27	18
Description		Primary screen feed	Primary screen +2 mm reject	Primary screen –2 mm product	Primary screen dust	CC drum HS reject	CC drum product	RE seps feed	RE seps non mag reject	RE seps magnetic product (Sec feed)	RE seps dust	Primary baghouse feed	Primary baghouse vent to atmsphre	Primary baghouse dust	Primary plant rejects
Solids flowrate	tph	150.00	16.05	133.86	0.18	0.65	133.22	133.22	99.43	33.78	0.11	0.29	0.00	0.29	116.42
Size dist															
+2 mm	tph	16.05	16.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.05
–2 + 1mm	tph	21.79	0.00	21.79	0.00	0.03	21.76	21.76	16.30	3.46	0.00	0.00	0.00	0.00	18.33
–1mm + 600um	tph	29.42	0.00	29.42	0.00	0.16	29.26	29.26	21.30	7.96	0.00	0.00	0.00	0.00	21.46
–600um + 400um	tph	42.62	0.00	42.62	0.00	0.23	42.39	42.39	30.85	11.53	0.00	0.00	0.00	0.00	31.09
–400um + 200um	tph	34.30	0.00	34.30	0.00	0.19	34.11	34.11	24.83	9.28	0.00	0.00	0.00	0.00	25.02
–200um	tph	5.90	0.00	5.73	0.18	0.03	5.69	5.69	4.14	1.55	0.11	0.29	0.00	0.29	4.47

S E C O N D A R Y P L A N T – A R E A 2

Stream		28	29	33	31	11	12	5	13	10	14	15	16	17	32
Description		RE seps feed	RE seps dust	RE seps non mag reject	RE seps magnetic product	Screen house dust	–2 + 1mm screen product	–1 mm cumultve screen product	–1 mm +600um screen product	–600 um cumultve screen product	–600 um + 400 um screen product	– 400 um cumultve screen product	– 400 um + 200 um screen product	– 200 um screen product	Secondary baghouse feed
Solids flowrate	tph	33.78	0.02	1.01	32.76	0.01	3.36	29.38	7.72	21.66	11.19	10.48	9.00	1.47	0.03
Size dist															
+2 mm	tph	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
–2 + 1mm	tph	3.46	0.00	0.10	3.36	0.00	3.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
–1mm + 600um	tph	7.96	0.00	0.24	7.72	0.00	0.00	7.72	7.72	0.00	0.00	0.00	0.00	0.00	0.00
–600um + 400um	tph	11.53	0.00	0.35	11.19	0.00	0.00	11.19	0.00	11.19	11.19	0.00	0.00	0.00	0.00
–400um + 200um	tph	9.28	0.00	0.28	9.00	0.00	0.00	9.00	0.00	9.00	0.00	9.00	9.00	0.00	0.00
–200um	tph	1.55	0.02	0.05	1.49	0.01	0.00	1.47	0.00	1.47	0.00	1.47	0.00	1.47	0.03

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GEOCHEMPET SERVICES, BRISBANE

MINERALOGICAL REPORT ON A GARNET PRODUCT

WORK REQUESTED

Mineralogical assessment of a garnet product -600u +250u by grain counting.

METHODS AND COMMENTS

The sample was repeatedly coned to improve homogeneity prior to subsampling for grain counting using transmitted polarized light microscopy with an oil immersion mount. Mineral identifications have been made on microscopic appearance in transmitted light and where necessary checked in obliquely reflected light.

Results are based on counts of 200 grains in random linear traverses.

RESULTS

0149 Garnet Product -600u +250u

Garnet	97.5%
Hornblende	1.0%
Opaque oxide (prob. ilmenite)	1.0%
Composite biotite and opaque oxide	0.5%

In more detail the product consists mainly of garnet of essentially pink and reddish colours (probably almandine) which may be subdivided as follows:

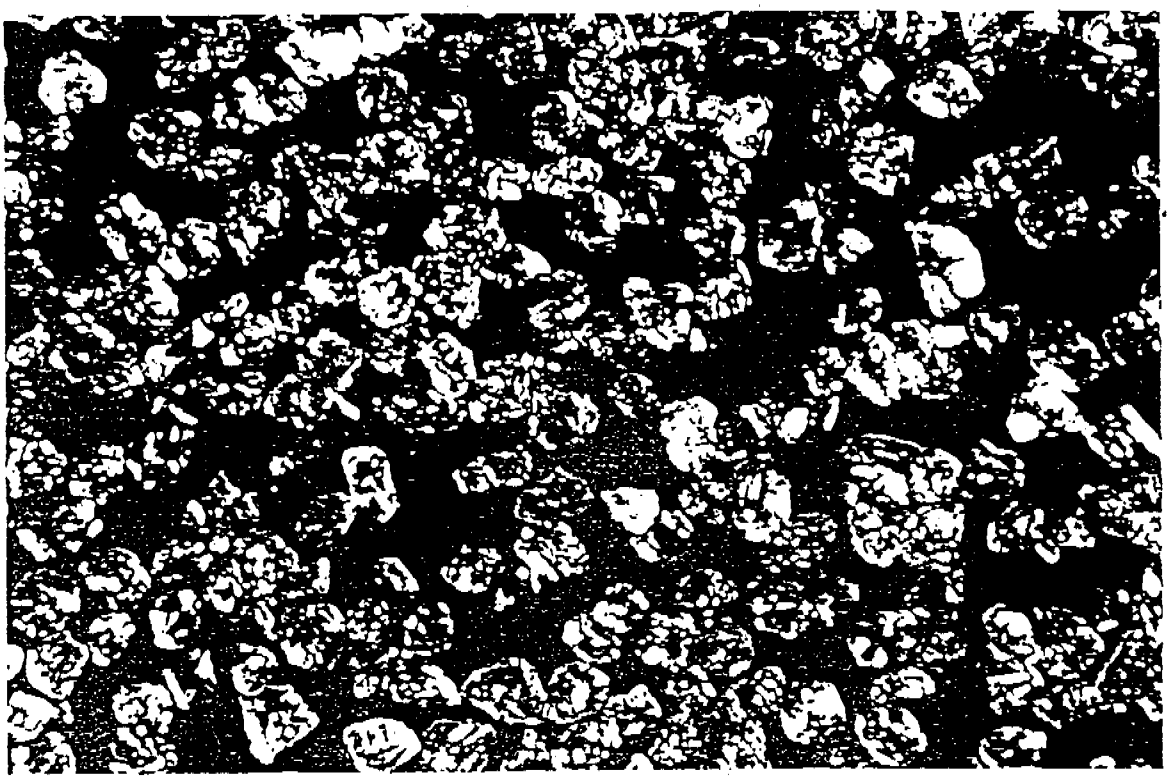
10.0%	clean, fresh garnet
3.0%	fresh garnet with one or more small inclusions of opaque oxide
75.0%	lightly or moderately iron-stained garnet
7.5%	garnet which is both iron-stained and impregnated with one or more inclusions of opaque oxide
2.0%	garnet composite with minor hornblende

Without the constraint of actual counting, it seems that at least half of the garnet grains are of angular, broken appearance and the rest are equidimensional, multifaceted, small crystals.

The rest of the product comprises 1% hornblende (barely translucent green to brown), 1% opaque black grains of probable ilmenite and 0.5% biotite (dark brown flakes) composite with opaque oxide.

OCTOBER, 1993.

Photograph 3



-250µm Garnet Product

Photograph 4

- 250µm - 600µm Garnet Prod

Photograph 5

- 600µm - 800µm Garnet Product

Photograph 6

- 800µm - 1.00mm Garnet Product

ADDENDUM

This addendum provides the visually estimated garnet grades, in volume %, for those locations visited during the first ground reconnaissance traverse of the Plenty River. Note that the most intense sampling was carried out along the Plenty River between longitudes 134°52′E and 135°00′E; the visual estimates for these sites are not included, as they have been superseded by the much more accurate, comprehensive and representative laboratory-measured weight % data presented in appendix pages 5 through 16 of this report.

METHOD

The sites listed in this addendum were accessed from existing roads and bore tracks, by 4WD vehicle. At each site, a number of ≈ 0.7 metre holes were dug at both edges and the centre of the watercourse to establish the variation in the stratification of garnet ("reds"), amphiboles+pyroxenes+biotite+opaques ("blacks") and quartz+feldspar+ muscovite ("yellows"). About 1kg of sand from each of these holes was mixed to form a composite for the site. A subsample from this composite was sieved to remove small pebbles and grains larger than 1.2mm, and from this, approximately 0.5kg was then wet panned. The heavy concentrates were then examined visually in the pan (with the aid of a portable binocular microscope) to estimate garnet volume percentage for the creek- or riverbed at that site.

Note that these data serve merely to establish that these areas of the Plenty River are prospective; they are not particularly accurate, and do not take into account the likely variation in garnet grades with depth - this is particularly important for the lower reaches of the Plenty, where depths in excess of 2m are common, and depths in excess of 4m have been recorded. Furthermore, while wet panning clearly separates the >0.3mm garnet grains, it is less effective in separating the fines. Additionally, within the fines, it is difficult to visually distinguish iron-oxide coated quartz grains from garnets, as both are various shades of red to orange.

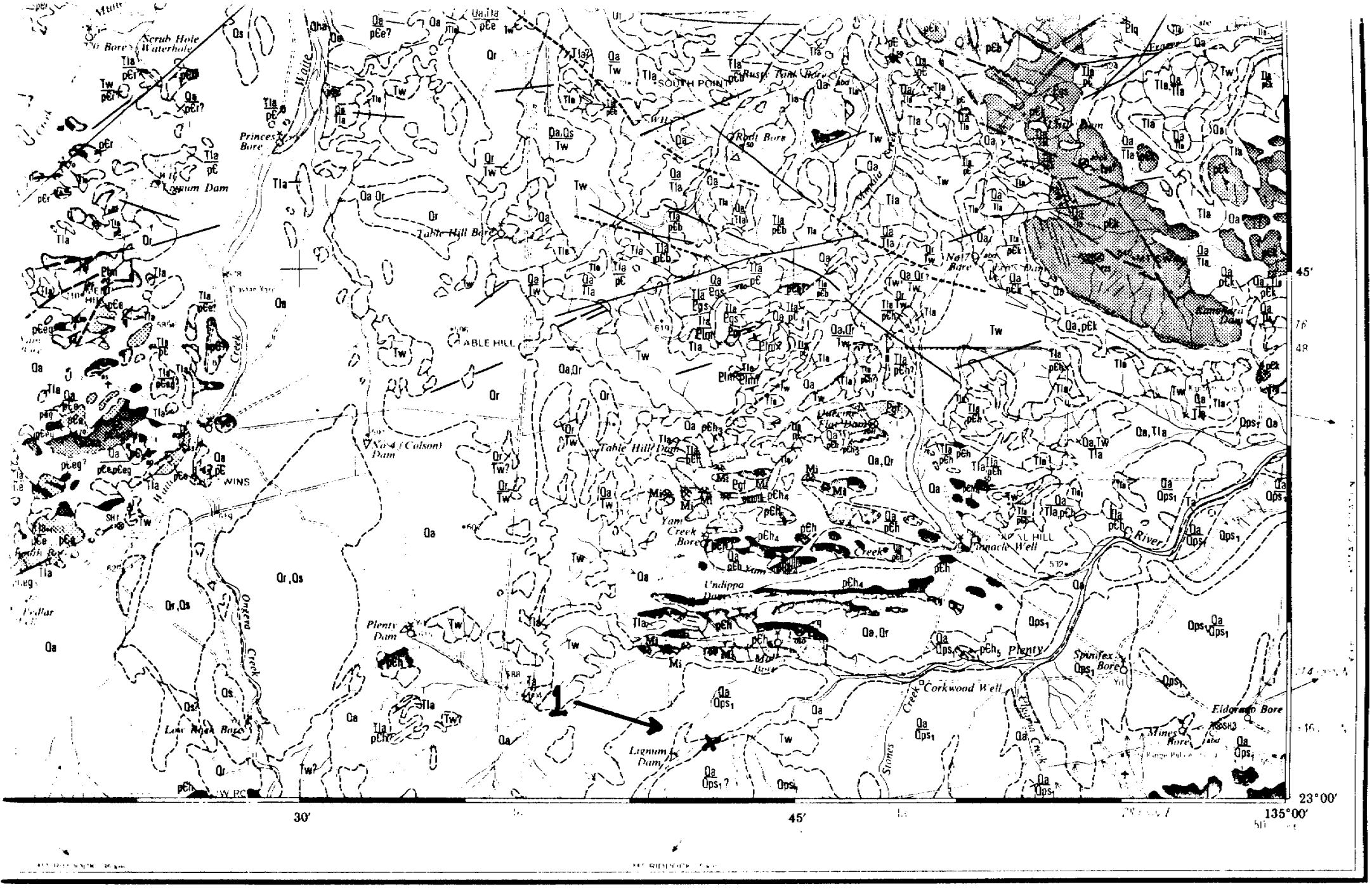
As forshadowed in the text of this report, the more prospective of these sites, plus others, will be sampled via backhoe, and graded on mineral separates, to provide more accurate and representative data on which to base production decisions and planning.

GARNET VOLUME PRECENTAGES

The visually estimated 0.2 - 1.2mm garnet volume precentages are listed below. The sampling site locations are also marked on the 1:1 photocopies of the relevant 1:250,000 geological maps on the following pages.

Site	EL	Location (1:250,000 geological map)	Garnet volume %
1	8076	Mallee Bore track, downstream from Lignum Dam (Alcoota)	12%
2	8076	4km south of Aturga Well (Alice Springs)	12%
24	8076	Dneiper HS road crossing (Huckitta)	12%
25	8076	Adjacent to Top Well (Huckitta)	8%
26	8076	Near Huckitta HS (Huckitta)	8%
27	8384	Blackbird Bore (Huckitta)	6%
28	8423	Ghost Gum bore track crossing (Huckitta)	5%
29	8423	Plenty Highway crossing (Huckitta)	5%

Note that the garnet grade of Entire Creek on its flood plain is relatively low - it was not panned, but a visual inspection indicates << 5% by volume; hence, downstream from its confluence, the generally higher garnet grades of the Plenty River are effectively diluted by the Entire Creek river sands.

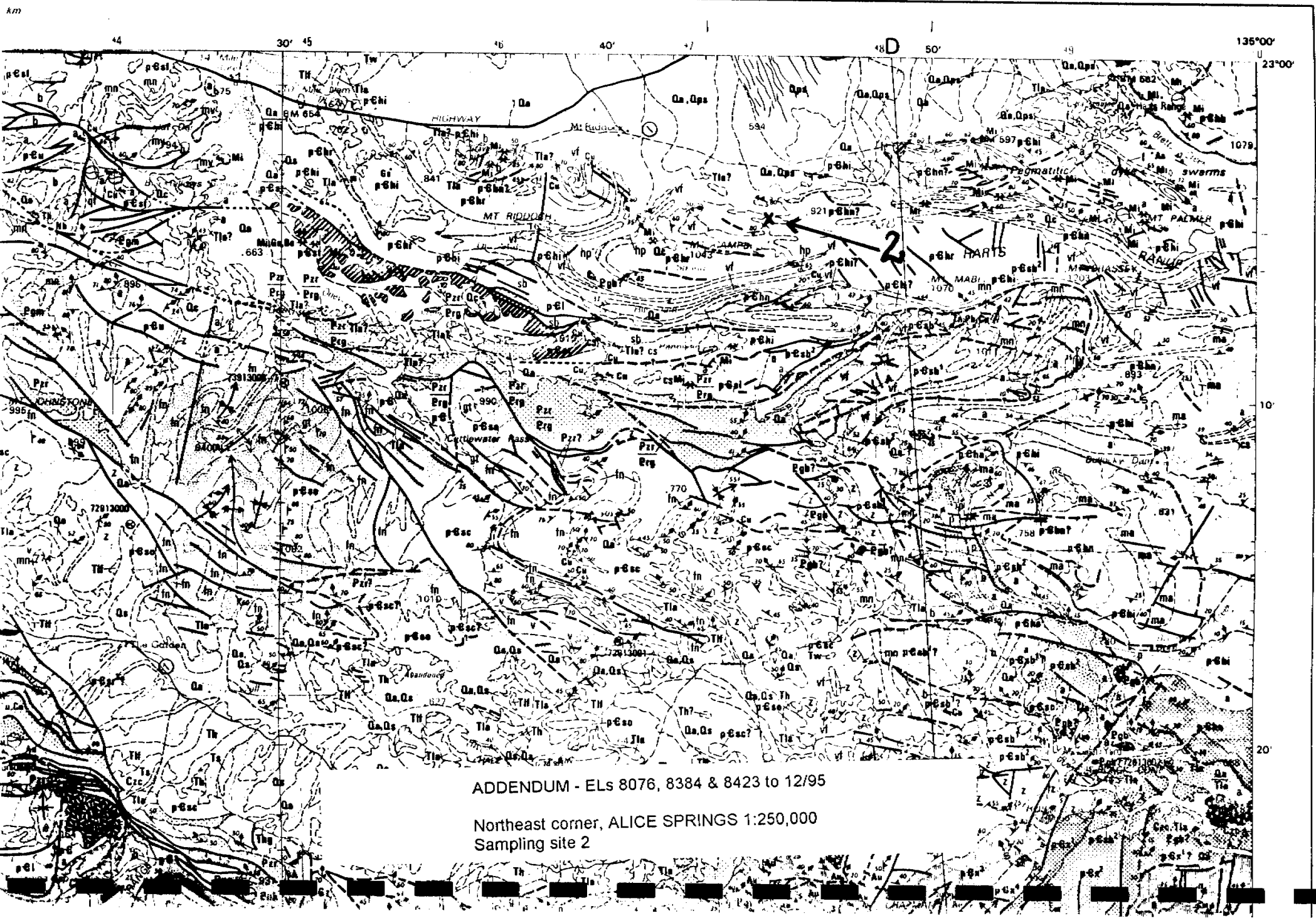


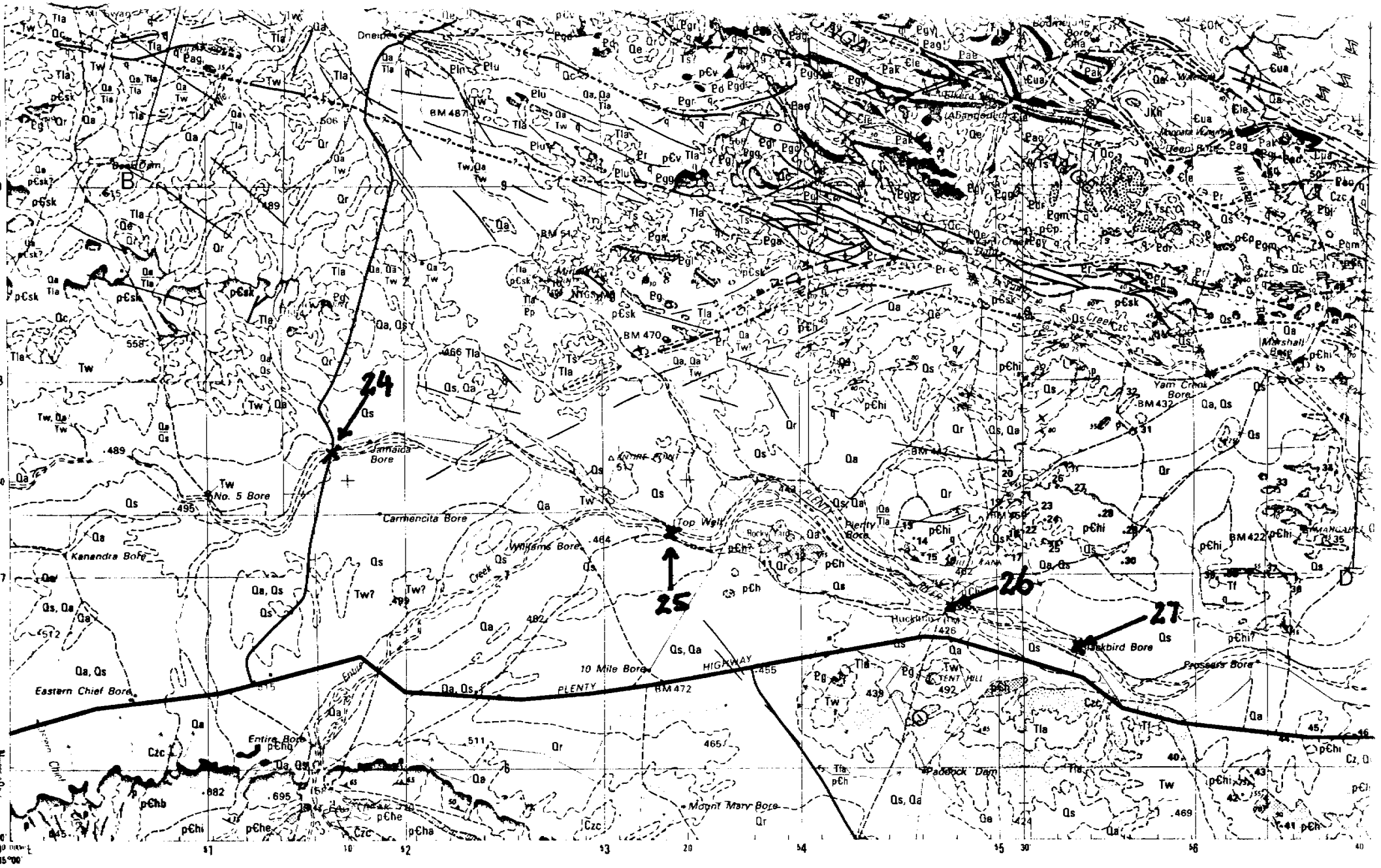
ADDENDUM - ELs 8076, 8384 & 8423 to 12/95

Southeast corner, ALCOOTA 1:250,000

Sampling site 1

SHEET SF53-14





ADDENDUM - ELs 8076, 8384 & 8423 to 12/95

Southwest corner, HUCKITTA 1:250,000

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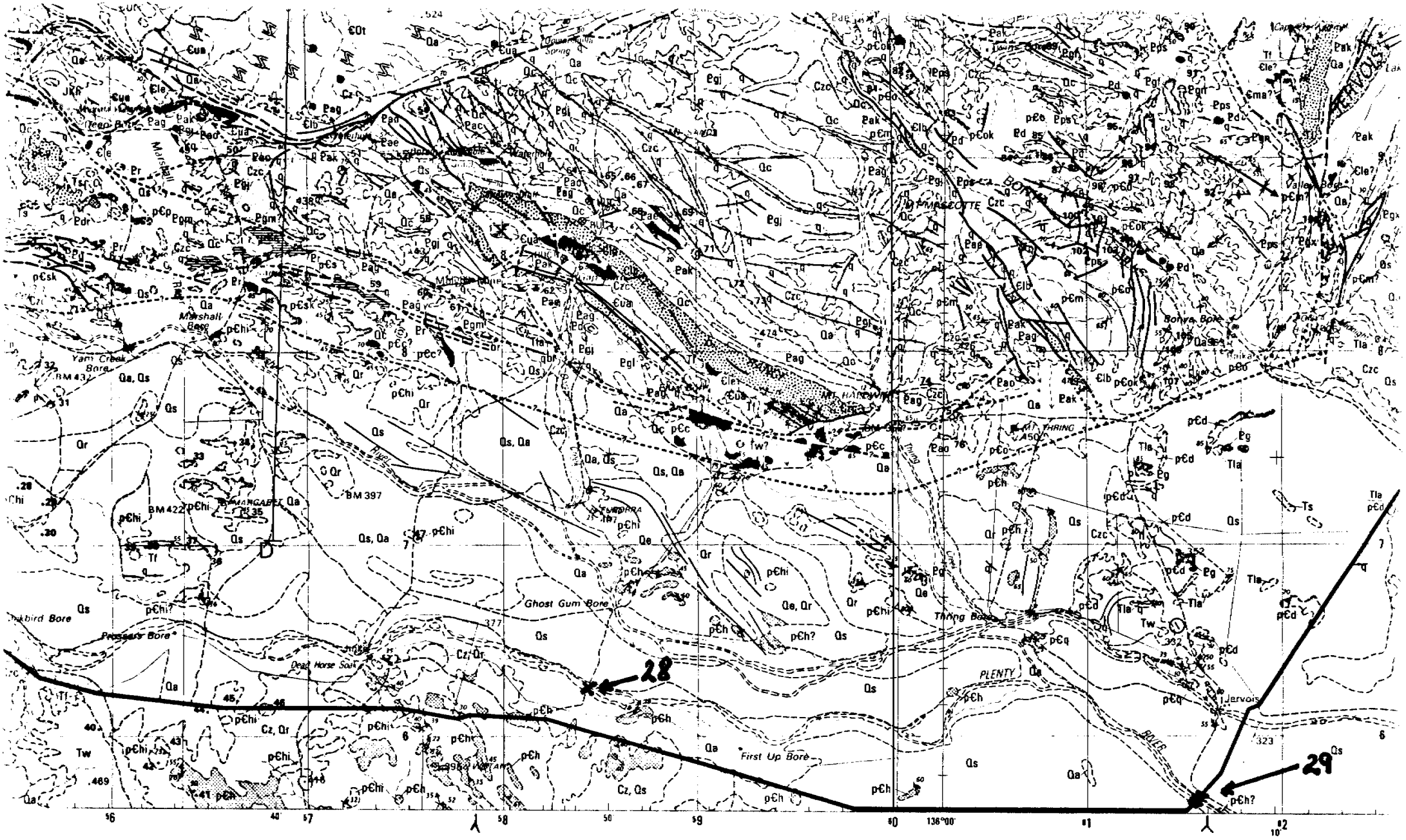
5 0



Scale 1:250 000

5 0 5 10 15 20 25 KILOMETRES

ADDENDUM - ELs 8076, 8384 & 8423 to 12/95

Southern edge, HUCKITTA 1:250,000
Sampling sites 28 and 29