GM 33904

1978 FIELD WORK, LAC COSTEBELLE PROJECT

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ESSEX MINERALS COMPANY

LAC COSTEBELLE PROJECT

1978 FIELD WORK

SUMMARY REPORT

Ministère des Richesses Naturelles, Québec SELVICE DE LA DOCUMENTATION TECHNIQUE

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S.L. Tihor

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1.0 INTRODUCTION

In 1976, Essex Minerals Company acquired a group of 684 claims, around and to the south of Lac Costebelle, Comte Duplessis, in Eastern Quebec. The claims covered airborne radiometric anomalies detected during a regional survey carried out in 1975 by the Geological Survey of Canada.

During 1977, a close spaced airborne radiometric survey supplemented by ground surveys and geological mapping delineated four separate areas of anomalous radioactivity within the claim group. These anomalous areas were designated Areas A, B North, B South and C. The original claim group was reduced to two smaller groups containing a total of 232 claims; one to the west and south of Lac Costebelle, covering Areas A, B North and B South, and a second group on the west side of the Nabisibi River, covering Area C. (see map 1).

The 1978 program consisted of diamond drill testing of Area C on a semi detailed basis and reconnaissance drill testing of Areas A and B North. Thirty four short, relatively large diameter holes and five deeper, standard diameter holes were drilled in Area C, four standard diameter holes were drilled in Area B North and two holes were drilled in Area A, for a total of 3066 feet in rock.

2.0 CONCLUSIONS and RECOMMENDATIONS

Drilling in Area C confirmed that the red granite of that area (Tihor, 1977) is the source of the anomalous radioactivity and the host for the uranium mineralization in Area C. The average U₃0₈ content of samples of red granite obtained from the drill holes is .005%, and the range of individual samples is from .001 to .034%. The drilling program was not designed to delineate and define the ultimate limits of the red granite, but it did confirm that the granite does occur in relatively large bodies of mineable dimensions and that the shape of these bodies, in three dimensions, is extremely irregular.

Drilling in Area B North was of a reconnaissance nature and was intended to confirm the continuity in depth of the white granite which the 1977 work indicated was the host for the U₃0₈ mineralization of that area and to obtain samples of the white granite. The white granite persists to a depth of at least 100 feet and probably much further. The average U₃0g content of the white granite is .014%, and the range of values in individual samples was from .001 to .027% U308. The uranium values tend to be uniformly distributed through the white granite, although some concentration is associated with coarse biotite segregations. Geological mapping in Area A indicated that uranium values in that area are associated with a white granite which appeared to occur in a westerly dipping dike-like body. Drilling results did not confirm the projected distribution of the white granite and indicates that the geology of the area is more complex than previously expected. Only one significant interval of white granite was encountered in the drilling (hole 78-A-1 from 18.8 to 28.5 meters) and this sample contained .047% U308.

Although relatively large bodies of uraniferous rock occur in Areas B North and C, the uranium content of these rocks is low when compared with the uranium content of present and projected sources of uranium. The next steps in evaluating the economic potential of the Lac Costebelle area uranium concentrations should be mineralogical and metallurgical testing to determine the extent to which the uranium values can be extracted from the rock, followed by preliminary studies to determine whether mining and processing of these low-grade uraniferous rocks can be done profitably at present and projected prices for uranium oxide.

There is no evidence of any significant supergene redistribution of uranium, or of any significant variation of uranium content with depth, in the Costebelle area.

3.0 FIELD PROGRAM

The 1978 field program consisted of diamond drilling in Area A, B and C and a topographic survey of a portion of Area C. The camp was established on the Nabisibi River adjacent to Area C in late April and was occupied by the field crew on May 17th.

Drilling was carried out by Canadian Longyear Limited. The drill equipment was moved in by May 20th and drilling started on May 24th. A Longyear "38" skid mounted drill was used. In Area C, the moves between holes were accomplished with a small caterpillar tractor and a muskeg tractor. In Areas A and B North, the equipment was moved with a Bell 204 helicopter.

Thirty four vertical HWG diameter holes (core diameter - 3 inches) were drilled to a depth of about 30 feet in bedrock in Area C, with standard equipment. Five vertical wireline BQ diameter holes (core diameter - 1 3/8 inches) were also drilled to a depth of 200 feet in Area C. Four vertical holes, each 100 feet deep, were drilled in Area B North, and two inclined holes, each 200 feet deep were drilled in Area A. The total footage drilled was 3066 feet. Core recovery was virtually complete.

Core was logged geologically and radiometrically. Radiometric logging was performed with a McPhar Spectra 44 D spectrometer using a 76×76 mm crystal. Because background readings in the camp were relatively high, and would fluctuate within a wide range over periods of a few seconds, it was therefore necessary to shield the instrument. In practice, a five gallon pail was immersed in a water-filled forty-five gallon drum,

creating a "dry hole" in the water. The detector crystal and the section of core to be read were placed side by side in the pail. Counting time was 60 seconds. Core pieces used for the radiometric logs were taken at intervals of 25, 50 or 100 cm, depending upon rock type, and were about 10 cm long.

The radiometric logging of the core, as a method of estimating the amounts of uranium present, proved to be highly unreliable due to three main factors:

- the low concentrations of radioactive elements in the core;
- 2. the high ambient background radiation; and
- 3. the incompatable geometry of the cylindrical drill core and the square detector crystal housing.

Of the 23 holes from Area C which were systematically logged radiometrically, only 22% showed a positive correlation between the highest radiometric assay in the highest chemical (XRF) assay.

After the core was geologically and radiometrically logged, representative sections of core 2 to 10 cm in length were taken and preserved as a skeleton log. The remainder of the core was sent to the laboratory to be crushed and analyzed. A sample preparation lab was set up in Aguanish where core was crushed and ground to minus 40 mesh. A two kilogram split was sent to Montreal for analysis and the remainder of the crushed core was stored. In addition, a composite sample of fines from each hole was analyzed. Analysis was by semi-quantitative X-ray fluoresence methods. The sample preparation facility was operated under contract by Metriclab of Montreal, and analyses were performed by the same organization. At the present time, the skeleton logs and a two kilogram split from each sample are stored in Aguanish.

The topographic survey in Area C was carried out with an electronic level supplied by Edwin Gaucher Ltd. of Quebec.

Helicopter support was provided throughout the program with a Bell G 47 A operated by Helicopters Les Ailes du Nord from Sept Iles. In addition, a Bell 206 B and a Bell 204 from the same organization were used from time to time.

The drilling was completed on July 8th, 1978 and all equipment was removed from the field by July 12th.

The program was carried out under the supervision of Ms. Sharon Tihor. Mr. Robert A. Quartermain was program geologist, assisted by Mr. William D. Love and Ms. Susan Yatabe.

4.0 PROGRAM and RESULTS

4.1 Area C. (Map 2a)

Area C lies about 1 km west of the Nabisibi River and 6 km north of the Gulf of St. Lawrence. The area of interest is about 1 km by 1.5 km and is included within claims 364127 - 2 and 3, 364130 - 3 and 4, and 364131 - 3 and 4. The area is underlain by granitic gneiss and paragneiss which surround and enclose large irregular bodies of a red, coarse grained granite. The red granite is the source of the anomalous radioactivity in Area C.

Area C was tested with 34 relatively short (30 feet in bedrock) HWG diameter and 5 deeper (200 feet) BQ diameter diamond drill holes. The purpose of these holes was to obtain representative rock samples for analysis and to determine the continuity of the granite with depth and between outcrops. The distribution of the red, coarse grained granite in Area C, as determined by the geological mapping and drilling, is shown in Map 2a. The drill logs and analytical results are in appendix I.

In general the drilling showed that the red, coarse grained granite is irregular in depth, with thicknesses of less than one or more than 60 meters being encountered in the drill holes. The more persistent zones in length and depth, occur along the east side of line 114 S and the west side of line 115 S and 116 S. The drilling did not show conclusively that these zones are part of the same larger zone. Of the thirtynine holes drilled in Area C, 26 were mostly or entirely in red granite.

There are two main phases of the red granite: a very coarse grained phase with the feldspars ranging up to 5 cm in size, and rare bast-naesite; and a more medium grained 0.2 to 1.0 cm equigranular phase containing bastnaesite, zircon, magnetite and rare molybdenite. The medium grained red granite is the principal host for the uranium, which appears to be associated with zircon and bastnaesite.

Assay results indicate that the uranium content of the red granite is generally very low. Only about 10% of the 286 samples analyzed from Area C contained more than about 0.25 lb/ton U_30_8 from the crushed core samples. The overall average for the composite fines was a little higher at .007% or 0.14 lb/ton. However, the values for the fines represent a very much smaller volume of sample.

4.2 Area B North (Map 2b)

Area B north lies on the north side of a small bay in the south-west corner of Lac Costebelle. The area of interest is about 700 m long and 500 m wide and is included in claim 364057 - 2. The area is underlain by white, coarse grained granite and augen gneiss. The white granite is the source of the radiometric anomalies.

Area B north was tested with four 100 foot BQ diameter drill holes. The purpose of this drilling was to test the depth and continuity of the white granite at the strongest radiometric anomalies, as well as to obtain samples for analysis. The distribution of the white granite in Area B north, as determined by geological mapping and drilling, is shown on Map 2b. The drill logs and analytical results are in appendix I.

In general, the drilling showed that the white granite is quite continuous down to 30 meters, with sections of augen gneiss and amphibolite up to about 5 meters in thickness within the granite. White granite, with associated and equally radioactive augen gneiss, makes up 95% of the rock drilled in Area B north, and three of the four drill holes ended in the white granite.

Hole 78-B-3 ended in amphibolite. There is a 10 meter thick amphibolite body, enclosed by white granite and augen gneiss crops out on the hill-side south of the drill hole. If the amphibolite encountered in the drill hole is the same body which crops out on the hillside, then a continuation of hole 78-3-B should encounter white granite below the amphibolite.

The radiometric logging of the core from Area B north indicated a higher, and much more consistent uranium content than Area C. The U/Th ratio is also higher in Area B north than in Area C.

The XRF assay results from Area B north confirmed the higher and more consistent uranium content in the rocks from Area B as compared to those from Area C. The overall average value of the U₃08 analyses for the white granite is 0.014% or .28 lb/ton and most of the individual sample results do not vary much from this value. The U₃08 values obtained from the composite fines samples was considerably greater at 0.08% or 1.6 lb/ton.

4.3 Area A. (Map 2c)

Area A lies on the east side of the southern extension of Lac Costebelle. The area of interest is about 800 m long and 300 m wide and is included in claims 364066 - 1 and 364071 - 3. The area is underlain by granite-gneiss and white, coarse grained granite, both of which show anamalously high radioactivity.

Area A was tested with two 200 foot BQ diameter drill holes set at 60° off horizontal and drilled grid east. These holes were designed to test the depth extensions and continuity of zones of anomalous radioactivity which appeared to be associated with westerly dipping bodies of white granite in a granite-gneiss host rock. The distribution of the various rock types as determined by geological mapping and drilling is shown on map 2c. The drill logs and analytical results are in appendix I.

In general, the drilling showed that the geology of this part of Area A is more complex than was indicated by the surface mapping. Outcrop in the area of hole 78-A-2 is patchy and some of the rock which was mapped as granite-gneiss in surface exposures may in fact be the more felsic portion of the paragneiss. Hole 78-A-2 was collared in paragneiss and remained in paragneiss through most of its length. Hole 78-A-1 encountered augen gneiss and amphibolite over most of its length and only minor sections of white granite.

The radiometric logs and the analytical results show consistently low values of uranium and other radioactive elements in the core

from Area A. The single exception was a sample of white granite from hole 78-A-I which contained .047% U_30_8 . This 10 meter section of white granite is similar to the white granite in Area B north in its U/Th ratio, higher U values in the radiometric log, and higher U_30_8 (XRF) assay (.047%). In the other rocks encountered in the holes, the U/Th ratio was similar to the rocks in Area C.

S.L. Tihor.

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REFERENCES

Tihor, S.L. 1977 Summary Report. Essex Minerals Company, Lac Costebelle Project - 1977 Field Work. Company Report.

APPENDIX I

Drill Hole Logs and Analytical Results

Note: 1. Geological and Radiometric logs in meters.

- Assay results in percent.
- 3. Horizontal lines in Geological log:
 - solid line rock type division
 - dashed line variations within a rock type
- 4. Cross hatched sections in log column indicate where piece of core was removed for skeleton log.
- 5. Solid horizontal lines in sample and assay columns indicate sample length.
- 6. Collar elevations relative to a point on the base line at 108 + 00S which was given the arbitrary value of 100. Values are in meters.

Ministère des Richesses Naturelles, Québec SERVICE DE LA DOCUMENTATION TECHNIQUE

1 4 FEV. 1979

Date:

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GEOLOGICAL LOG BY R. Quartermain DATE Nav 27, 1078 HOLE # ESSEX MINERALS COMPANY 78-6-1 B-3205 DATE LAC COSTEBELLE RADIOMETRIC LOG BY_ CLAIM # LAT.117 + 63 LONG. Dage Jine COLLAR ELEV. 96.48 DEPTH 9.58 m. DIP 90° CORE RECOVERY 95% CORE SIZE HW 364130-3 LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS % TO REMARKS FROM TOTAL Th FROM TO Th 02 U308 .003 1.81 .007 40 3.31 Coarse Red Granite - light red color, grain size up to 0.25 Felsic portion- impure euhedral salmon red feldspars(orthoclase), up to 3 cm; smokey grey to green 0.50 transparent anhedral quartz, up to 1 cm. Mafic portion- consists of four black minerals; Bi-0.75 otite, magnetite, zircon and bastnaesite. Biotite is largely sub to anhedral, 3mm to 2 cm, magnetite is anhedral 2mm to 1 cm. Both zircon(up 1.00 to .5 cm) and bastneasite (up to 1.5 cm) have well formed euhedral crystals. 1:25 Alteration- minor chloritization of biotite and some minor epidite associated with the biotite: 1.50 minor alteration of magnetite to hematite. Mineral percentages; feldspar 60, quartz 25, biotite 10, magnetite 2, bastnaesite 3, zircon 1, 1.75 epidote 1. 1.72 1.87more biotite rich section , fine to coarse grain-1.81 3,62 .002 .00A 2.00 ed, contact to above at 86° to core and minor fo liation continues through section and stays approximately perpendicular to the core axis. Biot-2.25 ite makes up about 15% of the rock, shows minor chloritization and some brownish alteration which 2.50 may be vermiculite. 1.87 2.12 ...coarse red granite continues as described above 2.75 0-1.72 with less bastnaesite and more biotite. 2.22 ... this section contains up to 25% biotite in books 2.12 up to 4 cm. Other mafic minerals were not seen. 3.00 2.22 3.17 ...similar to 0-1.72, fracture cuts core at 600 at 3.25 ...core ground and fractured into pieces .5 cm to 6 3.17 3.50 3.31 ...contact 900 to core axis Biotite Rich Granite- black, salmon red and light 3.44 5.51 100. .007 3.62 4,15 3.75 grey, grain sizes from 1mm to .5 cm. Felsic portion - light grey to salmon red feldsp-TITTE ars, white to grey quartz. 4.00 Mafic portion- euhedral biotite flakes 2mm or less foliation approximately perpendicular to core. 4.25 .002 .004 4.15 5.22 Alteration- some biotite surfaces with brown alt. 43 Mineral percentages; feldspar 25, quartz 25, biot 4.50 ite 50.

ESSE	Y MINIE	ERALS COMPANY LAC COSTEBEL	1 =	D-	2205			CORE	SIZE	DA		PAGE	HOLE	#
LOOL	V 1411141	TRAES COMPANY LAC COSTEBEL		D					HW	May a	27, 19	8 2	78-C-	.1
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC		7	S	AMPLE		-	SSAYS	
					IOTAL	K	U	Th		FROM	ТО	U ₃ Q ₈		
		contact gradual over 5 cm.		4.75										
3.44	3.62	Medium Red Granite - salmon red, grain size up to .5		4.75									-	
		Felsic portion- salmon red feldspars, clear grey	71111	5.00										
		quartz.												
		Mafic portion- biotite, minimal alteration. Mineral percentages- feldspar 65, quartz 25, bio-		5,25										
		tite 10.		5.50					44	5,22	7,25	1001	.022	
3.62	4.15	Biotite Rich Granite- similar to 3.31 to 3.44, dis-		3.30										
		tinct foliation at 80°-90° to core axis. Some alteration of biotite to vermiculite.		5.75										
4.15	5.22	Medium Red Granite - black to red, grain size .l to												
• 1	./ ● fine fine	l cm.		6.00										
		Felsic nortion- salmon red feldspars have deeper color than previously noted.		6.25										
		Mafic portion- zircon and bastnaesite more common	777777											
		than previously noted. 1 mm. hexagonal molybde-		6.50										
		nite crystals, on surfaces at 4.92 and 5.00 cm. Alteration-biotite is chloritized, some minor hema	1	6.75										
		tite is associated with the magnetite.		0./5										
		Mineral percentages- feldsper 50, quartz 20, bio- tite 10, zircon 5, bastnaesite, magnetite 5, mo-		7.00										
		lybdenite 1.												
		••••gradual contact over 5 cm•		7.25										
5.22	7.28	Coarse Red Granite- similar to 0-172 in mineral content and percentages. Fracture surfaces at 6.45		750					45	7. 25	9.58	.034	.045	
		show yellow staining.		7.50										
6.75 7.16	6.83	core ground in chips		7.75										
/•10		same as abovegradual contact over 5 cm.												
7.28	9.58	Medium Red Granite - similar to 4.15 to 5.22.		8.00										
		Hafic ortion- zircon and bastnaesite are concen-		8.25										
		trated up to 5% over intervals of 15 to 20 cm. scattered of random in this section.		0.23										
7.20	7.03	zone of 40% biotite; finegrained, no foliation.		8.50										
7.04		fracture cuts come at 650 to come axis.												
3.00	2.46	core ground in chips. both fractures and core from 7.94 to 0.46 have		8.75										
		grey weathered surfaces with yellow staining.		9.00										
9.38	9.43	equal amounts of biotite and magnetite comprise	111111											
	1			9.25		1								

ESSE	X MINE	TRALS COMPANY LAC COSTEBELLE			I DADIO	4ET DICC		2-44	U	May 27	7, 1978		HOLE 3	
ROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈	ASSAIS	
		50% of the rock. Alteration- minor- biotite altered to chlorite and minor epidote. Minor kaolinization of fel		9.50										
		spars. Mineral percentages- feldspar 45, quartz 20, kaolin 5, biotite 18, zircon 3, bastnaesite 2,		9.75					46	fines		. 004	.045	
	9.58	magnetite 7, chlorite \(\Lambda \), epidote \(\Lambda \) 1.		10.00										
		010		10.25										
		1 Straternan		10.50					4					
				10.75					1					
				11.00										
				11.25										
				11.50										
				11.75										
				12.00										
				12.25										
				12.50										
				12.75										
				13.00										
				13.25					-					
				13.50										
				13.75										
				14.00										

T. <u>//6</u> +	985_LONG	6. 0+65 COLLAR ELEV. 97.02 DEPTH 17.15 m DIP	900	COR	E SIZE	_HW		ORE R	ECOVE	ry_96	%		CLAIM # 364/3/-
M	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC	S SP	44		AMPLE			ASSAYS
					TOTAL	K	U	Th	#	FROM	ТО	U308	
				0.25									
	1			0.50									
	7.32	Overburden		0.75									
				0.75					1				
				1.00						1			
				1.25									
				450									
				1.50					-				
				1.75									
				2.00									
				2.25					1		-		
				2.50									
				2.50					1				
				2.75									
									1				
				3.00]		1		
				3.25									
				3.50									
				3.50			1		1				
	46			3.75									
									1				
		9		4.00									
				4.25					1				
				4.50									

FSSF	X MIN	IERALS COMPANY LAC COSTEBEL	IF	R-	3205	,		CORE		DA		PAGE	HOLE #	
	1	TENALS COMPANY LAC COSTEBLE							W	29/5/	78	2	78-C-2	
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	K	S SP.	Th	SA	FROM	ТО	U ₃ Q ₈	SSAYS	
				4.75 5.00 5.25 5.50 5.75 6.00 6.25 6.50 7.00		K		Th		FROM	TO	<i>V</i> ₃ O ₈		
7.32	7.55	Pebbles- ground nebbles of biotite schist, para- gneiss, and granite gneiss up to 6 cm. æross.		7.25					24	7, 32	8,86	.002	.004	
7.55	17.15	Paragneiss- grey to light salmon red, fine to medium grained. Felsic portion- pink to salmon red, sub to anhedral 1-4 mm. potassium feldspars; transparent		7.75										
Y		to white anhedral 1 mm. to 1 cm. quartz grains. Some quartz grains are bright green. Mafic portion- 1 mm. to 1 cm. books of biotite. Alteration- minor chloritization of feldspars and minor kaolinization of feldspars. Mineral percentages- feldspar 40, quartz 40, biotite 20. This rock is generally equigranular with bands of coarser grains up to 2.5 cm. across. Biotite		8.25 8.50 8.75										
		shows distinct foliation from 25 to 50°. Pelsic bands have about 5% biotite and range up to 3		9.00					23	8,86	10.41	.004	.004	

ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	В	3-32	05			CORE		DA	7.5	PAGE 3	HOLE #	
					D. D.O.	IETRICS	SF	2-44	W s	29/5 SAMPLE	0/ 1		78-C-2 ASSAYS	_
ROM	ТО	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈	ASSAIS	
		cm. wide. Chlorite coats the walls of fractures occurring at: 8.10 at 45° to core then parallel		9.50										
		to core to 8.30, 8.85 at 20° to core axis and ending at 9.00 without crossing the core, and r at 9.95 at 70° to core axis.		9.75										
10.12	10.41	black. Fine-grained equigranular 2 mm. grain		10.00									į.	
		size. Felsic portion- white to red anhedral feldspars and minor anhedral quartz.		10.25										
		Mafic portion- subhedral biotite with well-de- veloped schistocity at 49 to 58° to core. Mineral percentages- feldspar 20, quartz 10,		10.75					22	10,41	12,02	1001	.002	
		calcite 5, biotite 65. At upper and lower edge of this section is a concentration of red feldspar grains with 40%		11.00										
		of them being over 5 cm. At upper contact the are also lenses of calcite to 1 cm. wide which parallel the schistocity; they do not occur		11.25									4	
		elsewhere. At lower contact grain size of a quartz and feldspars increases to 8 mm.		11.50 11.75										
10.41	10.63	paragneiss- similar to 7.55-10.12. From 10.41 to 10.47 there is a coarse-grained felsic band, and the same from 10.61 to 10.63 Fer the descri		12.00										
10.64	10.63	tion in 7.55-10.12contact distinct at 50° to core.	111111	12.25					18	12.02	12.66	.004	.008	
10.63	10.76	biotite schist- similar to 10.12 to 10.41. It lacks calcite and potassium feldspars are not concentrated along contracts.		12.50										
10.70	10.76 10.92 10.92	contact distinct at 55° to coreparagneiss = similar to 7.55-10.12contact at 60° to core.		12.75					19	12,66	14,16	.004	.004	_
10.92	10.93 10.93	biotite schist- similar to 10.63-76.		13.00										
10.93	10.94	quartz-rich nortion- white, coarse-grained. 5-1 cm, relatively equigranular, anhedral. Felsics 95% with 70% quartz, 25% white notas-		13.25										
	10.94	sium feldspar. Hafics 5% biotite. contact at 55°		13.50 13.75										
			m	1400										

ESSEX	MINEF	RALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE		DA DA		PAGE 4	HOLE	
									W	29/5	1 /8	-	78-C	
ОМ	то	REMARKS	LOG	METER	RADIOM TOTAL	ETRICS		P-44	-	SAMPLE			ASSAYS	_
					TOTAL	K	U	Th	#	FROM	ТО	U308		1
10.01	12.01	paragneiss- similar to 7.5%-10.12. In this sec-												1
		tion there are more zones up to 1 cm. of coarse felsic grains giving the section an overall mor			14.25				20	14.16	15.66	.004	.004	
		coarse appearance. From 1144 to 1149 there is a											1.00-	
		felsic band at 65° to core parallel to banding.			14.50									
		From 1174 to 1184 the core is ground and chippe												
		From 1100 to 11.70 a chloritized fracture cuts			1 4.75									
		core at 10° and for 30 cm. is norallel to core.												
		At 1184 a fricture with chlorite on its surface	ļ		15.00									
	12.01	cuts the core at 38°contact at 90° to core.	1											
	12.001	From 12.00-15.00 the core fell from the core			15.25									
		barrel on retrieval and the log from 12 to 15												١
		is not accurate.	77777		15.50				ll					1
12.01	12.65	coarse red granite- red, med. to coarse-grained	277777											
		Felsic portion- sub to euhedral, 2 to 50 mm., twinned, frequently with inclusions, potassium	1		15.75				21	15,66	17.15	.001	.004	1
		feldspars and light gren to gray, 2-10 mm.	1									100.	.004	1
		anhedral quartz grains.	ı		16.00		1							١
		Mafic portion- consists of three black minerals											1	
		Biotite is euhedral, 2-3 mm., magnetite 3-15			16.25				ll .					1
		mm., and euhodral 2-4 mm. (tourmaline?) The												
		biotites have minor chlorite alteration and there are some crystals of hematite. There is			16.50]				4	
		a gradation to the section with the finer												
		grains concentrated at the contact and the			16.75									
		coarser ones in the middle of the section.												
		Mineral percentages-			17.00									1
		Felsic: potassium foldspar 50, quartz 30 Hafic: magnetite 10, biotite 5, tourmaline(?)												١
		2, hematite 2, chlorite \(\alpha\).	_		17.25				25	fines				+
	12.66	contact not distinct								Tines		.004	•008	1
12.66	12.73	paragneiss- similar to 7.55-10.12			17.50									
40 000	12.78	contact at 47° to core.												
12.78	12.83	biotite schist- similar to 10.63-10.76 There it contacts the paragneiss the gneiss is white			17,75									
		and more siliceous than usual.												
	12.83	contact at 47° to core.			18.00									
12.93	14.88	contact at 47° to coreparagneiss- similar to 7.55-10.12. At 13.11 an	da l											
		13.24 there are fractures at 72 to core with			18.25									
		white blebs of calcite. From 13.76 to 13.82, a												
		white blebs of calcite. From 13.76 to 13.82, a felsic-rich layer at 60° to core and the same from 14.06 to 14.11 Banding varies 58° to 65°.			18,50									
		Trom 14.00 to 14.11 panorul varies 30 to 85 .												
	I				1875				1					

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-320	05			CORE H	W	29/5		PAGE 5	78-C-	
FROM	то	REMARKS	1.00	A-T-D	RADION	ETRICS	SF	-44	s	AMPLE			ASSAYS	
F KOM	10	REMARKS	LOG	MEIER	TOTAL	К	U	Th	井	FROM	ТО	U ₃ O ₈		
14.88	14.38 14.99	From 1422 to 1438 the core is chippedcontact groundbiotite schist- similar to 10.63-10.76. It has more quartz than previous.												
14.08	14.98 16.10	Felsics- potassium feldspars 15, quartz 15. Nafics- biotite 70% Schistocity is not as well-developed but it is 40° to corecontact distinct at 40° to coreparagneiss- similar to 7.55-10.12. The first 32 cm. has 8 cm. of a fine-grained, more siliceous paragneiss at 40° to core, followed by 10 cm. of a coarser quartz-rich mection, then 2 cm. of biotite-rich section; 6 cm. of paragneiss;												
16.10	16.10 16.14	and 6 cm. of a mixed coarse-grained quartz-rich zone with patches up to 3 x 6 cm. of biotite. From 15.38 to 15.44, a coarse, quartz-rich area Foliation of the gneiss is 35-42 to core. contact at 45 to core. biotite schist- red to black, fine grained. Felsic portion- red K-feldspars and quartz. Mafic portion- biotite. More abundant red K meldspars. Foliation at 45 to core. Mineral percentages- K feldspar 40, quartz 10, biotite 50												
16 . 1 <i>h</i>	16.14 17.15	contact at 45° to coreparagneiss- similar to 7. 5-10.12. From 16.20 to 16.24 a coarse quartz band has a 1 cm. biotite band in its center. From 16.68 to 16.98 the gneiss is very coarse and quartz-rich. The is folding at the schistocity. At 16.73 an S-fold has its upper limb at 58° to surface and the lower limb at 35° to the surface at 16.81. The axial trace is 40° at 16.78. The foliation of the gneiss is at 48° to 53° to core.												
	17.15	Balluarterna												

ESSEX MINERALS COMPANY GEOLOGICAL LOG BY R. Quartermain DATE __30/5/78 HOLE # 78-C-3 LAC COSTEBELLE B-3205 DATE . RADIOMETRIC LOG BY__ CLAIM # LAT. 116+235 LONG. 0+84E COLLAR ELEV. 94.29 DEPTH 10.85 m DIP CORE SIZE HW CORE RECOVERY_ 364131-3 LOG METER RADIOMETRICS SP.-44 SAMPLE 96 **ASSAYS** FROM TO REMARKS TOTAL FROM Th TO U308 COARSE RED GRANITE 3.30 0 1.65 .001 .004 Black to red, coarse-grained. 0.25 Felsic portion: pink to red, .5-5 cm., twinned subhedral notassium feldspars; smokey green to grey, 0.50 .5-1 cm., anhedral quartz. Mafic portion: black, .5-2 cm., sub to euhedral, biotite; black .5 cm., euhedral -ircon; greyish-b 0.75 black, .5-1 cm., anhedral ragnetite. From 25 cm-40 and 55-70 the core is ground and chipped. Minor 1.00 alteration of biotite to chlorite and vermicalite. The magnetite in some places has a peacock color. 1.25 The quartz is dominantly green; however, after 2 meters this is replaced by a grey to clear color. Mineral percentages: 1.50 felsics: K-feldspars 40, quartz 20 mafics: biotite 32, magnetite 5, zircon_l, chlo-1.75 1.65 3.30 .001 .004 rite 2. .93 contact gradual over 5 cm. 2.00 .93 1.94 ... similar to 0-93, however it does not contain as much biotite and no zircons. Felsic nortion: K-feldsnars 55, quartz 30 2.25 Mafic portion: biotite 15, chlorite41 1.84 contact at 90° to core. 2.50 1. 24 2.02 ... biotite-rich zone- black to mink, coarse-grained (lcm-3cm); felsic portion consists of pink, euhedral K-feldspars and smoky grey anhedral quarts 2.75 The mafic nortion consists of euhedral biotite and subhedral magnetite. The biotite has chlo-3.00 tie alteration on some boo'rs. Possible kaolinization of K-felispars. 3.25 Felsic portion: K-feldspar 25, quartz 25 Mafic nortion: biotite 45, magnetite 5. 3.30 4.80 .002 .033 2.02 contact at 90° to core. 3.50 2.64 ... similar to 93-184, but lacks zircon. 2.02 2.64 contact at 90° to core. 3.75 2.71 ...biotite-rich zone similar to 1.34-2.02. 2.4 2.71 contact at 90° to core. 3.30 ...similar to .93-1.34 2.71-4.00 3.30contact gradual over 7 cm. Contact gro and and chinned. 4.25 4.50

ESSE	X MINE	ERALS COMPANY LAC COSTEBEL	LE	B-:	3205	5		CORE H	W	DAT	-	PAGE 2	78-C
ROM	то	REMARKS	LOG	METER	RADIO:	METRIC:	S SP	-44 Th	SA	FROM	ТО	U ₃ Q ₈	SSAYS
.37	3.30 4.76	contact gradual over 7 cm. Contact ground and chipped. MEDIUM RED GRANITE Black to red, medium-grained1-1 cm (grains near		4.75 5.00					4	4.80	6,30	.005	.086
		contacts up to 3 cm) Felsic portion: white to pink, sub to euhedral, .5- cm. twinned K-feldspars and smoky green to clear, anhedral, .3-1 cm. quartz. Mafic portion: consists of six minerals. Black,		5.25 5.50									
		subhedral, .28 cm. biotite; black, subhedral, .5-1 cm. tourmaline (?); black, euhedral, .2 cm. zircon; greyish black, anhedral, .5-1 cm. magne-		5.75									
		tite; black, euhdral, .38 cm. bastnaemite; and silver-grey, euhedral, .3 cm. molybdenite. There is a minor fracture at 3.67 at 60 to core.		6.25									
		Minor chloritization and alteration to vermiculite of biotite. In the section, rock appears to be relatively equigranular. Mineral percentages:		6.50					5	6.30	7.80	.005	.028
		Felsite- K feldspar 40, quartz 30 Mafic- biotite 20, magnetite 5, chlorite 2, tour- maline 2, zircon 1, bastnaesite 1, vermiculite 1,		7.00									
76	4.76 4.87	molybdenite/1contact gradual over 5.cm. COARSE RED GRANTTE		7.25									
91	4.87	Similar to 93-1.84contact gradual over 4 cm.		7.50					-				
01	7.78	MEDIUM RED GRANITE Similar to 3.37-4.76. In this section, the quartz is no longer green and there is less biotite and a greater abundance of bastnaesite.		8.00			-		6	7.80	9.30	.001	.008
		There are also zones in which biotite is concentrated as at 6.35 (over 10 cm) and likewise where felsics are concentrated, as at 2.00 (over 8 cm).	Kun										
		There are no distinct boundaries to these zones. Mineral percentages: Felsics: K-feldspar 40, quartz 25. Mafics: biotite 15, bastnaesite 10, magnetite2,		8.50									
		zircon 5, molybdenite 1, chlorite 1, vermiculitel At 725 a fracture cuts the rock at 10°. It has chlorite along its walls and an orange fine-grain		9.00									

		ALS COMPANY LAC COSTEBELLE			D. D.O.	AFTRICS		?-44		SAMPLE		3		C-3
ROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈	ASSAYS	
	7.78	minerallimonite (no kick on TV-lA)contact ground (probably distinct at 90° to core.		9.50					7	9.30	10.85		.041	
7:78	9.31			9.75										
		Similar to .93 to 1.84 with exceptions; the quartz is not green and there are more mafic minerals.		10.00										
		Mineral Percentages: Felsics: K-feldspar 45, quartz 30.	77777	10.25										
		Mafics: biotite 15, bastnaesite 4, magnetite 3, zircon 2, chlorite 1.	777777		2.									
		zircon 2, chlorite 1contact at 90 to core (ground).		10.50										
9.31	10.85	Similar to 3.37 to 4.76 except it lacks vermiculit		10.75										
		and has 2% bastnaesite and 1% tourmaline. It also has two zones 5-6 cm. cross which are coar		11.00					8	fines		.006	.053	
		ser grained (up to 3 cm. crystals).		44.05										
	10.85	end of hole. (381)		11.25										
		PAthanternair		11.50										
		1) Haraite		11.75										
				12.00							1			
				12.25										
				12.50										
				12.75										
				13.00							-			
				15.00										
				13.25										
				13.50										
				13.75										
				14.00										

ESSE		SERALS COMPANY GEOLOGICAL COSTEBELLE B-3205 RADIOMETRIC			,	in			ATE		+	10LE #1	
LAT	to	1+72E COLLAR ELEV. 97.43 DEPTH 10.75 m DIP_		COR				S	RY 9			LAIM # 364130-4 ASSAYS	+
0	2 7/	DUD II OTUL OD THEN COANTER			IOIAL	 U	Th	#	FROM	TO	U3O8		
0	2.34	RED MEDIUM GRAINED GRANITE Black to red, medium grained (a few grains up to 2 cm. occur), relatively equigranular. Felsic portion: white to red, sub to euhedral, .5-2 cm. K-feldspars; smoky grey to clear, anhedral, .3-1 cm. quartz.		0.25				9	0	2.34	.004	.016	
		Mafic portion: three mineralsblack, subhedral,		0.75									
		1-5 mm. biotite; black, euhedral, .5-1.5 cm. bas naesite; grey, sub to anhedral, .2-1.5 cm. magnetite. There is an altered fracture at 1.67 at		. 1.00							٠		
		45° to core with chlorite and vermiculite on the surface.		1.25									
		Mineral percentages: Felsics: K-feldspar 50, quartz 35. Mafics: magnetite 8, biotite 5, bastnaesite 1,		1.50									
0	•75	chlorite 1, vermiculite41, others (hematite) 1 the granite has xenoliths of paragneiss (see		1.75									
1.70	2.25	78-C-2) up to 10 cm by 6 cm on core surfacethe granite is red, essentially equigranular and consists of red K-feldspars 50%, smoky quartz 35,		2.00									
	2.34	grey magnetite 13, black biotite 2. 1contact at 24 to core. (Gradation into paragne over 5 cm).		2.25					2.7.1	3.0/			
2.34	10.75	Purple, fine grained, equigranular.		2.50 2.75				10	2.34	3.06	.004	800.	
		Felsic portion: consists of white to light red, sub hedral, 1-2 mm, K-feldspar and smoky grey to clea anhedral 1-2 mm quartz.	r	3.00									
		Wafic portion: biotiteblack, 1-2 mm. subhedral. Within this section there are zones, some coarse-grained and more felsic; others more mafic. De-		3.25				//	3.06	3.36	•001	-001	
		scribed below. Foliation of biotite grains va- ries from 27° to core near surface to 18° at 3.51 m, 30° at 5 m., and 20° at 6.5 m. Hinor chloriti	-	3.50				12	3.36	4.02	.001	.006	
		Zation of biotite, predominantly along fractures. Hineral percentages: Felsics- K-feldspar 45, quartz 35.		3.75									
2.21:	2.86	Mafica- biotite 20, chlorite41.		4.00 4.25			-	/3	4,02	5.46	.003	.016	_
		WICH		4 50									

====:		TALE 001/DALW 140 000TTDT	_	1	2005			CORE	SIZE	DAT	E	PAGE	HOLE	#
ESSE)	X MINE	RALS COMPANY LAC COSTEBELI	LE	B	3205)		H	W			2	78-0	-4
					RADIO	METRIC	S SP	-44	SA	MPLE		A	SSAYS	
FROM	ТО	REMARKS	LOG	METER	TOTAL	К	U	Th		FROM	ТО	U3 Q8		
		i		4.75										
	- Copy or personnel	biotite concentrated over 1 mm. along its contacts.	***************************************	5.00										
2.94	3.06	core is fractured and ground.	mm											
3.06	3.36	fine to medium grained red granite. Abundant red	777777	5.25										
		.15 cm. sub to euhedral K-feldspar with hite te												-
		clear, .1-1 cm. anhedral quartz. Mafics include black .15 cm. subhedral biotite and minor .2		5.50					14	5.46	7.46	.001	.001	
		cm. magnetite. There are minor veins .15 of							, ,	3.40	1.46	.001	.00,	
		light green epidote and chloritic alteration of		5.75										
		biotites. K-feldspars 60%, quartz 30, biotite 7p		6.00										
		enidote 2, chlorite 1. There is a weak foliation at 33 to core.		0.00		-								
3.5%	4.23	fracture cuts the core at 10 . Chlorite altera-		6.25										
		tion to 4.03, then chlorite and enidote altera-							1					
7.62	7 90	tion along fracture walls.		6.50								-		
3.62	3.0%	zone similar to 3.06-3.20 et 20 to core over 20								1.16				
		cm. The granitic zone is not distinct and has a		6.75										
		gradual contact over 3 cm. with the paragneiss												
		which it cuts at 30° to core across the gneisso-		7.00										
4.02	4-61	sityfine to medium red granite similar to 3.06-3.20.	<u> </u>											
		It has 5% less K-feldspar with more biotite and		7.25										
		2% magnetite. It lacks a foliation and has a												
1. 00	5 70	gradual contact with the paragneiss.		7.50					15	7.46	9.46	4.001	2.001	
4.82	7.32	ries from 5-10 cm. in width and forms a gentle							13	7.40	7.46	2.001	2.001	
		elongated Z-shared fold.		7.75										
5.40	5.46	medium grained granite similar to 1.70-2.25;												
5 56	F 96	forms at 45° to corea gentle S-shaped fold in the gneiss.		8.00										
5.56 6.70	7.10	a gentle S-snaped fold in the gnerss.		8.25										
8.65	10.75	GRADATIONAL CONTACT PARAGNETSS VITA AUGEN WEISS.		0.23										
.00	10.70	AUGEN GUSISS- purble, fine grained, equigranular.		8.50										
		Compositionally similar to paragneiss; however,												
		the quartz and feldspars are concentrated into		8.75										
9.10	0.20	augen shapes .5 cm. to 1 cm. in length.												
7.10	7.60	fine to m dium red granite similar to 3.05-3.20,		9.00										
		no distinct contacts. Lacks foliation.												
1	,	1		9.25		and a second								

ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	: E	3-32	05			CORE H	SIZE W	DA.	ΓE	PAGE 3	HOLE # 78-C-
ROM	то	REMARKS	106	METER	RADION	ETRICS	S SF	2-44	-	SAMPLE		,	ASSAYS
KON	10	REMARKS	100	VEIEN	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈	
9.52	0 85	ann ahimned and fractured	3 111111	9.50					.,,	0.11			
10.35	10.75	core chinned and fractured.	-11	9.75					16	9.46	10.75	4.001	.004
and the second s	10.75	End of hole.	<u> </u>	9.75									
		Blevarteman		10.00									0.0
		Medicarleina		10.25									
			H	10.50									
			4==	10.75					17	fines		-001	.010
				11.00									
				11.25									
		•		11.50									
				11.50									
				11.75									
				12.00									
				12.25									
													2
				12.50									
				12.75									
				13.00									
				12.05									
				13.25									
				13.50									
				13.75									
				14.00									

GEOLOGICAL LOG BY R. Quartermain DATE ____ HOLL # ESSEX MINERALS COMPANY LAC COSTEBELLE B-3205 78-C-5 DATE _1/6/78 RADIOMETRIC LOG BY_ CLAIM # CORE RECOVERY 92.5 % LAT. 115 . 005 LONG. 2+46 E COLLAR ELEV. 101.71 DEPTH 9.90 m DIP 900 CORE SIZE _ 364131-4 LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS TO REMARKS FROM FROM Th # TO U308 9.9 .004 -006 65 0.25 4.70 AMPHIBOLITE 0 Grey to black, fine grained, equigranular. 0.50 Felsic portion: pink to white, sub to anhedral, .1-3 cm feldspars; colorless to greenish, anhedral, 2mm quartz. 0.75 Mafic portion: three minerals- Greenish-black, .1-1 cm subhedral amphibole (hornblende); black .1-.2cm 1.00 subhedral biotite; silver-grey, L.lcm anhedral magnetite. A weak foliation defined by the biotite is parallel to the core (90° to surface). 1.25 There is abundant chlorite, as alteration of biotite and amphibole (?), and vermiculite is present along 1.50 fractures. At the ton of the hole and along some fractures the 1.75 feldspars are white to pink K-spars, and there is minor kaolinization of these. There are numerous altered fractures in the core as described below. 2.00 There are zones up to .5 m. which have felsics up to 25% as from 3 to 2.5 meters. There are minor chlor-2.25 ite veins41 mm by 4 or 5 cm. Mineral Percentages: 2.50 Felsics- white foldspars 10-15, pink feldspars 5-10 quartz 5, apatite (?) Mafics- hornblende 55-65, bi tite 10, chlorite 5. 2.75 vermiculite 2, manetite1. •97...a fracture with limonite alteration runs parallel 3.00 to core ending at 12°. 1.33....a limonite fracture at 90° to core. 3.25 1.78 1.85 2.47 3.50 2.65 3.00 3.75 3-45 4.00 4.25

ESSE	X MINE	ERALS COMPANY LAC COSTEBEL	LF	B-	3205	5		CORE		DA*		PAGE	HOLE	
					PADIO	METRIC	s cn		HW II c	1/6/	78	2	78-C	- 5
FROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th	5	FROM	то	U ₃ O ₈	SSAYS	
				4.75										
4.70	4.83	COARSE RED GRANITE		4.75 5.00										
		Red, course-grained. Felsic portion5-2cm pink to red, subhedral K-feld spar and clear to sm ky grey, lcm, anhedral quartz.	-	5,25										
		Mafic portion- consists of euhedral, 1-2cm books of black biotite. Minor molybdenite and chalcopyrite.		5.50										
		Chlorite alteration of biotite. Along the contacts there is a chill margin and particles of the amphibolite occur in the granite.		5.75										
		Mineral Percentages: Felsics- K-feldspar 50, quartz 30.		6.00										
	4.83	Mafics- biotite 15, chlorite 5, molybdenite 41, chalcopyrite 41contact at 40° to core axis.		6.25										
4.23				6.50										
7.80 3.80	8.40 9.10	AMPHIBOLITEsame as 0-4.70fracture at 35° to corefracture at 10° to corefracture at 10° to core.		6.75										
	9.90	End of hole.		7.00										
				7.25										
				7.50										
				7.75										
				8.00										
		_		8.25										
				8.50										
				8.75										
				9.00										
				9.25										

ESSE	X MINE	TRALS COMPANY LAC COSTEBEL	LE E	1	n			HV	11	DA	IE	PAGE 3	HOLE #
ROM	то	REMARKS	LOG	METER	RADIOM TOTAL	TETRICS		2-44	-	SAMPLE	1		ASSAYS,
•					TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈	
		,		9.50									
		010		9.75									
		1 Stlutila mar		10.00					66	0			
										fines		.005	. 010
				10.25									
				10.50									
				10.75									
				11.00									
				11.25									
				11.50									
				11.75									
				12.00									
				12.25									
				12.50				,					
				12.75									
				13.00									
				13.25				-					
				13.50									
				13.75									
				14.00									

ESSE		ERALS COMPANY C COSTEBELLE B-3205	GEOLOGICAL RADIOMETRIC				irtermo	zin			ATE2	/6/78		78-0-6	
LAT. <u> 5+</u> 0	TO LONG.	3+45E COLLAR ELEV. 102.39 DEPTH 10	.60 m DIP	90°	METER	RADIO	HW METRIC	S SP.	-44	ECOVE S	RY	94%		LAIM # 364131 ASSAYS	
•13 •3° 1.50	•52 1•05 1•20 1•62	HEDIUM RED GRANITE Black to red, medium-grained (.1-lcm), effelsic portion: white to red, sub to end lcm, hematite-stained, A-feldspars and to grey anhedral .2-1cm quartz. Mafic portion: black, subhedral, .1-lcm biotite; grey, .5cm anhedral magnetite cm, cuhedral molybdenite; and black .5 dral bastnaesite. Minor alteration of chlorite; along fractures, chlorite, ve and a vellowish-orange mineral (limonipresent. With depth (2 m), the quartz green stain. Wineral percentages: Felsics- K-feldspar 55, quartz 30. Mafics- biotite 12, vermiculite 4, magchlorite 1, molybdenitetrace, bastnatrace. a fractur cuts the core at 15°. core is ground and fractured. fracture at 87 to core. "" biotite-rich zone. Black, fine to medium grained. K-felds quartz 30, biotite 30.	books of street, leading to books of street, leading to books of street, leading to books of biotite to biotite to biotite to be biotite to be biotite are belowed by the biotite of the biotic of the biotite of the bi		0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25	IOIAL	K	U	Th	47	FROM	TO 2.71	U3O8 ∠.001	.006	
2.47	3.64	Black, fine to medium grained. K-felds quartz 30, biotite 'O.	spars 50%,	777777	3.00 3.25 3.50 3.75 4.00 4.25					48	2.71	5.58	2.001	.006	

ESSE	x mine	ERALS COMPANY LAC COSTEBEL	LE	B-:	3205	5		CORE	SIZE	2/6/7		PAGE 2	78-0-6
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRICS			S	AMPLE	TO		SSAYS
NOM:	10	REMARKS	200	METER	TOTAL	К	U	Th		FROM	ТО	U ₃ Q ₈	
				4.75									
				5.00									
				5,25					-				
				5.50					-			. 4	
				5.75					49	5.58	7.73	001	.020
				6.00						1, 14			
7.29	7.4	4biotite-rich zone. Similar to 3.47-3.64.		6.25									
72	8.75	COARSE RED GRANITE Pink to red, coarse-grained (1-5cm).	,,,,,,,	6.50									
		Felsic nortion: nink to red, 1-5cm, sub to euhedral K-feldsnar; smoky grey to clear, 1-2cm, anhedral		6.75									
		quartz. Black, subhedral, 1-3cm, biotite with minor chlorite alteration forms mafic portion.		7.00									1.0
		Mineral Percentages: K-feldspar 65%, quartz 20, bio tite 15.							1				
9.04	9.75	contact over 5 cmsimilar to 0-7.72 except larger grain size up to		7.25									
		2cm. 2contact over 5cm.		7.50									
75 8.75		HEDIUM RED GRANITES similar to 0-7.72		7.75					50	7.73	9.58	.001	.012
	0.41	contact over 5 cm.		8.00					-				
				8.25				-					
				8.50									
			- kurum	8.75									
			mini	9.00									
				9.25									

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	-32	05			CORE	SI LE	2/6/78		PAGE 3	78-C-6	
			1.00	ACTER	RADION	METRICS	SF	2-44		AMPLE			ASSAYS	_
ROM	то	REMARKS	LOG	VETER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
9.45	9.85	biotite-rich zone. Similar to 0-7.72 except biotite grains are up		9.50										
		to 1 cm and biotite omprises 30%, K-feldspar 45, quartz 25. Other minerals are in trace amounts.		9.75					51	9.58	10.60	.001	.024	
9.85	9.85	a fracture at 60° to corecontact over 5cmsimilar to 0-7.72		10.25										
10.30	10.60	End of hole. End of hole.	1	10.50										
	-		-	10.75					52	fines		.004	.020	
				11.00										
				11.25										
				11.50					4					
				11.75					-					
				12.00					4					
				12.25	5				-					
				12.50										
				12.75	5									
				13.00					-					
				13.25	5				-					
				13.50			1		1					
				13.7	5	-			1					
			1	1400	ıll	1	1	1	11	1	1	II	1	1

	LA	C COSTEBELLE B-3205 RADIOMETRI	C LOG	BY_				*	D	ATE			78-C-7
LAT. 114+	50s_LONG.	3+586 COLLAR ELEV. DEPTH 10.57 m DIP									99%		364131 -
FROM	то	REMARKS	LOG	METER	TOTAL	K	U U	44 Th	# S	FROM	ТО	U ₃ O ₈	ASSAYS
									32	0	2.13	(.020
0.00	. 30	Overburden		0.25					100			.000	1.020
• 50	2.43	MEDIUM RED GRANITE							1				
• 5		Dark red, medium grained, relatively equigranular.		0.50									
		Felsic portion: pink to red, sub to euhedral, 15-1.	MILITI										
		cm stricted, hematite-s sined A-feldspars; smoky green to grey, anhedral, .5-lcm quartz.	777777	0.75					4				
		Mafic portion: black, .15cm books, subhedral bio-		1.00									
		tite; black, .2-1.5cm, euhedral bastnaesite; grey	1	1.00					╢				
		.38cm anhedral magnetite; black, .2cm, euhedral zircon; black, .28cm, subhedral tourmaline; gre		1.25									
		.15cm euhdral molybdenite; red, .5cm, subhedral							1				
		hematite. Biotite has been altered to chlorite and to vermiculite along fractures.		1.50					4				
		Some feldspars have impurities of hematite, and											
		there are stringers of hematite and an aphanitic		1.75					-				
		green mineral radiating out from some hastnaesite crystals.		2.00									1
		Mineral percentages:											
		Felsics- K-feldspar 50, quartz 25.		2.25					33	2.13	3.45	-006	.024
		Mafics- biotite 15, bestnaesite 3, magnetite 2, chlorite 2, hematite 2, vermiculite 1, molybdeni											
		1, zircon- 1, nyritetrace.		2.50				ļ	1				
		In places the bastnaesite is concentrated up to 10% over 5-10cm (and the highest scintillometer count	1 1										
		are obtained from these areas.). There is a fine-		2.75	1				1				
		grained, anhedral, yellow mineral (pyrite) dissem-		3.00									
	2.43	inated throughout the corecontact gradual over 5cm.							1				
2.43	4.00	COARSE RED GRANITE	1	3.25									
2.43		Red, coarse-grained (.5-2cm).											
		Felsic portion: red, subhedral, striated, limonite-		3.50					34	3.45	4.61	.001	-007
		stained, .5-2cm. K-feldspars and smoky grey to clear .5-1cm. anhedral quartz.	711111	2.75							1.0	1001	.007
		Mafic portion: block, subhedral, .2-1cm biotite.		3.75					-				
		Mineral percentagesfeldspar 60, quartz30, biotic	; e	4.00									
	3.75	10contact oradual over 3cm.							1				
3.75		biotite-rich section. Black to red, fine to me		4.25					1				
			11	1	11			1	П	1			

FSSE	K MINE	RALS COMPANY LAC COSTEBEL	LF	B-:	3205	,	-	CORE	SIZE	DAT		2	HOLE	
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							HW	4	2/6/7	8		78-C-7	
FROM	то	REMARKS	LOG	METER	RADIO:	METRIC:	S SP	-44 Th	SA	FROM	то	U ₃ O ₈	SSAYS	
					IOIAL	IV.		111		TROM	10	0308		
		grained. Felsic portion consists of pink to red28cm, subhedral K-feldspars and clear to smo-		4.75					35	4.61	6.40	.009	.053	
		ky, .?5cm, anhedral quartz. Mafic portion con-		4.73										
		sists of block, .18cm, subhedral biotite and		5.00										
		grey, .24cm onhedral magnetite; Mineral percentages:												
		K-feldspar 45, quartz 25, biotite 25, magnetite	,	5.25										
	1. 00	Minor alteration of biotite to chlorite.												
		contact over 3 cm.		5.50										
4.00		MEDIUM TO COARSE RED GRANITE Similar to 2.43-253 except 5% more biotite.		5.75										
	4.34	contact over 3cm.	011111	5.75										
4.34		biotite-rich section. Similar to 3.45-3.70, but		6.00										
	4.50	only 2% magnetitecontact over 3 cm.												
4.20		COARSE RED GRANITE		6.25	-									
4.20		similar at 3.70-4.04.		650										
1.65	4.62	contact over 3cm.		6.50					36	6.40	7.04	.001	.018	7.
4.62		biotite-rich section. Similar to 4.04-4.20bastnaesite increases in abundance up to 5%.	<i></i>	6.75										
, , , , ,		contact gradual over 5 cm.	7777777		1									
6.68	7.38	red, coarse-grained (1-3cm).		7.00										
		Felsic portion: pink to red, 1-3cm, striated, hematite-strined K-feldspar and smoky grey to clear,	1						37	7.04	8.65	.011	.090	
		1 cm, anhedral quartz.		7.25	1									
		Mafic portion: black, subhedral, .22cm biotite;		1 750										
		grey .'3cm anhedral magnetite; and a silver- grey, .1 mm anhedral disseminated minerala mine	r	7.50										
		chloritic alteration of biotites.		7.75										
		Mineral norcentages:												
		Felsics- K-feldspar 50, quartz 35. Mafics- biotite 10, magnetite 2, chlorite 2, ?:		8.00										
	7.38	contact gradual.												
7:38	10.57	HEDIUM RED GRABITE		8.25										
8.27	2 1,-	Similar to 0-6.38biotite-rich zone, similar to 3.70-4.04.		8.50										
1006/	0.47	similar to 3.70-4.04.		0.50										
	10.57	End of hole.		8.75					38	8.65	10.27	.009	00"	
												.007	.024	
				9.00										
				0.25										
1	1		1	9.25		<u> </u>		Sept. 4.29		1	I	II.	1	1

ESSE	X MINE	ERALS COMPANY LAC COSTEBELLE	E E	1	1				W	DA 2/6	/78	PAGE 3	HOLE \$	
ROM	то	REMARKS	106	METER	RADION TOTAL	METRICS		-44		AMPLE	1		ASSAYS	_
NOM:	-	NEPONO .		The state of	TOTAL	K	U	Th	井	FROM	TO	U ₃ O ₈		
				9.50										
			anna	9.75										
				10.00			-							
				10.25										
		Metuarleman		10.50										
		getta allmans		10.75					39	fines		.011	.039	
				11.00										
				11.25										
				11.50										
				11.75										
				12.00										
				12.25										
				12.50										
				12.75										
				13.00										
				13.25										
				13.50										
				13.75										
				1400										

	OOS LON	G. 4+43 E COLLAR ELEV. 101.38 DEPTH 9.96 m DIP	900						ECOVE		9.3		LAIM #
MOR	ТО	REMARKS	LOG	METER	TOTAL	METRIC K	.5 SP	44 Th	# S	FROM	ТО	U ₃ O ₈	ASSAYS
.00	•72	MEDIUM RED GRANITE Red, medium-grained (*lcm). Felsic portion: pink to red, subhedral, striated, .21cm quartz.	<i></i>	0.25					26	0	0.84	.013	.047
		Mafic portion: black, subhedral .15cm biotite; black, .13cm euhedral zircon; .25cm black, euhedral bastnaesite; grey, .23cm, anhedral magnetite; silver grey, .1cm, euhedral molybdenite.	1-	0.50									
		There is minor chlorite and vermiculite along fracture surfaces and an orange-yellow minerallimo-		. 1.00					27	0.84	3.26	.001	.004
		nite. Hematite staining occurs throughout and is seen radiating from some bastnaesite crystals.		1.25									
		Mineral percentages: Felsics- K-feldspar 50, quartz 25.		1.50					•				
		Mafics- biotite 15, chlorite 3, hematite 2, bast- naesite 2, vermiculite 1, zircon 1, molybdenite trace.		1.75									
		Frictures at 90° to core at 40 cm. and 48 cm. Contact at 45° to core.		2.00									
72	9.96	PARAGNETSS Gray to purplish red, fine to med. grained.		2.25									
		Felsic portion- white to red, subhedral,.l5cm, hematite stained K-feldspar and white, clear, an-		2.50									
		hedral .15cm quartz. Mafic portion- black, .13cm. subhedral biotite. Minor alteration of biotite to chlorite and vermi-		2.75									
		culite. Fractures have chlorite alteration along their surfaces.		3.00									
		Bonding of gneiss is subparallel to parallel to cor Throughout the core there are alternating bands	•	3.25									
		of mafics and coarser felsics. There are a few gentle S-shaped folds. Mineral percentages:		3.50	-				28	3.26	5.62	.004	.004
		Felsics- K-feldspar 50-60, quartz 30-40. Mafics- biotite 10-15 With depth, pink K-spars increase in abundance, and		3.75									
		quartz ecresses.		4.00									
			f {	4.25									
				4.50									

					PADIO	METRICS	CD.		IW c	3/6/ AMPLE	70	2	78-C-
ROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th	5/	FROM	ТО	U ₃ Q ₈	SSAYS
.72	2.90	Metamornhosed Contact Paragneiss with Granite Gray, fine grained, equigranular sucrosic texture		4.75								-5-0	
		Rock consists of white to light bink .lcm subhedral G-feldspars (50%); clear to white, anhedral .lcm subhedral biotite		5.00									OL S. C.
		(10) There is a foliation of biotite parallel to core but this is not as pronounced as other areas of bonding.		5,25									
.72	1.00	Biotite Schist. Black, fine grained, equigranular. Felsics consist of white, .lcm subhedral K-feldspar (20%);		5.50									
		white to clear, .lcm subto anhedral quartz (20%); black, .lcm, euhedral biotite (60%). This rock type is only 2 cm thick and appears to be conform		6.00					29	5,62	7.85	.006	.005
1.50	2 /12	able with the paragneiss, but is in chill contact with the quartz. Granite Vein.		6.25		1							
1.70	G•48	White to pink, fine to coarse grained. Felsics consist of white to pink, .5-2cm, subhedral, striated		6.50									
		K-foldspars (60%); white to clear, .5-1.5cm, anhedral quartz (55). Mafic portion consists of black .25cm biotite (5). Vein varies from lcm thick		6.75									
	4.73	and fine-grained at 1.50 m to coarse-grained and 3cm thick at 2.20 meters. fracture at 15 to core. fracture at 10 to core.	ļ	7.00									
7.80	7•55 მ•60	fracture at 10° to coreMassive Paragneiss. Compositionally the core is paragneiss, yet it		7.25 7.50									
		lacks the distinct foliation subparallel to core seen throughout the rock. There are no distinct contacts but gradual development of foliation over		7.75									
7.85	7.93	10 cm.		8.00	,				30	7.86	9.96	۷.00۱	.005
	9•70	Banding of 45° to core. K-feldspar 50%, quartz 30, hiotite 20. Contacts distinct at 45° to corefracture at 15° to core.	<i>3]]]]]</i>]	8.25	-								
	9.96	End of hole.		8.50									
_				8.75									
			1	9.00									

ESSE)	K MINE	ERALS COMPANY LA	C COSTEBELLE B	-320	05			CORE H	SIZE W	DA.	ΓΕ	PAGE 3	78-C	
FROM	то	REMARKS	100	METER	RADION		SF	2-44		SAMPLE		 	ASSAYS	
· KOM	10	REMARKS	LOG	VEIER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
			,	9.50										
		10		9.75										
		Bellerai	tumero	10.00										
		00		10.25					31	fines		.011	.016	
				10.50										
				10.75										
		*		11.00										
				11.25										
				11.50					-					
				11.75										
				12.00										
				12.25										
				12.50										
				12.75										
			.]	13.00										
				13.25										
				13.50										
				13.75	-									
				14.00	II I		l	L	II	1		H	1	1

HOLE # GEOLOGICAL LOG BY R. Quartermain DATE _____ ESSEX MINERALS COMPANY LAC COSTEBELLE B-3205 DATE _ 3/6/78 RADIOMETRIC LOG BY___ 78-C-9 CLAIM # LAT. 115 + 965 LONG. 5+04 E COLLAR ELEV. 101.84 DEPTH 11.54 m DIP 900 CORE SIZE HW CORE RECOVERY 364131-4 RADIOMETRICS SP.-44 SAMPLE ASSAYS TO LOG METER FROM REMARKS TOTAL U # FROM Th TO U308 53 0 1,63 .002 .005 1.71 PARAGUETSS 0.25 Grey to marple, fine to medium-grained, relatively equigranular. 0.50 Felsic portion: shite to pink, subhedral, .1-.3cm 111111 Mafic portion: black, .1-.2cm subhedral biotite; 0.75 grey, anhedral .1-.2cm magnetite There is minor alteration of biotite to chlorite and 1.00 vermiculite along some fractures. Banding is parallel to sub-parallel to core. In some sections of the core there are segregated bands of felsics and 1.25 mafics. Mineral percentages: 1.50 Felsics- K-spar 45, quartz 30. Mafics- biotite 15-20; magnetite 2-4; chlorite 2, 1.75 54 1.63 2.56 vermiculite 1. .003 .005 MEDIUM RED GRANTEE 2.50 1.71 2.00 Red, medium grained (.2-.4cm). 111111 Felsic portion: pink to red (.2-.4cm) subhdedral feldspars; white to clear, anhedral (.2-.3cm) qtz 2.25 Nafic portion: black, euhedral, .1-.2 cm biotite; minor gray, anhedral, .1 -. 2cm magnetite. Folia-2.50 tion of biotite is parallel to banding of gneiss and sub-parallel to core. 2.56 5.71 .002 55 .005 2.75 Unit varies in thickness from lcm to 3cm. Hematite staining of some K-spars. Mineral percentages: 3.00 Felsics- K-spar 45, quartz 30. Nafics- biotite 20, marnetite 1-2, hematite 2 3.25 2.50 11.54 PARAGILETSS as in 0-1.71. 3.50 3.52 3.67similar to 1.71-2.50 excent magnetite equals 5-8%. Unit cuts core at 60°. 3.75 4.00 4,25

ESSE	X MINE	RALS COMPANY LAC COSTEBEL	LE	B-	3205	5		CORE		DA		PAGE 2	78-C-	
			T		IPADIO	METRIC	S SP-		HW S	3/6/ AMPLE	70		SSAYS	9
FROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th		FROM	ТО	U ₃ O ₈		
				4.75						=				
				5.00										
				5.25					4					
				5.50										
				5.75										
									56	5.71	8.60	.002	.004	
				6.00					1					
6.25	7.36	fracture at 10° to core.	amn	6.25					4					
				6.50				71	1					
				6.75										
				7.00										
7.25	8.60	core is fractured.							1					
				7.25										
0 (0	0.10	0		7.50	 									
8.60	9.10	similar to $3.62-3.67$. Cuts core at 30° .		7.75	5									
				8.00										
	11.54	End of hole.	-											
		• 0		8.25										
				8.50					-					
				8.75	5				57	8.60	11.54	4.001	.004	
				9.00										
		n &	277777											
	1	*	1	9.25	211		l	1	А	1	1	II	1	ı

ESSE	X MINI	ERALS COMPANY LAC	COSTEBELLE	В	-32	05			CORE HW		3/6/		PAGE 3	18-C-	
ROM	то	REMARKS		06	ACTED	RADION		SP	-44		AMPLE			ASSAYS	
KOM	10	REMARKS		00	VEIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		_
					9.50										
					9.75										
					10.00										
					10.25										
					10.50										
					10.75										
					11.00										
				7777	11.25										
					11.50										
			4-		11.75					58	fines		.001	010.	
					12.00										
				Ī	12.25										
					12.50									- 1	
					12.75										
					13.00										
			· • 11		13.25										
					13.50										
					13.75										
					14.00										

		C COSTEBELLE B-3205 RADIOMETRIC								DATE			78-C-10	
		. 4+00E COLLAR ELEV. 99.99 DEPTH 11.88 m DIP	900	COR	RADIO	HW	S SP	ORE F	4	RY	979	%	364/3/ ASSAYS	
ROM	ТО	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	ASSATS	I
	1.86	Overburden		0.25										
				0.50										
				0.75										
									1					
.86	3.86	COARSE RED GRANTITE		1.00					1					
		Red, coarse-grained (.5-5cm). Felsic portion: white to red, sub to euhedral .5-5cm		1.25					1					
		striated, hematite-stained K-spars; smoky grey to green, anhedral, .5-2cm quartz.		1.50					-					
		Mafic portion: black, sub to euhedral, .5-3cm bioti- black, euhedral .26cm bastnaesite; gray, .5cm	;e;	1.75					-					
		subhedral magnetite. Alteration of biotite to chlorite. Portions of core are very coarsenegmatitic.		2.00					67	1,86	3.86	.00:	2.	
		Mineral Percentages: Felsics- K-spar 55-60, quart 230.		2.25					1					
		Mafics- biotite 10, chlorite 3, bastnaesite 1, magnetite 1.		2.50					4					
.86	3.86	HEDIUM-COARSE RED GRANITES		2.75										
	• /-	Red, medium-coarse grained (.2-1.5cm), relatively equigranular.		3.00										
		Felsic portion: white to red, sub to euhedral, .2-1.5 cm, strinted, hematite-stained K-spar; clear	2	3.25	5									
		have portion. Track, submediat, Jacon Protect,	mm	3.50										
		black, eubedral, .5-lcm bastnaesite; grey to black, anhedral .5-lcm magnetite; black, euhedral		3.75										
		.2cm zircon; silver grey, euhedral, .2cm molybde nite; black, .48 subhedral tourmaline (?). Alteration of biotite to chlorite and vermiculite								2.00	F. 46			4
		along fractures. Hematite is abundant throughout the rock and seen		4.00					68	3.86	5,46	4.0	91	
		in redicting structures from bastnaesite crystals.		4.25					1					
	1			4.50	M.			1	11		1			

ESSE)	K MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE HW		DA' 5/6/'		PAGE 3	HOLE 3	
FROM	то	REMARKS	106	METER	RADION	ETRICS		-44	4	SAMPLE			ASSAYS	
FROM	10	REMARKS	100	VIETER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
				9.50										
	10.30	••••contact at 90° to core•		9.75										
10.30	10.53	MEDIUM RED GRANTTE Similar to 3.86-6.66contact at 90 to core.		10.00										
10.53		BIOTITE SCHIST		10.50					72	10.30	10.53	.006		
10.00	L. I. • ()	Similar to 6.66-8.44.		10.75					73	10,53	11.88	.007		
				11.00									h	
				11.25										
				11.50										
	11.88	End of hole.		11.75										
		gorianionas		12.00					74	fines		.004		
				12.25										
				12.50										
				12,75										
				13.00										
				13.25										
		,		13.50										
				13.75										
				14.00		<u> </u>	1	<u>L</u>	11	1	<u> </u>		ı	

		ERALS COMPANY LAC COSTEBELI			PADIO	METRICS	SP	-44	S	5/6/'		A	SSAYS
ROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th		FROM	то	U3 Q8	
				4.75									
				4.75									
				5.00									
				5,25									
				5.50					69	5.46	7, 06	.004	
		Feldspars are approximately 50:50 white to red grains. Fractures at 4.26 and 5.14 are at 10 to		5.75									
		core. There is a fine zone from 4.25 to 4.50 with grain size \(\perp .3\text{cm}\).		6.00									
		Mineral percentages: Felsics- K-spar 50, quartz 25. Nofice histite 10 15 hastrossite 1.7 hematite		6.25									
		Mafics- biotite 10-15, bastnaesite 1-3, hematite 5, magnetite 2-5, tourmaline 1-2, zircon 1, molybdenitetrace-		6.50									
0 53	8.52	denitetracecontact at 40° to core. BIOTITE SCHIST		6.75									
8.52	1.0.50	Black, fine-grained (.12cm). Felsics: white subhedral, .12cm, K-spars and		7.00									
		white to clear, anhedral, .lcm quartz. Black euhedral .12cm biotite and black .2cm anhedral							70	7.06	8.52	.004	
		magnetite form the mafic portion. Alteration of biotite to chlorite. Hinor pyrite and	1	7.2					1				
		chalcopyrite mineralization. The foliation is sub-		7.50					1				
		is cut by a 2cm quartz vein at 7.50 meters. Mineral percentages:		7.7	5				-				
		Felsics- K-spar 20, quartz 15. Mafics- biotite60-65, magnetite 1-2, pyrite 1, cha	a -	8.0	0	-		1	4				
		copyritetrace.		8.2	5								
			71111	8.5	0				_				
				8.7	5				7/	8,52	10.30	.004	
				9.0								-	
				3.0					1	-			+

DATE 4/6/78 HOLE # GEOLOGICAL LOG BY R. Quartermain ESSEX MINERALS COMPANY 78 - C- 11. B-3205 DATE _ LAC COSTEBELLE RADIOMETRIC LOG BY___ CLAIM # __CORE SIZE __HW ____CORE RECOVERY__ LAT. 117+005 LONG. 3+06 E COLLAR ELEV. 105.15 DEPTH 10.73 DIP 900 364131-4 RADIOMETRICS SP.-44 ASSAYS SAMPLE LOG METER FROM TO REMARKS Th # FROM TO U308 TOTAL .45 Overburden 0.25 .45 CONTACT -- RED GRANITE VITH PARAGNEISS .60 Salmon red, fine to medium-grained. 0.50 Welsic portion: white to red, subhedral, .1-.5cm, he 59 0,45 2,85 .003 .008 matite-stained K-spars; and green to gray, .1-.2cm 0.75 subhedral quartz. Mafic portion: black, .1-.5cm subhedral biotite; black, .1-.2, euhedral zircon; gray, anhedral .4cm 1.00 magnetite. Alteration of biotite to chlorite with vermiculite along fractures. 1.25 hinor kaolinization of feldspars near the top of hold. Fracture runs parallel to core to .59m. 1.50 -60 2.85 PARAGNEISS Purple to red, fine to med. grained. 1.75 Felsic potion: white to red, subhedral .1-.3cm, hematite-stained K-spar; and clear to smoky, anhedral .1-.3cm quartz. 2.00 Mafic portion: black, .1-.2cm, subhe ral biotite and minor black, anhedral. .3cm magnetite. 2.25 Banding varies from 10 -20 to core. Finor alteration of biotite to chlorite. Some zones of alternating coarser felsic and finer mafic bands. Fractures at .65 at 12 to core, 1.95 at 15 to core. Core frac-2.50 tured and ground from 1.15-1.35 and 2.85-2.95. 2.75 Hineral percentages: Felsics- quartz 35, K-spar 45. 2.85 60 5.15 .006 .022 3.00 Mafics - biotite 1º, magnetite 1, chlorite 1. 2.85 contact ground over 10cm. 3.25 2.95 10.05 HEDIUM RED GRANITE Red, med, to coarse-grained, dominantly equigranuar. Fely in to red, subhedral, .2-1cm, striated, hema-3.50 tite-stained K-spars and clear to smoky grey, anhedral. .2-1cm quartz. 11111 3.75 Mafic portion: black, .2-. cm, subhedral biotite; black, euhedral, .2cm zircon; black, euhedral .3 4.00 cm by thaesite; gray, anhedral .5-lcm magnetite. Chloritic and limonitic alteration occurs along fractures. Hematite occurs between grain contacts. From 5.1°-5.9° a fracture runs sub-parallel to core. At 4.25

-55E	X MINE	RALS COMPANY LAC COSTEBEL						1.5	M	4/6/	78	2	79-C-11
ROM	то	REMARKS	LOG	METER	RADIO	METRICS			SA	MPLE	TO		SSAYS
3.90	TO 4.30	REMARKS 8.40 a fracture cuts at 80° to core. Mineral percentages: Felsics- K-snar 50-55, quartz 25. Mafics- biotite 10-15, hematite 3-5, magnetite 1-3 chlorite 2, backnassite 1-2, zircon 1, limonite 1magnetite-rich medium-grained granite. A zone of magnetite concentration un 20%contact over fem.	LOG		RADIO		S.P	Th	61 62	FROM		.006	·009
				8.25 8.50 8.75									
				9.00									

					RADION	/ETRICS	S SF	2-44		AMPLE		3	ASSAYS
ROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th	井	FROM	ТО	U ₃ O ₈	100/4/10
				9.50									
				9.75									
				10.00									
LO.05	10.73	GRANITE GNEISS Black to red, fine-grained, equigranular.		10.25					63	10.05	10.73	.008	.061
		Felsic portion: .12cm, subhedral, hematite- stained, K-spars and clear to smoky grey, .1cm co- anhedral quartz.		10.50									
		Mafic nortion: black, subhedral, .lcm biotite; grey, anhedral .l2 magnetite and black subhe-		10.75									
		dral to cuhedral .12cm bastnaesite. There are concentrations of biotite and only a weak folia-		11.00					64	fines		.005	-028
		tion is developed because of its closeness to the contact. Mineral percentages:		11.25									
		Felsics- K-spar 45, quartz 30. Mafics- biotite 20-25, magnetite 1-2, bastnaesite		11.50									
		1.					1						
	10.73	End of hole. Alleanuman		11.75									
				12.00									
				12.25									
				12.50									
				12.75									
				13.00	100								
				13.25									
				13.50									
				13.75									
				14.00									

E33		C COSTEBELLE B-3205 RADIOMETRIC				arterm	ain			ATE			HOLE 78 - C	
AT. <u>117</u>	TO LONG.	2+00 E COLLAR ELEV. 103.34 DEPTH 10.87 m DIP	90°	METER	E SIZE RADIO TOTAL	METRIC	S SP	-44	SA	AMPLE	99%		364/3 ASSAYS	
0	1.96	MEDIUM Red GRANITE Red, medium-grained, relatively equigranular. Felsic portion: white to red, .2-1.8cm, sub to euhedral, striated, hematite-stained K-spars; green to smoky grey, .2-lcm anhedral quartz. Mafic portion: black subhedral .38cm biotite; black .5-1.3cm subhedral bastnaesite; black, .5-1.2cm subhedral tourmaline(?); .13cm euhedral zircon; gray, .5cm anhedral magnetite; red, .5 cm anhedral hematite; silver grey, .1cm euhedral molybdenite. Alteration of biotite to chlorite with vermiculite along minor fractures subperpendicular to core. Kaolinization of feldspars occurs near top of hole and rock has an orange limonite stain. Bastnaesite grains have a radiating structure and where they are concentrated, 15-20% of the feldspars are dominantly		0.25 0.50 0.75	IOIAL	К	U	Th	75	O O	TO 1,96	.004		
	1.96	white and not hematite red. Mafics are randomly concentrated in the core and are not evenly distributed. Mine all percentages: Felsics K-spar 45-50, quartz 25. Mafics- biotite 8-14, hematite 5, bastnaesite 1-5, magnetite 2-4, chlorite 3, tourmaline 1-3, vermiculite 2, molybdenitetrace, zircon 1. contact over 5cm.		2.00 2.25 2.50 2.75					76	1,96	3.85	. 004		
1.96	2.70	COARGE RED GRANITE Similar to above but coarser grained (.5-3.5cm) and less mafics. Mineral percentages: Felsics- K-spar 55-60, quartz 25-30, Mafics- (biotite, magnetite, bastnaesite, chlorite 10-15. contact over 3cm.).	3.00 3.25 3.50										
2.70	2.90	MEDIUM RED GRAFITE Similar to 0-1.96contact over 3cm.		3.75 4.00					77	3.85	5,91	.006		
2.90	3.85	MEDIUM TO COARSE-GRANITE Similar to 0.196. From 3.55-3.65 bastnaesite and tourmaline totals 15%.		4.25 4.50										

ESSE	X MINE	RALS COMPANY LAC COSTEBEL	LE	B-	3205)		CORE		DA * 6/6,		PAGE 2	78-0	
FROM	то	REMARKS	LOG	METER	RADIO! TOTAL	METRICS K	SP.	-44 Th	SA	FROM	TO	U3 08	SSAYS	
	3.85	contact over 5cm.		4.75										
.25	4.64	MEDIUM R .D GRA ITE Similar to O-1.96contact over 5cm.		5.00										
65	6.00	COARSE RED GRANITE Similar to 1.96-2.70 with mafics equal to 20%.		5,25										
	6.90	contact over 5cm.		5.50 5.75										
90	7.75	MEDIUM RED GRANITE Similar to 0-1.96.		6.00					78	5.91	7,75	.011		
	7.75	contact at 85° to core, discordant to paragneis: banding.		6.25										
•75	7.90	PARAGNETSS Purple, fine-grained. Felsic portion: red, .12mm subheiral, hematite-		6.75										
		stained K-spars and smoky grey to clear, .12cm anhedral quartz. Mafic portion: black, euhedral .2cm biotite and gre	7	7.00										
	,	anhedral .2cm magnetite. A minor segregation of felsic and mafic bands. Foliation at 45-49° to core. Minor chloritic alteration of biotite.		7.50										
		Mineral percentages: Felsics- K-spar 40-50, quartz 30, Mafics- biotite 20, magnetite 2-3, chlorite 2contact at 90 to core		7.75 8.00					79	7,75	8.50	.013		
90	8.50	AEDIUM-COARSE R D GR I D Similar to 0-1.96contact at 90° to core-ground.		8.25										
50	10.87	PARAGNEISS Similar to 7.75-7.90		8.50					80	8.50	10.87	. 004		
				9.00										
				9.25										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	11		et e	CORE		6/6/78		PAGE 3	HOLE 78-C-	
FROM	то	REMARKS	LOG	METER	RADION TOTAL	ETRICS		-44		SAMPLE			ASSAYS	
			200		TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
8.65	9.40	varies 50° to subparallel to core, generally 40° to core.		9.50										
9.40	9.00	a 3cm band of medium grained granite runs para- llel to banding in the core subparallel to core in a gentle S-shaped fold.		9.75										
				10.25										
		,												
		00		10.75										
	10.87	End of hole. Marluman		11.00					8/	fines		.009		
				11.25										
				11.50										
				11.75										
				12.00										Ä) .
				12.25										
				12.50										
				12.75										
				13.00										
				13.25										-
				13.50										
				13.75										
				14.00										

GEOLOGICAL LOG BY R. Quartermain DATE 7/6/78 HOLE # ESSEX MINERALS COMPANY 78-C-13 LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY_ CLAIM # LAT. 117+005 LONG. 2+30 E COLLAR ELEV. 105.89 DEPTH 60.85 DIP CORE SIZE BO CORE RECOVERY_ 364131-4 RADIOMETRICS SP.-44 SAMPLE **ASSAYS** LOG METER TO REMARKS FROM TOTAL Th FROM # U308 TO 11.56 0 2.10 .006 COARSE RED GRANITE Red, medium to coarse-graine (.5-2cm). 0.25 Felsic portion: pink to red, .5-2cm, sub to euhedral, striated, limonite-stained K-spars and smoky green 0.50 to grey, .5-lcm, anhedral quartz. Mafic portion: black, .2-1.3cm subhedral biotite; black, euhedral .5cm bastnaesite; black, subhedral 0.75 .4-.8cm tourmaline (?); black, suhedral .2cm zircon; red, .3cm anhedral hematite; grey, .5cm anhedral 1.00 magnetite; minor silver-grey, .1cm, euhedral molyb-1.25 Minor alteration of biotite to chlorite and vermicution lite. Hematite staining occurs between K-spar grains 1.50 and minor kaolinization of K-spars near top of hole. Mineral percentages: Felsics- K-spar 45-55, quartz 25-30. 1.75 Mafics- biotite 10-12, hematite 2-3, chlorite 2-3, bastnaesite 2, magnetite 2, tourmaline 1-2, ver-2.00 miculite 1, zircon 1, molybdenite--trace. 2.10 4.20 .004 2.25 2.50 2.75 3.00 3.25 3.50 3.75 4.00 4.25 4.20 6.30 102 .009

ESSEX	MINE	RALS COMPANY LAC COSTEBEL	LE	B-:	3205			CORE	SIZE	DAT		PAGE 2	HOLE	
					PADIO	VETOR	S SP	BQ	■ SA	7/6/ AMPLE	78		78-C-	13
FROM	то	REMARKS	LOG	METER	TOTAL	К	. U	Th		FROM	то	U ₃ Q ₈	33A13	
6.96	9.45	biotite-rich zone. Similar to 0-11.56, but felsic portion equals 75% and mafic portion, dominantly biotite, equals 25%.		4.75 5.00										
				5,25										
				5.50										
				6.00										
				6.25										
				6.50					/03	6.30	8.40	.009		
				7.00										
				7.25										
				7.50										
	-			7.75 8.00	-									
				8.25										
				8.50					104	8.40	10.50	.009		
				9.00										
			min	9.25										

ESSE:	X MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE		7/6/7		PAGE 3	HOLE 78-C	•
FROM	то	REMARKS	106	METER	RADION	ETRICS	SF	2-44		AMPLE			ASSAYS	
T KOM	'`	REMARKS	LOG	VETER	TOTAL	К	U	Th	#	FROM	TO	U ₃ O ₈		
				9.50										
				10.00										
	11.56	contact over 5cm.		10.25										
11.56	13.11	MEDIUM RED GRANITE Similar to 0-11.56, but grain size is .28cmcontact over 3cm.	<i></i>	10.50		7			105	10.50	12.60	.009		
13.11	13.31 13.31	COARSE RED GRANITE Similar to 0-11.56contact at 60° to corediscordant to gneissos		11.00										
13.31	49.39	PARAGNEISS Grey to purplish red, fine to medium grained. Felsic portion: white to red, .1 to .3cm striated,		11.25 11.50										
		hematite-stained K-spars and white to clear, .1-cm anhedral quartz. Mafic portion: black, euhedral, .12cm biotite and		11.75		1								
		grey, .lcm anhedral magnetite. Minor chloritic alteration of biotite. Throughout this section there are zones of coarse red and	<u> </u>	12.00										
		grey recrystallized granites, both concordant and discordant to banding of the gneiss. Foliation of biotite varies with depth and there are		12.50										
		minor S-shaped folds. Mineral percentages: Felsics: K-spar 55-65, quartz 30-35.		12.75					106	12.60	14.60	.003		
	13.72	Mafics: biotite 15-20, magnetite 1-3banding at 42° to core.	2777777	13.00										
				13.50										
				13.75										
				14.00										

ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	В	-32	1			CORE B	Q	7/6/7		PAGE 4	HOLE # 78-C-13
ROM	то	REMARKS	LOG	METER	RADIOM TOTAL	ETRICS		-44		AMPLE			ASSAYS
	10				IOIAL	K	U	Th	#	FROM	TO	U ₃ O ₈	
				14.25									
	14.6	fracture at 40° to core.		14.50									
			mm	14.75					107	14.60	16,60	.001	
				15.00									
				15.25									
				15.50									
				15.75									
				16.00									
				16.25									
				16.50									-
									108	16.60	21.60	.004	
										,,,,,,	21.60	.004	
				17.00									
17.37	17.63	Red, .52cm K-spar 60%; smokygrey, .5-lcm] 	17.25									
		quartz 30%. Black, .5cm biotite 10%.		17.50									
			- †	17.75									
				18.00									
				18.25									
				18.50									
				18.75									

					RADION	/ETRICS	SF	BQ	s	AMPLE			ASSAYS	
ОМ	то	REMARKS	LOG	METER	TOTAL	К	U	Th		FROM	то	U ₃ O ₈	AUUATU	I
				19.00										Ī
19.36	19.66	Red to grey, medium to coarse-grained. Section L consists of white to red, subhedral .5-1.3cm K-spa	 rs	19.25										
		50-60%; white to grey .5-lcm anhedral quartz 25-30 black .5cm subhedral biotite 10-15%; grey, subhedr .5cm magnetite 2-5%; trace amounts of tourmaline (?) and ba thaesite. Upper contact is discordant,	%; a <u>l</u>	19.75										
		lower is concordant to banling.	777777	20.00										
				20.25								A I		
				20.50										
				20.75										
				21,00										
	21.34	banding at 35° to core.		21.25										
				21.50			•							
				21.75					109	21.60	26.60	.003		+
				22.∞										
				22.25										
				22.50										
				22.75										
			27777	23.∞									•	
				23.25										
				23.50										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-32	05			CORE		7/6/		PAGE 6	HOLE # 78-C-13
					RADION	METRICS	SF	2-44		AMPLE			ASSAYS
FROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈	
23.17	24.09	Interlayed coarse grey granite and paragneiss. Granite similar to 19.36-19.6%.		23.75									
				24.25									
				24.50									
24.70	25.91	Medium grey granite. Similar to 19.36-19.66.		24.75					-				
				25.00									
				25.25									
				25,50									
				25.75									
			mm	26.00		,							
26.52	27 72	Coarse Red Granite		26:26									
20.72	<i>⊆</i> (• (<i>⊆</i>	Felsic portion: red, .5-1.5cm K-spar 50-55%; white to gray .5cm quartz 30%.	1	2650									
		Mafic portion: grey, .5cm magnetite 15%. Upper contact at 85 to core; lower at 65 to core.		26.75					110	26.60	31.60	.005	
				27.00									
				27.25									
	27.44	handing at 25° to core.		27.50									
				27.75									
				28.00									
				28.25					H	1			

ESSE	MINER,	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE Bର୍		7/6/		PAGE 7	HOLE 78-	
			1.06	AETER	RADION	ETRICS	SF	-44		SAMPLE			ASSAYS	
ROM	то	REMARKS	LOG	VEIER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		+
				28.50										
				28.75										
			27777	29.00										
				29.25							-			
				2950										
				29.75										
				30.00										
				30.25										
31.7	32.01	Biotite-rich section.	1	30,50										
		Feldspar augens up to lcm in a fine-grained host; K-snar 40-45 %, quartz 25-30, biotite 20-25. Banding at 20 to core.		30.75										
			1	31.00										
				31.25										
				31.50										
				31.75					111	31.60	36.60	.004		+
				32.00										
			7777	32.25										
				3250										
				32.75										
				33.00										

ESSEX	MINER	ALS COMPANY LAC COSTEBE	LLE F	3-32	05	podra.		CORE Bପ୍		7/6/7		PAGE 8	HOLE 78-C-	
					RADION	METRICS	S SF	?-44	S	AMPLE			ASSAYS	
FROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
				33.25										
				33.50										
			ſ	33.75										
33.54	37.50	biotite up to 30% of core.		34.00										
				34.25										
			İ	34.50										
			1	34.75										
				35.00										
				35.25										
			!	35.50										
				35.75										
			il	36.00										
				36.25										
				36.50										
			1	36.75					112	36.60	41.60	.003		
				37.00										
,			[37.25										
			4	37.50										
				37.75										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	-32	05			CORE BÇ		7/6		PAGE 9	HOLE 78-C-	
					RADION	RADIOMETRICS SP		2-44		AMPLE			ASSAYS	
FROM	ТО	REMARKS	LOG	MEIER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
37.80	38.00	Coarse Red Granite Similar to 26.52-27.72.		38.00										
		banding at 45° to core.	7777	38.25										
38.41	39.02	Medium - grained Grey Granite Similar to 19.36-19.66 with green stained K- spars and quartz.		38.50										
				38.75										
			L	39.00										
				39.25						e				
				39.50										
39.63	40.55	an elongated S-shoped fold with banding sub-		39.75										
		parallel to core.	1	40.00										
				40.25										
				4050										
				40.75										
				41,00										
		1	27777	41.25										
				41.50	-									
				41.75					//3	41.60	46.60	.004		
				42.00										
				4-2.25										
				4250										

	MINER	ALS COMPANY LAC COSTEBELLE	В	3-32	05			CORE BQ	SIZE	7/6/	78	PAGE 10	HOLE 78-C-17	
EPOV4	TO.	DEMA DICE	1.06	METER	RADION	ETRICS		2-44		AMPLE			ASSAYS	
FROM	то	REMARKS	200	TETER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
	42.68	handing at 35° to core.		42.75										
				43.00										
				43,25										
				43.50								,		
				43.75										
				44.00										
44.36	44.67	a gentle S-shaped fold.	<i></i>	44.25										
		a gentle S-shaped fold. Upper limb at 25° to core, common limb 10-15° to core, bottom limb 20° to core.		44.50								4		
				44.75										
				45.00										
				45.35										
				45.50										
				45.75										
				46.00										
				46.25										
				46.50										
				46.75					114	46.60	51.70	.003		
				47.00									-	

ESSE	X MINEF	RALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE		7/6	T E /78	PAGE 11	HOLE 78-C-	
FROM	то	REMARKS	LOG	METER	RADION TOTAL			?-44		AMPLE			ASSAYS	
			,,,,,,,		TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				47.50										
				47.75										
				48.00										
				48.25										
				48.50										
				48.75										
	49_39	contact at 30° to core.		49,00										
49.32	55.34	BIOTITE SCHIST Black, fine-grained, equigranular.		49.25										
		Felsic portion: clear, .lcm sub to anhedral feldspa 40%; clear to grey, .lcm anhedral quartz 10%.	rs	49.50										
		Mafic portion: black, euhedral, .lcm biotite 50%. Minor trace of pyrite and alteration of biotite to		49.75										
		chlorite. Banding is 28° to 34° to core.		50.00										
				<i>5</i> 0.25										
			27777	50.50							*			
				50.75										
				51.00										
				51.25										
				51.50										
				51.75					115	51.70	56.80	.009		
				52,00									-	

ESSE.	X MINEF	RALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE B		7/6/		PAGE 12	78-C-	# 13
DOM.	то	REMARKS	106	METER	RADION			-44		AMPLE			ASSAYS	
ROM	10	REMARKS	LOG	VETER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		\vdash
				52.25										
				52.50										
				52.75	-									
				53.00										
				53.25							600			
			2272	53.50										
				53.75										
				54.00										
				54.25										
				54.50										
				54.75										
	FE 71	+contact at 30° to core.		55.00										
55.34	60.98	PARAGNETSS		55.25										
		Similar to 13.31-49.39. Banding at 30-35° to core.		55,50								-		
			27777	55.75				,						
				56.00										
				56.25										
				56.50										
				€.75										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE		DA		PAGE 13	HOLE	
					RADIOM	METRICS	SF	P-44	1	7/6/	70		78-C	-15
FROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U3O8		
				57.00					116	56.80	60.85	4.001		
				57.25										
				57.50										
57.92	58.54	Medium Grey Granite. Similar to 19.36- 19.66.		57.75										
			ļ	58,00				•						
				58.25										
				58.50										
				58.75										
				59.00										
59.45	59.76	" " " " "		59.25										
	7,01		- Time	59.50										
		1		59.75										
60.55	60.89	11 11 11 11		60.00										
				60.25										
	60.85	End of hole. Pallingtern	L	60.50										
		7,000	7777	60:75										
,				61.00) 				117	fines		.007		
1				1										

ESS	EX MIN	NERALS COMPANY GEOLOGICA	LOG	BY	R. Quartermo	ain		ATE _8	6/78		HOLE	#
	LA	C COSTEBELLE B-3205 RADIOMETR	C LOG	BY_				ATE			78 - C -	
LAT. 114	+ 83 5 LONG	5+02E COLLAR ELEV. 101.47 DEPTH 9.85 m DIP_	900	COR	E SIZE HW	CORE			98%		364/31-	
FROM	ТО	REMARKS	LOG	METER	RADIOMETRI TOTAL K	U Th	#	FROM	ТО	U ₃ O ₈	ASSAYS	1
	4.35	Red, medium to coarse grained (.lcm- 3cm). Felsic portion: red, sub to euhedral, .5-3cm, str ated, hematite-stained &-spars; smoky green to grey, anhedral, .3-2cm quartz. Mafic portion: black, subhedral, .2-1cm biotite; black, .3-2cm, euhedral bastnaesite; black, euhedral .24cm zircon; black subhedral .48cm tou maline (?); gray, anhedral .23cm magnetite; si ver-grey, euhedral .1cm molybdenite. The coarse sections are over 10-15cm and there are 3 of these. They have less mafics than the medium-grained granite. In the medium section there are a few zones 5-10cm which are slightly more biotite-rich. Hematite is present throughout the section as staining and grains. Minor alteration of biotite to chlorite with vermiculite present near the top of the hole. Minor knolinization of K-spars and limonite occurs along fractures. A fracture extends subparalled to core. The hastnaesite displays a radiating structure and one grain at 3.50 cuts a biotite grain buborders around a quartz and K-spar grain at its energy and the section and appearance. Minor systel gives it a zoned appearance. Minor systel mineralization aloedges of tourmaline (?) grains. Mineral percentages: Felsics- K-spar 45-55, quartz 25-30. Mafics- biotite 10-20, hematite 3-5, magnetite 4, bastnaesite 2-5, tourmaline 2-3, chlorite 2, zircon 1, vermiculite 1, limonite 1, molybdenite 41.	e ds.	1.25 1.50 1.75 2.00 2.25 2.50 2.75			82	1	2.15	.004		
	4.35	contact at 90° to coreground.		4.2								
				1 4 =	-II		84	4.35	6.59	.008		

ESSE	X MINE	RALS COMPANY LAC COSTEBELL	_E					H	SIZE	6/6/		PAGE 2	78-C	
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC K	S SP.	-44 Th	SA	FROM	ТО	U3 08	SSAYS	I
.35	6.59	BICTL E SCHIST Black, fine-grained, equigranular. Telsic portion: white to clear, .lcm subhedral feld spars and clear .lcm anhedral quartz. Mafic portion: black, ewhedral .lcm biotite; grey anhedral, .lcm magnetite and minor pyrite mineral ization. Banding varies 20-30° to core and biotite is altered to chlorite in some areas. Fractures occur at 4.55 at 45° to core, 5.35 at 50° to core, at 6.45 at 45° to core. Mineral percentages: Felsics- feldspar 30-35, quartz 15-20. Mafics- biotite 50-55, chlorite 2, magnetite 1, pyritetrace.	-	5.25 5.50 5.75 6.00										
5.59	6.59 7.19	nyritetrace. contact at 45° to core. HEDIUM PINK GRANITE (PED (RADIO)) Similar to 0-4.35m but not as red in color. At the upper contact there are lenses of the schist in the granite. contact at 40° to core.		6.25 6.50 6.75					85	6.59	7.34	.004		
7.19	7.34	METAMOR HO ED CONTACT ZONE Grey, fine-grained, equigranular. Felsic portion: pink to red, clear, striated, subhedral .12cm K-spars; white to clear, anhedral .1cm quartz. Mafic portion: black, euhedral, .1cm biotite. Mineral percentages: Felsics-K-spars 50-55, quartz 30-35. Biotite- 10-15. contact at 25° to core.		7.25 7.50 7.75 8.00	5				86	7.34	9.85	.002		
			Control and Contro	8.50 8.75 9.00	5									
				9.25										

ESSE	K MINER	RALS COMPANY LAC COSTEBELL	E E	3-32	05			CORE HW		DA 8/6/7		PAGE 3	HOLE 78-0-	# 14
5001		DEMARKS	1.00	ATTER.	RADION	DIOMETRICS SP.				AMPLE			ASSAYS	
FROM	то	REMARKS	LOG	VEIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				9.50										
7.34	9.05	BIOTITE SCHIST		9.75										
(•)4		Similar to 4.35-6.59.		10.00					87	fines		. 004		
		End of hole.		10.25										
				10.50										
				10.75										
				11.00										
				11.25										
				11.50	9									
				11.75										
				12.00										
				12.25						j				
				12.50										
				12.75										
				13.00										
				13.25										
				13.50										
				13.75										
1		~		1400		1								

MINERALS COMPANY GEOLOGICAL LOG BY R. Quantermain DATE 8/6/78 ESSEX HOLL # LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY____ DATE 78 - C - 15 CLAIM # LAT. 114 + 005 LONG. 1+00E COLLAR ELEV. 95.09 DEPTH 8.50 m DIP 90° CORE SIZE HW _CORE RECOVERY___ 364 130 -4 LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS FROM TO REMARKS TOTAL Th FROM TO U308 .625 HEDIUM RED GRANITE .625 .005 Red, medium grained (.2-1cm), relatively equigran-0.25 Felsic portion: salmon-pin't to red, sub to euhedral 0.50 .2- 1cm, striated, hematite-stained K_spars; and smoky green to grey, anhedral .2-1cm quartz. Mafic portion: black, sub to euhedral .2-.8cm bio-0.75 89 . 625 1.625 .011 tite; black, euhedral .2-.3cm zircon; black, sub to euhedral .2-. cm bastnaesite; black, subhedral 1.00 .2-.7 tourmaline(?); gray, anhedral .2-.5cm magnetite; red, anhedral, .2-.5cm hematite; silver gray 1.25 .lcm euhedral molybdenite. Hematite stain occurs in K-snar grains and along contacts at others. Minor alteration of biotite to 1.50 chlorite in core, and to vermiculite along fractures near top of hole. Bootnoesite has a radiating struc-1.75 1.625 3.375 .002 ture with hematite along fractures. Mineral percentages: 2.00 Felsics: K-spar 40-50, quartz 25-30. Mafics: biotite 10-15, hematite 5-10, bastnaesite 2-5, chlorite 3, tourmaline 1-2, zircon 1, magne-2.25 tite 1. molybdenite / 1. A fracture at .125cm occurs at 15° to core. 2.50 From .55 to .65 core is ground. .625contact over 5cm. 2.75 1.625 .625 COARSE RED GRANITE Similar to above, but grain size is .5- 4cm. 3.00 Mineral percentages: Felsics-feldspar (.5-4cm) 60, quartz (.5-1.5cm) 20-30. 3.25 Mafics- biotite (.5-2cm) 8-12, hematite (.5cm) 2-4, magnetite (.5cm) 1-3, others 1.
1.13 ... major fracture at 95° to core--kaolinization of 3.50 3.375 5./25 .009 K-spars, hematite, limonite stain; minor calcite. 1.625 contact ground over 5cm. 3.75 1.525 5.175 MEDIUM RED GRANITE Similar to 0-525. Minor fractures sub-perp. to 4.00 core. 4.25

	V NAINIT	TRALE COMPANY LAC COSTERE		D	2205			CORE	SIZE	DA'	TE	PAGE	HOLE	#
ESSE.	X MIINE	RALS COMPANY LAC COSTEBEL						H V		8/6/	78	2	78-C-1	.5
FROM	то	REMARKS	106	METER	RADIOI TOTAL	METRIC	S SF	-44	S	AMPLE			SSAYS	
FROM	10	REMARKS	200	****	TOTAL	K	U	Th		FROM	ТО	<i>U</i> 308		
				4.75										
5.125	9.50	COARSE RED GRAJITE		5.00										
		Similar t .625-1.625.		5,25					92	5./25	6.825	.002		
				5.50										
5.30	6.00	medium red granite similar to .625												
				5.75										
				6.00										
				6.25										
				6.50										
				6.75										
				7.00					93	6,825	8.50	.009		
			min	7.25										
7.70	8.00	medium red granite similar to 0625												
		1		7.50										// - A
				7.75										
				8.00										
				0.25										
	8.50	End of hole.		8.25										
		10	4	8.50						fines				
				8.75					94	tines		.008		
				9.00										
				9.25				1						

	ERALS COMPANY C COSTEBELLE B-3205	GEOLOGICAL RADIOMETRIC								ATE			HOLE 78 - C	
T. 114 +605 LONG.	2+04 E COLLAR ELEV. 91.93 DEPTH	11.25_DIP	900	COR	E SIZE	H	[MC			RY 98	%		CLAIM # 364130	-
ом то	REMARKS	÷	LOG	METER	RADIO TOTAL	METRIC	S SP.	44 Th		AMPLE	TO	ilaOa	ASSAYS	Т
2.15 .15 9.15	Overburden MEDIUM (TO COARSE) RED GRANITE Refer to Medium Red Granite, Log 15. of coarser granite over 6-locm. Scatte tures sub-perpendicular to core.	Minor zones		0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25		K	U	Th	95	2.15	TO 4,40	U308		
3.05 3.35	biotite-rich zone. Felsics- 65-70%, Nafics- Biotite 25-30, others 2-3%.			3.00 3.25 3.50 3.75 4.00 4.25										

	V NAINIT	TRALE COMPANY LAC COSTERE		D	2205			CORE	SIZE	DA"	TE	PAGE	HOLE	#
ESSE.	X MINE	RALS COMPANY LAC COSTEBEL	LC					HW	7	9/6	/78	2	78-C	- 16
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRIC:	S SP	-44 Th	SA	FROM	ТО	1	SSAYS	1
T KOM		TE PARTO			IOIAL		U	In		FROM	10	U ₃ O ₈		
			711111	4.75										
				5.00										
				5,25										
				5.50										
				5.75										
				6.00										
				6.25										
				6.50							1.45			
				6.75					97	6.65	9.15	-004		
				7.00					, ,					
			77777											
				7.50										
				7.75										
				8.00										
				8.25										
				8.50										
				8.75										
	9.15	contact over 10 cm.		0.75										
				9.00									4	
			4	9.25					- 00	OIE	1125	004		

ESSE.	X MINE	RALS COMPANY LAC COSTEBELLE	В	-32	05				SIZE HW	9/6/	78	PAGE 3	HOLE 78-C-	# 16
FROM	то	REMARKS	LOG	METER	RADIOM TOTAL	METRICS		2-44	H	SAMPLE			ASSAYS	_
- ROM	10	KEMANIS	100		TOTAL	К	U	Th	井	FROM	ТО	U ₃ O ₈		
				9.50										
				9.75										
				10.00										
			11111	10.25										
				10.50										
				10.75										
. 15	11.25	COARSE RED GRAHITE Refer to Coarse Red Granite, log 15. Grain size (.5cm4cm) is dominantly greater		11.00										
	0=	than 2cm and biotite occurs in books.		11.25		1								
	11.25	End of hole.	1	11.50					99	fines		,009		
				11.75										
		14 J. 10 U		12.00										
				12.25										
				12.50										
				12.75										
				13.00										
				13.25										
				13.50										
				13.75										
				14.00										

HOLE # DATE _ 9/6/78 GEOLOGICAL LOG BY R. Quartermain MINERALS COMPANY ESSEX 78-C-17 LAC COSTEBELLE B-3205 DATE _ RADIOMETRIC LOG BY_ CLAIM # LAT. 114+005 LONG. 3+03 E COLLAR ELEV. 92.19 DEPTH 61.28 m DIP 90° CORE SIZE BQ CORE RECOVERY_ 364131-4 LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS TO REMARKS FROM # FROM U308 TOTAL Th TO 2.0 .004 0 3.05 COARSE (TO MEDIUM) RED GRANITE 0.25 Salmon-pin't to red, medium to coarse-grained (.1-2cm). Coarse portion comprises 50-60%, medium portion 40-0.50 23.8 1.8 3.7 2.1 50% of section. Felsic portion: pink to red, .4-2cm subhedral to euhedral, striated, hematite-stained K-spars; white to 0.75 smoky green to grey to clear, anhedral .2-2cm quartz 1.8 3.5 Mafic portion: black, subhedral .2-1cm biotite; 2.46 1.00 black, euhedral .3-1cm bastnaesite; black, subhedral .4-.8cm tourmaline (?); black, euhedral .2cm zircon; grey, anhedral .5-.8cm magnetite; silver-1.25 grey, euhedral .lcm molybdenite; red, anhedral .5-1.8 1.50 2.5.3 2.1 1cm hematite. Biotite is altered to chlorite throughout the hole and to vermiculite along fractures. The green quartz oc-1.75 curs randomly throughout the core. Bastnaesite and tourmaline(?) exhibit radiating fracture patterns in-2.00 30.0 3.6 1.9 2.1 to adjoining grains, some with hematite staining. Hematite occurs both as grains and stains between K-2.0 4.0 007 spar grains. Minor kaolinization of feldspars near 2.25 top of holes as well as limonite staining along fract tures. 2.1 2.50 33.3 2.3 4.2 There are numerous fractures throughout the core. Epidote and quartz veining is abundant. There are concentrations of quartz, biotite and bastnaesite as 2.75 noted below. Contacts of these sections are gradual 34.31 2.3 4.0 2.3 over a few centimeters. Mineral Percentages: 3.25 26.91 Felsics- quartz 25-30, K-apar 50-60. 1.7 4.0 Mafics- biotite 10-15, hematite 5-10, bastnaesite 1-3, zircon 1, magnetite 1, tourmaline 1, epi-3.50 \$6.9 1.7 4.0 Mote 1, limonite 1, molybdenite 1. 1.22core ground and chipped. 1.37 ... fractured at 10° to core. 3.05 contact at 60° to core. 3.75 3.05 3.66 PARAGNEISS 45.5 40 2.1 2.3 4.00 Red, fine-grained, equigranular. 4.0 6.0 .014 4.25 150 34.7 2.4 3.5

ESSE	X MINE	ERALS COMPANY LAC COSTEBEL	LE	B-3	3205)		CORE		DA1		PAGE 2	78-C	
					RADIO	METRIC	S SP	-44	ă .	9/ <u>6</u> /7 AMPLE	0		SSAYS	- 17
FROM	ТО	REMARKS	LOG	METER	TOTAL	K	U	Th		FROM	то	U ₃ O ₈		
		Felsic portion: red to white, .lcm subhedral K-spar + 40%; white to clear, anhedral .lcm quartz 20-25. Mafic portion: black, subhedral .lcm biotite ,25%;		4.75	4.73	4.2	2.4	2.3						
		black, anhedral .lcm magnetite 2%; red, anhedral .lcm hematite (stain) 5-10. Banding at 60° to core. Minor alteration of biotite		5,25										
	3.66	to chloritecontact at 60° to core.		5.50	25.2	3.2	1.8	1.4						
3.66	35.67	COARSE (TO MEDI M) RED GRANITE Similar to 0-3.05m.		5.75										
	4.88	bastnaesite <3% over 5cm.		6.00	26.5	3.1	2.0	1.6						
				6.25						6.0	8.0	· 014		
				6.50	99.7	6.2	4.3	4.8				: : :		
				6.75										
				7.00	138.8	8.1	4.5	4.9						
				7.25										
	7.42	bastnaesite ≤10% over 5cm.		7.50	121.1	6.3	4.0	5.3						
				7.75										
				8.00	34.4	3.8	2.4	2.0		8.0	10.0	00/		_
				8.25				0.1		0.0	10.0	. 006		
				8.50	35.2	3,9	26	21						
				8.75										
	9.15	fracture at 10 to core, filled with calcite.		9.00	24.2	3.1	2.1	2.0						
				9.25										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE BG		DA 9/6/		PAGE 3	HOLE 78-C-1	
					RADION	1ETRICS	S SF	2-44	9	SAMPLE			ASSAYS	
FROM	ТО	REMARKS	LOG	MEIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				9.50	24.6	3.2	2.1	1.6						
				9.75	2≰.									
				10.00	27.6	3.1	1.9	2.0		/0.0	42.5			
				10.25						/0.0	12.0	.008		
				10.50	31.4	3.6	2.2	2.0						
				10.75				0.0						
				11.00	30.5	3.9	2.1	2.0						
11.28	11.8	Quartz-Rich Section		11.25										
		White to black, medium to coarse-grained. Quart 40%, black biotite 15%, hematite 5%.	z	11.50	24.3	2.8	1.9	1,5						
		Biotite has the appearance of randomly oriented needle-like grains, .05cm x lcm. Hematite occurs as a coating on grains of quartz, K-spar		11.75			2.0	1.7						
		and biotite.		12.00	26 .9	3.5	2,2	1. /		12.0	14.0	.014		
	12.20	bastnaesite 410% over 10 cm.		12.25		4.6	2.9	2.4						
				12.50	5.39	1.0	5''	2						
				12.75		1 1	2.6	2.2						
	17 11	bastnaesite \(\textit{L3%} \) over 5cm and minor fractures at	ı	13.00	32.5	4.1	2.6	2,2						
	10.11	10 to core.		13.25	24.0	3.3	2.1	1.7						
				13.50			271	,,,,						
				13.75	248	3.7	2.4	1.9						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	-32	05			CORE BQ	SIZE	9/6/		PAGE	HOLE 78-C-1	
		DELLA DICC	1.00		RADION	METRICS	S SF	?-44	5	SAMPLE			ASSAYS	
FROM	ТО	REMARKS	LOG	VEIER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
14.02	14.33	Quartz-rich section. White to red, ooarse-grained. White quartz 2cm,		14,25						14.0	16.0	. 006		
		45-50%; pink K-spars 2cm, 40%. black biotite (ibooks) lcm 10-15%; red hematite lcm, 5%. A 1.5 cm grevish-white quartz vein guts this section at		14,50	24.6	3.5	1.9	1.6						
		cm greyish-wite quartz vein cuts this section at 40 to core.		14.75					-					
				15.00	23.5	3.3	2.0	1.9						
				1525										
				1550	27.6	3.6	2.2	1.8						
				15 <i>.7</i> 5										
				16.00	24.5	26	2.2	1.6						
				16.25					-	16.0	18.0	.009		
16.77	17.38	Quartz-rich section	1	16.50	39.8	3.1	2.4	1.9						
		Similar to 14.02-14.33. Quartz 50%; K-spar 30-35 Hematite 15-20%; biotite 23. Contact at 16.77m is a 2mm quartz/epidote vein at		16.75										
		45 to core; lower contact gradual.		17.00	28.6	2.3	1.9	1.3						
				17.25								-		
				17.50	23,4	2.8	20	1.6						
17.99	18.60	Biotite-rich zone.		17.75										
		Red to black, medium-grained. K-spar 45-50%; Biotite 20-25, others 3.		18.00	33.5	3.1	1.9	1.6						
				1825						18.0	20.0	.015		
				18.50	23.1	29	2.5	2.0						
I	l			19.75	П	I.	I	1 1	I	1 1	1		ļ	I

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	-32	05			CORE Bସ୍	SIZE	DAT 9/6/78		PAGE 5	HOLE #	
			100		RADION	ETRICS	SF	2-44	S	AMPLE			ASSAYS	
FROM	ТО	REMARKS	LOG	MEIER	TOTAL	K	U	Th	#	FROM	то	U ₃ O ₈		
				19.00	20.0	2.3	1.8	1.5						
				19.25	3'									
				19.50	32.7	3.1	2.4	2.0						
				19.75										
				2000	27.8	2.3	1.9	1.4		22.0	20.0			
				20.25						20.0	22.0	.007		
				20.50	22.8	2.6	1.8	1.6						
				20.75										
				21,00	21.9	2.6	2.1	1.7						
				21.25										
				21.50	25.8	2.9	2.0	1.8						
	21.95	bastnaesite 5% over 12cm.		21.75										
				22.00	22.5	2.7	1,7	1.5		0.1.1	a >			
				22.25						22.0	24.0	.012		
22.87	23.05	Purple medium-grained, altered. Section consists		22.50	26.2	3.2	2.3	1.6						
		of clear anhedral quartz 45-50%; pin's to orange, altered K-spars 25-30; ggeen to red altered bio-tite 10-15%; gray to red anhedral magnetite, 2%;	*1	22.75					-					
-		red hematite 10%. The feldspars have been aclinized and the biotite has been altered to chlorite,		2300	22.2	2.6	1.5	1.3						
		some heavily stained by hematite. Some of the chlorite appears to be further altered to a dark		23.25										
		green, soft(4) greasy-feeling, clay mineral (?)		27 50	22.2	2.8	1.9	15						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05	-		CORE	SIZE	DA.	TE	PAGE 6	HOLE = 78-C-17	•
					RADION	METRICS	SP	-44		SAMPLE			ASSAYS	
FROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
23.78	24.09	hematite-altered zone. Similar to 22.87-23.05m, except more hematite up		23.75										
		to 15%.		24.00	22.8	2.8	1.9	1.6						
24.39	25.30	Similar to 22.87-23.05 except less hematitemore kaolinization of K-spars and abundant green clay		24.25						24.0	26.0	.007		
		mineral. Grains are angular and some zones have brecciated appearance. Numerous minor fractures at 40 to 50° to core. Minor epidote veining.		24.50	23.7	3.6	1.9	1.6						
		at 40 to 50° to core. Minor epidote veining.		24.75										
				25.00	33.1	3.7	2.1	2.2						
				25.25										
	25 01	bastnaesite 3% over 5cm.		25.50	258	3.4	1.6	1.7						
	2)•71	•••• bas chaesite 5/0 over join.		25.75										
				26.00	24.0	3.7	2.2	1.9						
				26.25						26.0	28.0	.004		
	26.83	quartz vein over 5cm.		26,50	33.6	3,6	2.3	2.3						
		Green medium-grained. Quartz comprises = 60%, remainder is a dark green, anhedral epidote-alter		26.75										
		cherty-appearing mineral. Vein is at 45° to core		27.00	39.8	4.0	2.3	2.3						
				27.25										
				27.50	24.9	3.2	2.0	1.9						
				27.75										
				28.00	38.6	3.8	2.3	2.5						
				28,25						28.0	30.0	.011		

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-32	05			CORE	SIZE	DA	IE.	PAGE 7	HOLE 78-	# C-17
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS	S SF	-44		SAMPLE			ASSAYS	
	. •		200	- ILIV	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		-
	29.27	bastnaesite 2% over 5cm.		28,50	36.7	3.9	2.4	2.2						
				28.75										
				29.00	49.0	4.1	2.3	2.4			-			
				29.25										
30.49	30.79	quartz-rich section. White to red, wry coarse grained (44cm). Quartz		29.50	27.0	3.1	1.8	1.7						
		70%; K-spar 25%; hematite-stained biotite 5%.		29.75										
31.10	31.25	altered zone		30.00	27.3	2.8	1.3	1.5			-			
		Similar to 22.87-23.05, except more biotite (25%) which has been totally chloritized.		30.25						30.0	32.0	-007		
				30,50	22.3	2.7	1.5	1.4						
				30.75										
				31.00	28.7	3.3	2.2	2.0					-	
32.32	32.62	a series of Z.lcm wide epidote veins cut the core at 45°.		31,25										
	-			31.50	31.2	3.6	2.3	2.2						
				3 1.75										
				32,∞	24.4	3.2	1.8	1.6						
				32.25						32.0	34.0	.002		
				32.5C	23.3	3.3	2.1	1.9						
				32.75			_							
		Y 1		23.00	23.9	3.8	2.0	1.6						

ESSE:	X MINEF	RALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE BQ	SIZE	9/6/°		PAGE 8	78-C-1	
	T.C.	DELVA DIVE	1.06	METER	RADION	ETRICS		-44		AMPLE			ASSAYS	
FROM	ТО	REMARKS	200	VE IER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				33.25										
				33.50	25.0	3.7	1.8	2.0						
				33.75	24.7	3.2								
				, 34.00	24.7	3.2	1.8	2.0						
				3425						34.0	36.0	.001		
				34.5C					7					
				34.75	25.2	3.2	1.8	1.6						
				35.00										
	,			35.25	24.5	3.4	1.7	1.6						
				35.50										
35.67	61.28	MEDIUM (TO COARSE) RED GRANTTE		35.75	24.1	3.6	2.1	1.8						
		Similar to 0-3.05, except that the percentage of the coarse-medium-grained portion is 15/85. The section is darker red and there is more hematite		36.00				4						
		staining present.		36.25	32.4	3.3	1.8	2.1	ľ	36.0	38.0	.002		
				36.50	24.8	3.4	1.9	2.0						
				36.75										
				37.00	24.0	3,9	1:4	1.8						
				37,25										
				37.50	27.4	3.4	2.2	2.1						
				37.75										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-32	05			CORE BQ	SIZE	9/6/		PAGE 9	78-C-17
ROM	то	REMARKS	100	METER	RADION	METRICS	SF	2-44		AMPLE			ASSAYS
ROM	10	REMARKS	LOG	VIC I E.K	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈	
				38.00	26.0	3.3	18	1.7					
38.11	38.41	biotite-rich section. Black to red; felsics 70%; biotite 30. Minor chlorite alteration.		38.25	i	2.2				38.0	40.0	4.001	
			\ 	38.50	22.2	3.3	20	2.0					
				38.75									
39.02		a 2 cm subhedral bastnaesite grain has grown		39.00	24.0	3.1	1.8	1.5					
		around a K-spar and quartz grain.		39.25									
				39,50	22.4	3.0	2.1	1.9					
				39.75									
				40.00	25.1	3.1	1.9	1.6					
				40.25						40.0	42.0	.008	
				4050	23.9	2.7	2.0	7.6					
				40.75									
				41.00	24.0	3.4	2.1	2.0					
				41.25									
				41.50	34.9	3.4	2.3	1.8					
				41.75									
				42.00	33.2	3.2	2.1	2.1					
				42.25						42.0	44.0	.021	
				4250	54.8	4.5	2.5	2.9					

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE Bର୍		9/6/		PAGE 10	78-C-1
:DO14	TO	DEMARKS	100	METER	RADION		SF	-44		AMPLE			ASSAYS
ROM	то	REMARKS	LOG	VETER	TOTAL	K	U	Th	#	FROM	то	U308	
42.99	43.60	bastnaesite and zircon-rich section. Bastnae-		42.75									
,	19.00	site 8%, zircon 2%.		43.00	41.0	4.3	2,5	25					
				43.25									
				43.50	8.26	5.9	4.1	3.6					
				43.75									
				44.00	325.0	14.0	9,1	14.1					
				44.25					-	44.0	46.0	.014	
				44.50	32.1	3.7	2.2	21					
				44.75									
				45.00	24.1	3.7	1.9	1.9					
				45.25									
				45.50	21.9	3.0	1.7	1.7					
45.73	46.01	biotite-rich zone.	L	45.75									
		Similar to 38.11-38.41.		46,00	26.5	2.7	1.8	1.6					
				46.25						46.0	48.0	.004	
				4650	33.7	4.1	2.4	2.2					
				46.75									
				47.∞	20,7	2.7	1,8	1.7					
				47.25									

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE BQ	SIZE	9/6/7		PAGE 11	HOLE \$
					RADION	METRICS	S SF	2-44	5	SAMPLE			ASSAYS
ROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	ТО	U308	
	47.26	bastnaesite 5% over 10cm. Trace of pyrite.		47.50	117.1	5,8	4.8	2.5					
47.87	47.97	altered zone.		47.75	19.4	2.1	1.7	1.3					
		Dark green, medium-grained. Dominantly soft green mineral observed in 22.87-23.05. All the feld-spars have been kaolinized and abundant chlorite.		48.00	7					48.0	50.0	.004	
		spars have been kaolinized and abundant chlorite This zone cuts the core at 45° with epidote on e contact. Minor alteration extends into the host granite for 3-4cm.	1			3.2	2.1	1.9					
48.48	49.0	9biotite-rich section.			28,1	0.2	2.1	1.7					
		Similar to 38.11-38.41, except biotite ≤20%.		48.75		2.0	2.0	1.7					
					1.8,3		2.0	.,,					
				49.25									
				49.50	1.85	2.2	1.7	1.6					
				49.75									
				50,00	1.8.6	2.6	1.8	1.7		500	~a ^	0.07	
				50,25						50.0	52.0	.007	
	č L			50,50	1.56	1.7	1.5	1.2					
				50.75									
				50.00	1.6.7	2.0	1,7	1.5					
				51.25									
				51.50	16.0	1.7	1,5	1.3	'				
				51.75									
				5200	1,53	1.8	1.6	1,3					

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE BQ		9/6/		PAGE 12	78-C-
ROM	то	REMARKS	1.06	METER	RADION	ETRICS	SF	2-44	-	AMPLE			ASSAYS
1014	10	REMARKS	200	VICTOR	TOTAL	K	U	Th	#	FROM	ТО	U308	
				52,25						52.0	54.0	.011	
				52.50	1.4.9	1.7	1.5	1.3					
				52.75									
				53.00	1.4.7	5.4	1.4	1.3					
53.13	52.74	Red, grains 1-2cm. K-spar 60%, quartz 30, bio-		53.25									
				53.50	18.2	2.3	1.8	1.6					
				53.75						0 15			
				54.00	20.7	1.9	1.5	1.4					
				54.25						54.0	56.0	.004	
				54.50	27.7	2.3	1.4	1.2					
EL 00	54.88	fracture at 10° to corebastnaesite ≤ 3%.		54.75					_				
54.88 55.18	55.49	core ground.		<i>5</i> 5.00	19.6	2.2	1.5	1.4					
			-	55.25									
				55.50	23.9	2.5	1.6	44					
				55.75									
				56.00	16.7	1.9	1.5	1.4					
				56.25						56.0	58.0	-007	
				56.50	1 1,5	1.8	1.4	1,3					
		"		56.75									

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE BQ		9/6/7		PAGE 13	78-G-1
					RADION	/ETRICS	SF	2-44	9	SAMPLE			ASSAYS
ROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U308	
				57.00	22.2	2.0	1.7	1.3					
				57.25	1								
				57.50	11.6	1.4	1.0	.9					
				57.75									
				58.00	20.5	1.8	1.4	1.3					
58.23	59.15	Coarse Red Granite Similar to 52.13-52.74	Ļ	58.25				,		58.0	60.0	.005	
				58.50	10.5	1.8	1.6	1.6					
				58.75									
				59.00	14.6	1,7	1.3	1,3					
				59.25									
				59.50	11.9	1.6	1.5	1.5					
				59.75									
				60.00	12.3	13	1.1	1.1					
60.37	60.67	biotite-rich zone.	1	60.25						60.0	61.3	. 002	
		Similar to 38.11-38.41.	1	60.50									
			\	60.75									
	61.28	End of hole.		61.00				-					
		Alliantumae		61.25									
				61.50									

I ESSE	X MIN	NERALS COMPANY	GEOLOGICAL	LOG	BY_R	. Quar	termai	n		D	ATE10	/6/78		HOL	E #
		C COSTEBELLE B-3205	RADIOMETRI								ATE			78 .	- C - 18
11/1	Sous	4 + 00E COLLAR ELEV. 93.16 DEPTH 1	Lo DID	000	COP	E 517E	U t.r		OPE D	ECOVE	DV.	93%		CLAIM	
			1.49m DIF	T	L	RADIO	METRIC	S SP	-44	S	AMPLE			ASSAY	131-4 'S
FROM	то	REMARKS		LOG	MEIER	RADIO TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
					0.25										
					0.50										
					0.75					\parallel					
					1.00										
					4.05										
					1.25					1		1			
					1.50				1	4					
0	5.49	Overburden			1.75										ł
					2.00					-					
					2.25	,									
										1					
					2.50					1	-		-		
					2.75										
					200										
					3.00	1				1					
					3.25										
					3.50										
					3.50	1									
					3.75					4					
					4.00										
					4.25	5				-					
					4.50										

FROM	то	RALS COMPANY LAC COSTEBEL REMARKS	LOG		RADIO			HV	N	10-6-	78	2	78-c-	-18
	то	REMARKS	LOG	METER	IVADIO		6 6 6	11		AMPLE			CCAUC	
					TOTAL	K	U U	Th	5,	FROM	ТО	U ₃ O ₈	SSAYS	
				4.75										
				5.00										
5.49	14.49	COARSE (TO MEDIUM RED) GRANITE Red, medium to coarse-grained (.2-2cm).		5.25 5.50		**								
		Felsic portion: salmon pink to red, sub to euhedral .5-2cm, striated, hematite-stained, epidote-veined K-spars and smoky greenish grey to white, anhedral	T	5.75	37.0	3.2	2.5	2.0		5.49	7.74	.007		
		.5-1.5cm quartz. Mafic portion: black, sub to euhedral, .3-1.5cm	,	6.00	31.6	3.3	2.8	2.1						
		biotite; black, sub to euhedral, .5-lcm hematite-stained bastnaesite; black, euhedral, .24cm zir con.		6.25	29.8	2.5	2.0	1.7						
		Biotite is altered to chlorite and in some areas stained by hematite. There is abundant epidote vei	72777	6.50	33.2	3.2	2.6	2.0						
		ing. The majority of K-spars has an orange color and the quartz is dominantely white. The bastnae-site exhibits hematite-stained, radiating fractures		6.75	31.3	28	2.A	2.1						
		There is minor pyrite mineralization. On the whole this granite is less mafic than most logged so far.	,	7.00		3,9	3.6	2.5						
		Mineral percentages: Felsics- 60 K-spar, 25-30 quartz. Mafics- biotite 10-12, hematite 5, chlorite 2-3,		7.25	103.9		4.6	3.4						
5.64	6.04	bastnaesite 1-2, zircon, pyritetrace.		7.50		4.1	35	3.2					- 1	
	7.24	limonite fracture at 75° to coreseries of epidote veins at 30-40° to core.		7.75		3.2	25	2.0		7.74	9.99	,004		
			777777	8.00		3.0	26	1.9				-		
				8.25		34	2.2	1.9						
				8.50		6.0	5.6	5.1						
8.89	8.99	core ground.		8.75	40.3	2.9	2.0	1.7						
		chlorite fracture at 45° to core.		9.00	53.2 53.2	3.5	3,2 2.8	2.3						

SSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE		10/6/		PAGE 3	HOLE \$	
ом	то	REMARKS	1.06	METER	RADIOM TOTAL		SP	-44		SAMPLE			ASSAYS	
OIVI	10	REMARKS	200	VIL. I LIV	TOTAL	К	U	Th	#	FROM	TO	U ₃ O ₈		F
				9.50	47.7	34	3.0	2.4						
				9.75	42.4	3.6	2.2	2.0						
				10.00	50,3	4.1	3.1	2.4						
				10.25	82.2	4.7	8.9	28		9.99	12.24	.006		
				10.50	32.2	29	2.3	18						
	10.74	••••series of epidote veins at 10-20° to core.		10.75	57.2	3.7	2.5	2.3						
					68.4	4.0	3.7	2.5						
11.24	11.99	Quartz-rich section.]	11.25	En 1	3.8	3.0	2.4						
		Red to white, coarse-grained. White quartz 50%; Red K-spar 35%; biotite 15%.	1		88.5	4.5	A.2	3.5				,		
					36.9	3.5	2.5	1.8						
					367	3.6	29	2.0						
			۱	12.00	201	2.8	2.2							
				12.25	90 (5.1	4.7			12.24	14.49	.011		
				12.50										
12.89	12.99	core ground.	7	12.75	162.8									
		Bastnaesite 410%.		13.00		10.5	9.6	7.6						
13.2	9 13.49	Bastnaesite ≤3%	L	13.25	501.6	16.3	16.2	13.7						
			ļ		1994		66	5.9						
				13.75	143.0	68	5,8	4.6						
			2777		162.2		6.1	4.9						

ESSE:	X MINE	RALS COMPANY LAC COSTEBELL	E E	3-32	05			CORE HV	SIZE	10/6	/78	PAGE 4	78-C	
					RADION	METRICS	S SF	2-44	5	SAMPLE			ASSAYS	
ROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	TO	U308		
		.0		14,25	43.6	3.4	28	1.9						
	14.49	End of hole. Attention		14.50	76.A	4.1	3.7	3.2		6				
				14.75						fines				
		45												

ESS		NERALS COMPANY GEOLOGIC											HOLE	
	LA	C COSTEBELLE B-3205 RADIOME	RIC LOG	BY					C	ATE			78-C-1	
LAT. 1141	OOS LONG	6. 5+00 E COLLAR ELEV. 95.57 DEPTH 11.48 DIP							_	RY9	19%		36413	
FROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	ASSAYS	
				0.25										
0	2.44	Overburden		0.50										
				0.75										
				1.00										
				1.25					-					
				1.50										
				1.75										
				2.00										
				2.25										
2.44	5.04	PARAGNEISS Purple to red, fine to medium-grained.		2.50						2.44	4.69	.00	7	
		Felsic portion: pink to red, subhedral .18cm, a ated, hematite-stained K-spars and smoky-grey to clear, anhedral .1-lcm quartz.		4	3.9.1		2.6	2.3						
		Mafic portion: black, sub to euhedral, .12cm bitite. Minor alteration of biotite to chlorite.		3.00	409	3.1	2.9	1.7						
		Banding is at 25-30° to core. Scattered segregat of coarser-grained felsics indicating recrystalli	ions	3.25	41.4	3.2	2.8	2.2						
		zation. Minor epidote veins cut the core at 15-20° at 4.0	5	3.50	43.1	2.8	2.6	2.1						
		and 4.20. From 4.20 to 4.95 the core is ground a chipped. A few fractures cut perpendicularly to core.	nd	3.75	38.1	2.5	2.2	1.6						
		From 4.98 to 5.02 a medium red granite vein cuts	the	4.00	41.0	3.0	2.4	1.9						
		Mineral percentages: Felsics- K-spar 50-60, quartz 30-40. Mafics- biotite 10-15, other 41.		4.25	45.4	3.1	2.6	2.1						
		Mafics- biotite 10-15, other ≤1.		4.50	33.5	3.0	2.2	2.2						

ESSE	X MINE	ERALS COMPANY LAC COSTEBEL	LE	B-:	3205	5		HV		12/6/		PAGE 2	78-C	
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC	S SP.	-44 Th	S	FROM	ТО	U ₃ Q ₈	SSAYS	
						30	25	2.1		T IX ON	10	<u> </u>		H
	5.04	contact over 5cm.		5.00	34.6	3.1	28	2.1		4.69	6.94	.004		
5.04	5.80	CONTACT ZONE - PARAGNEISS WTH MEDIUM RED GRANITE Red, fine-grained, equigranular. Compositionally		5,25	33.2	2.9	2.4	1.7						
		similar to paragneiss, however, grain size is .lcm or less. There is a minor foliation of the mafics and this is sub to perpendicular to core. From	77777		328	2.9	2.4	1.6						
		5.20-5.60, core is cut by a .lcm epidote vein sub- parallel to core with hematite staining. contact at 85° to core.		5.75	43.6	3.5	2.6	2.1						
5.80	7.40			6.00	40.1	2.5	2.5	1.9						
		Refer to log 15. This granite lacks molybdenite an vermiculite and only a few grains of tourmaline(?)		6.25	93.7	4.1	3.6	3.3						
		were visible. Some coarser zones (up to 1.5cm), bu these are minimal. There is abundant epidote vein-		6.50	61.7	3.6	3.4	2.6						
6.20	6.50 7.20	ingfracture at 20° to corefracture at 35° to core.		6.75	98.1	5.2	4.8	3.5						
					506.2	17.4	15.9	13.3		6.94	9.19			
	7,10			7.25	86.6	4.7	3.7	3.1		6.74	9.19	.012		
7.40		contact quartz and epidote veins at 30° to core.	111111	7.50	53.7	3.7	2.9	2.4						
		Pink to purple, medium-grained, minor foliation developed at 30 to core. Mineralogy similar to para gneiss; however, more white quartz and feldspars	1	7.75	49.3	4.0	3.4	2.2						
	0	are dominantly pink. Numerous hematite veins cut the core at 25-35°.		8.00	41.5	4.2	2.6	1,8						
8.00	9.30	PARAGNEISS		8.25	68.0	4.4	3.3	2.4						
,		Similar to 2.44 to 5.04. A gentle { shaped fold extends from 8.30 to 9.00 with medium red granite in		8.50	69.3	46	3.2	2.0						
		the core of the fold and paragneiss enclosing. Som magnetite is present as well as abundant hematite.	e	8.75	61.3	39	3.1	2.6						
				9.00	59,1	3.8	3,1	2.2	V					
				9.25	76.3	4,3	3,8	2.8			11.40			

E35E.	X MINEF	RALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE HW	SIZE	DAT 12/6		PAGE 3	78-C-	
ROM	то	REMARKS	1.06	/ETED	RADION	ETRICS	S SF	-44		AMPLE			ASSAYS	
KOM	10	REMARKS	LOG	VEIER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
		At 8.10 there is a biotite zone approximately 5cm		9.50	68.8	4.4	3.5	26						
	9.30	x 3cm x \(\) lcm comprised 100% of biotite which has been altered to chlorite. contact over 5cm.		9.75	175.0		5.4	6.0						
.30	11.48	MEDIUM RED GRANITE Similar to 5.8-7.4- At 8.50 the rock is fracture	1	10.00				3.5						
		and there is abundant bastnaesite and chloritic alteration of fracture surfaces. The last 10cm of	111111		72.3		38							
		the core is a coarse red granite. (refer to log 15		10.50	170.7	8.0	5.8	5.2						
			-		380.9									
				11.00	125.8									
	11.48	End of hole. Alluaduman		11.25	65.5			5.9 2.6						
				11.50	0210	7.0	20	2.0		fines	·	.012		+
				11.75										
				12.00									,	
				12.25										
				12.50										
				12.75										
				13.00										
	4			13.25										
				13.50										
				13.75										

HOLE # GEOLOGICAL LOG BY R. Quartermain ESSEX MINERALS COMPANY 78 - C - 20LAC COSTEBELLE B-3205 DATE _ RADIOMETRIC LOG BY____ CLAIM # CORE SIZE ___ HW DEPTH 9.15 DIP 900 LAT. 112.005 LONG. 2+95 E COLLAR ELEV. 104 CORE RECOVERY_ 364130-4 LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS TO FROM REMARKS TOTAL Th FROM U308 1.80 3.3 3.1 .012 64.8 5.8 0.25 5.40 COARSE (TO MEDIUM) RED GRANITE 4.3 4.0 6.2 82.5 Refer to Coarse Red Granite, log 15. This section 0.50 of core is dominantly coarse with medium-grained arnas up to 15cm. The coarser granite is generally 2.6 419 0.75 lighter red than the medium granite, though the first 2.5meters of the core has abundant hematite. Green 24 1.00 42.4 6.1 2.1 quartz is again present, though no molybdenite was noted. This granite is unlike that of holes 18 and 19. 1.25 100.8 3.8 Bastnesite is disseminated and there are no major concentrations, except at the contact with paragneiss 4 3% over 5cm. 1.50 1833 109 ...limonite fracture at 10° to core. 1.75 44.0 4.5 26 2.6 2.00 114.2 1.80 3.60 .007 38 2.25 1060 2.50 3.25 1.8 1.6 5.6 2.0 2.75 35.5 2.4 3.00 2.5 30.2 3.25 2.0 4.8 30.4 3.50 2.1 5.1 3.88 4.12 Biotite-rich section. 3.60 5.40 .012 3.75 Black, fine to medium-grained. White to red K-4.8 2.1 spars, 25%; clear quartz 15; black biotite 60. 40.7 4.00 Biotite occurs in books and lacks foliation. 3.8 1.8 31.8 4.25 32.8

ESSEX	MINE	ERALS COMPANY LAC COSTEBEL	LE	B-	3205	5		HW		13/6		2	78-C-20
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC K	S SP	-44 Th	S	AMPLE	ТО	U ₃ Q ₈	SSAYS
					465	5.1	3.1	2.4				3-6	
5.40	5.40 8.75	••••contact at 90° to core. PARAGNEISS		4.75	30.7	4.9	2.0	2.0					
)• 10	0.17	Purple to red, fine to medium-grained, equigranular Felsic portion: white to red, subhedral .13cm		5.00									
		striated, hematite-stained K-spar and smoky-green to grey to clear, anhedral, .14cm quartz.		5,25	40.6		1.9	2.4					
		Mafic portion: black euhedral .lcm biotite and grey anhedral .lcm magnetite. Minor alteration of biotic	711111	5.50	74.0	5.9	3.5	3.4		5.40	7.20	.012	
		to chlorite and abundant hematite staining. Coarser felsic areas occur up to 1.5cm with adjacent		5.75	33.4	5.2	2.6	2.2					
		fine-grained mafic layers up to .2cm. Mineral percentages:		6.00	317	5.0	2.1	2.0					
		Felsics- '-spar 50-60; quartz 20-30 Mafics- biotite 10-15, hematite 5, chlorite 2, mag	g-	6.25	300	4.8	2.5	2.0					
		netite 1. Banding varies from 45° to core to 25° to core down			25.2	4.1	1.9	1.9					
5.30	6.40	the hole. At the contact, banding is folded, progressing from 140 to 180 to 45 to core over 10 cm.		6.50	376	4.9	2.0	1.7					
6.40	6.50	••••a fracture runs sub-parallel to core. ••••a coarse red granite vein cuts the core at 40°.		6.75	29.0		2.1	1.9					
6.70	6.95	minor S-shaped fold.	71117	7.00		-							
				7.25	29.1	4.1	1.9	1.7		7.20	9.15	. 014	
				7.50	31.7	5.2	2.5	2.4				. 014	
7.80	7.90	a coarse red granite vein cuts the core at 30°.		7.75	31.7	3.9	2.3	1.9					
8.25	8.75	Biotite Schist	1	8.00	31.4	4.8	2.2	1.8					
		Black, fine-grained, equigranular. Rock consists of 25-30 white to pink K-spars; 15-20% white to		8.25	140	5.7	2.8	2.2					
		clear quartz; 50-60% black biotite. Banding at 15 to core. Alteration of biotite to	7777		40.9		2.8	1.8					
	0 55	chlorite.		8.50	200	3.3	1.8						
8.75	8.75 9.15	contact ground. COARSE RED GRANITE	4	8.75	1								
		Similar to 0-5.25.		9.00		4.0	2.5						
	9.15	End of hole. Alluarleman	1	9.25	28.0	5.3	2.0	2.0		fines		.018	

COITH MINI LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY_ DATE 78 - C - 21CLAIM # LONG. 2+00 E COLLAR ELEV. 98.33 DEPTH 8.75 DIP ___ CORE SIZE ___HW CORE RECOVERY. 364130-4 LAT. 1125 RADIOMETRICS SP.-44 SAMPLE ASSAYS LOG METER REMARKS FROM TO TOTAL FROM TO Th U308 2.20 .016 3.0 53.0 4.9 29 8.75 COARSE (TO MED.) RED GRANITE 0.25 Refer to Coarse-Grained Granite, log 15. All min-0.50 315 3.0 2.6 erals are present. There is an abundance of dark 777777 green quartz, which is concentrated around the bastnaesite crystals. Bastnaesite is more abundant in 2.3 2.0 27.2 4.0 0.75 this hole than previously seen and there are areas where molybdenite is disseminated up to 2% over a 19 5.5 39.4 2.3 few centimeters. 1.00 Medium-grained sections have more bastnaesite and 4.2 hematite than the coarser rock and are 5-10 cm in 7.1 4.5 101.0 1.25 length. Similar to granite in hole 78-C-20. Minor fractures at 10-15° to core and others perpen 36.2 49 2.5 2.3 1.50 dicular. 1.10 1.35 Biotite-rich section. 5.1 2.2 2.0 34.0 Black, medium-grained; felsics 65%, biotite 35%. 1.75 5.5 42.8 2.7 2.5 2.00 2.7 3.1 5.1 49.2 2.25 2.35Bastnaesite 43% over 5cm. 2.20 4.40 .009 6.3 3.0 2.6 43.0 2.50 80 7.4 2.75 1485 4.6 2.85 3.30 MEDIUM RED GRANITE 17.4 Refer to log 15. 511.0 21.6 16.1 3.00 Bastnaesite 45%. 3.25 1076 8,0 4.5 9.0 5.6 5.6 134.5 3.50 8.9 5.1 5.0 111.d 3.75 3.8 5.4 8.0 1312 4.00 2.2 2.1 5.0 39.4 4.25 3,5 6.5 82.3 4.1 4.40 6.60 .007

ESSE	X MIN	IERALS COMPANY LAC COSTEBEL	-LE	B-					W	13/6,	/78	2	78-0	J - 21
ROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC K	S SP	44 Th	S	FROM	ТО	U ₃ O ₈	SSAYS	_
					1943		7.6	7.5		1 KOM	10	0308		+
	4.85	bastnaesite 2% over 5cm.		4.75	1-150		6.3	6.2						
				5.00				7.0						
	5.25	molybdenite 2% over 5cm.	711111		194.8 572		2.8	2.8						
				5.50	57.3	11 2		9,1						
					2250		1							
				6.00	28.1		2.3	1,8						
				6.25	1	5.6	2.5	2.2						
				1	91.0	7.9	3.9	3.4						
					31.7	4.4	2.6	2.1		6.60	8.75	.010		
					55.7		2.9	2.8						
					99.6		4.1	4.3						
				7.50	1219	8.0	4.7	4.9						
				7.75	76.6	5.9	3.4	3.8						
				8.00	156.4	8.7	5.8	6.1				-		
	8.38	A-1-2cm wide zone of bastnaesite grains cuts th	е	8.25	52.6	6.7	2.8	2.8						
		A-1-2cm wide zone of bastnaesite grains cuts the core at 45° with concentrations up to 15% over 12 cm.		8.50	482.3	20.2	13.6	20.3						
	8.75	End of hole. Pollugue and			37.9		2.6	2.1						
		Journal of the state of the sta		9.00						fines		.01/		
				9.25										

ESSE		ERALS COMPANY GEOLOGICAL C COSTEBELLE B-3205 RADIOMETRI					in		ATE	/6/78		HOLE 78-c-	
LAT. 112	1635 LONG.	O +99 E COLLAR ELEV. 93.68 DEPTH DIP	90°	COR	E SIZE	HW		ORE R	K1	7%		CLAIM #	30-4
FROM	то	REMARKS	LOG	METER	TOTAL	METRIC K	U U	-44 Th	FROM	ТО	U ₃ O ₈	ASSAYS	
0	.60	Overburden		0.25									
•60.	9.80	PARAGNEISS Refer to Paragneiss, log 20. Banding varies down]	0,50		25	0.4	10	.60	2.85	. 006	1	
		Refer to Paragneiss, log 20. Banding varies down hole from 35-40-48-40 to core.			25:7 21:8	3.7 4.8	2.1	1.9		2.00	.008	'	
		-		1.25	301	4.9	2.0	1.7					
					29.4	4.2	1.8	1.7					
					318		2.3	1.9					
					29.2		2.2	1.8					
					29.1		20	1.8					
				2.50	28.4	4.2	1:7	1.7					
				2.75	28.9	4.3	2.1	1.8					
				3.00	27.3	4.2	2.0	1.8	2.85	5.20	.00	7	
7 10	7				26.2		1.7	1.5					
3.42	3.55	Coarse red granite vein. Refer to Coarse Red Granite, log 15.	77777	3.50	24.5	1	2.0	1.7					
				3.75			2.2	1.8					
				4.00		4.4	-	1.9					
				4.25	29.7		2.1	-					
			1	4.50	294	4.0	1 2.0	1 11		1		1	

ESSE)	K MINE	RALS COMPANY LAC COSTEBEL	LE					CORE	v i	15/6,		PAGE 2	78-C-22
ROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC K	S SP	44 Th	SA	FROM	ТО		SSAYS
										FROM	10	U ₃ Q ₈	
				4.75		4.8	2.1	1.9					
				5.00		1		1.8					
				5.25	29.3			2.0		5.20	7.55	.016	
				5.50	32.2	5.1	2.0	1.9					
5.72	5•73	Biotite Schist Refer to Biotite Schist, log 20.		5.75	30.4	5.0	1.9	1.5				,	
		, 205		6.00	266	2.1	2.1	19					
				6.25	28.0	4.2	2.2	2.0					
					30.9	1	2.3	2.1					
	6.75	fracture at 44° to core.			30.1	1	2.2	2.2					
		to core.		7.00	20.4	4.9	2.6	2.3					
	7.10	45 to core.		7.25	20.3	4.6	2.0	2.0					
			77777		200		2.3	2.0					
	7 75	fracture at 40° to core.	7/////	7.50	314		2.1	1.7		7.55	9.80	.012	
	(•1)	••••Iractur at 40 to core.		7.75	271	4.6		1.7					
				8.00				1.8					
				8.25			2.2		-				
				8.50			2.1	1.8					
			mm	8.75			2.2	1.7					
				9.00	28.4	4.3	2.0	2.26					
				9.25	31.6	4.9	22.	19					

ESSE.	X MINER	RALS COMPANY LAC COSTEBELLE	В	3-32	05		l.	CORE	SIZE	DA 15/6		PAGE 3	78-C-	
					RADION	ETRICS	SF	2-44	5	SAMPLE	, 10	ly .	ASSAYS	
FROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	то	U ₃ O ₈		
	0.60			9.50	3.00	5.0	24	2.0						
	9.60	fracture at 40° to core.		9.75	30.3	4.1	2.1	1.9						
	9.80	End of hole. Additaterman		10.00						fines		.012		
				10.25										
				10.50										
				10.75										
				11.00										
				11.25										
				11.50										
				11.75										
				12.00										
				12.25										
			3	12.50										
				12.75										
				13.00										
				13.25										
				13.50										
				13.75										
				14.00										

ESSEX MINERALS COMPANY GEOLOGICAL LOG BY R. Quartermain DATE 14 / 6 / 78 HOLE # 78 - C - 23 DATE ___ LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY_____ CLAIM # 11.05 m DIP 900 CORE SIZE HW _CORE RECOVERY. LAT. 112 +005 LONG. 1+50W COLLAR ELEV. 90.96 DEPTH_ 364130-4 LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS FROM TO REMARKS FROM # U308 0.25 2.70 Overburden 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50 9.40 PARAGNEISS 2.70 2.75 33.3 2.1 2.4 5.4 Refer to Paragneiss log 20. Banding is at 82° to 86° 2.70 4.95 .004 to core. There are a number of fractures with chloritic and calcite alteration.
....fracture at 20° to core. 3.00 27.4 4.2 1.3 2.70 2.1fracture at 15° to core 36.3 3.20 3.25 4.6 2.0 33.2 3.50 3.9 2.0 1.5 29.8 3.75 4.2 2.0 29.0 1.6 4.00 4.3 27.5fracture at 10° to core and fracturing of core 4.30 4.25 over .40cm. 4.3 2.2 26.7 4.50

ESSE.	X MINE	ERALS COMPANY LAC COSTEBELL	E.	B-:	3205	5		HW		14/6/		PAGE 2	78-C	
FROM	то	REMARKS	06	METER	RADIO!	METRIC			SA	AMPLE			SSAYS	
i Kori		NEPIAMO .		THE TOX	TOTAL	K	U	Th		FROM	ТО	V ₃ O ₈		
	4.70	fracture at 10° to core.		4.75	28.2	4.9	2.3	1.9						
				5.00	31.9	4.2	2.4	2.3		4.95	7.20	.004		
				5,25	269	4.0	2,3	1.9						
				5.50	31.1	4.7	2.5	2.2						
				5.75	28.0	4.5	2.4	2.1						
				6.00	27.5	4.1	1.9	1.6						
				6.25	27.5	4.5	2.3	2.2						
	6.50	••••5 parallel fractures 3cm apart at 20-25° to core		6.50	28.9	4.4	2.2	1.9						
6.50	7.00				28.5		2.2	1,9						
0.00	7.00	Red, fine to medium-grained. Has a granitic texture, yet still retains a foliation of biotite		4	27.7		2.2	1.9						
		grains. It is much redder than the paragneiss.			31.4		1.8	1.8						
				7.50	20.1	4.5	2.3	1.9		7.20	9.40	.008		
					29.6	4.2	2.1	1.9						
					310		2.1	1.8						
				8.00	201 1	5.2	2.2	2.1						
				8.25	261	4.4	2.4	2.2						
				8.50	28.3		2.0	1.8						
				8.75	28.5	4.4	2.1	2.1						
				9.00										
			mm	9.25	36.6	6.0	2.5	2.2						

					RADION	/ETPICC		HW		14/6	/ /0	3	78-C-2	
ом	то	REMARKS	LOG	METER	TOTAL	K	U	-44 Th	#	FROM	TO	U ₃ O ₈	ASSAYS	T
	9.40	contact at 82° to core.	mm	4		4.7	2.0							
9.40		MEDIUM RED GRANITE		9.50	30.4	7.7	2.0	1.7		9.40	11.05	.010		
		Refer to Medium Granite, log 15. This granite shows similarities with logs 18 and 19 granites. Because		9.75	34.1	5.0	2.2	2.1						
		it is close to the contact, it has minor zones of paragneiss and is not fully developed. It lacks	1	10.00	31.0	4.9	2.6	2.3						
		molybdenite, tourmaline and zircon.		10.00		5.1	2.4	1.9						
9.95		lens of paragneiss at 85° to core, contacts gradual over a few cm.		10.25	328	J. 1	2.4	1.7						
	10.15 10.50	Epidote vein at 20° to corefracture at 30° to core; core is ground and		10.50	306	4.8	2.0	20						
		chinned to end of hole.		10.75	2.6.1	4.3	2 <i>A</i>	2.2						
10.75	10.80	Refer log 20. Banding at 90° to core. Feldspar	=====		211	3.0	2.0	1.7						
		grains are very red, biotite totally altered to chlorite.		11.00	214	3.0	2.0	17,						
	11.05	End of hole. Alleraternas		11.25						fines		.008		
		The state of the s		11.50										
		(Suggestion: End of hole may possibly be the contact	a t.											
		with paragneiss.).		11.75										
				12.00										
				12.25										
				12.50										
				12.75										
				13.00										
				12.25										
				13.25										
				13.50										-
				13.75										
				14.00										

ESSEX MINERALS COMPANY GEOLOGICAL LOG BY R. Quartermain 10 LL ++ 78 - C - 24 LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY_____ DATE _ CLAIM # 9.0 CORE SIZE HW CORE RECOVERY_ LAT. 112 + 005 LONG. 3 + 50 W COLLAR ELEV. 93 DEPTH. 364127-3 LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS TO FROM REMARKS TOTAL Th FROM TO U308 2.25 .002 9.0 COARSE (TO MEDIUM) RED GRANITE 0.25 47.5 5.9 2.8 Refer to Coarse Granite, log 15. All minerals are present here. Core is dominantly coarse-grained 0.50 31.0 4.9 2.0 1.7 with medium-grained sections scattered throughout. Hematite is present as a K-spar stain and as grains It is more abundant in the medium-grained sections. 0.75 30.2 5.3 1.7 20 Green quartz occurs randomly throughout the core and is usually found in a sociation with bastnae-49 2.1 45.8 1.00 site. Biotite is altered to both chlorite and vermiculite. Tourmaline is the only mineral which is 4.7 28.4 2.1 1.8 only found in trace amounts. Molybdenite, magnet-1.25 ite and zircon are all disseminated throughout. .70 5.4 2.1 1.40very coarse section 28.3 1.7 1.50 Salmon-red, grains & 4cm. Red K-spars 50%, white to clear quartz 30, books of black biotite 20. 2.0 4.3 36.1 2.3 1.75 Trace amounts of other minerals. 1.50core ground over 4cm. 19 5.4 2.2 30.6 2.00 2.3 29 21 29.2 2.25 2.25 4.50 ,008 2.7 2.9 45.9 5.3 2.50 2.75 38.4 4.7 2.7 24 3.05magnetite and bastnaesite ≤ 4%. 2.90 6.4 2.9 75.6 2.8 3.00 2.2 288 4.7 2.2 3.25 3.37 3.87core is ground and chipped. 4.5 37.3 2.6 2.2 3.50 3.75 31.4 2.0 1.8 4.4 2.0 30.3 4.00 777777 1.9 49 32.3 1.6 4.25 5.1 2.6 50.3 4.50

ESSE	MINE	RALS COMPANY LAC COSTEBE	ELLE		3205			H	W	16/6		2	78-C-2	
ROM	то	REMARKS	LOG	METER	RADIO	METRIC K	S SP	44 Th	S	FROM	ТО	U ₃ Q ₈	SSAYS	
							2.9	28		4.50		.014		
					63.8 56.8	6.0	3.0	2.8						
				5.00	502	6.9	2.4	2.2						
				5,25	005	8.2	4.2	4.0						
				5.50	601		28	2.7				-1		
				5.75 6.00	973		3.6	3.9						
			<i>111111</i>		100	5.6	3.0	2.5						
					46.3		2.3	2.3						
6.80		Bastnaesite ≤ 3% over 5cm.	1	6.75	58.0	56	3.2	3.2						
			_	7.00	145-1	8.9	5.7	6.6		6.75	9.00	.012		
7.10	7.30	core ground and chinped.		7.25	41.9	5.5	2.6	2.4						
			+	7.50	56.1	5.2	2.8	2.7						
7.80	9.00	••••Bastnaesite≤3% in dominantly medium red		7.75	76.1	6.5	3.4	3.8						
		granite.		8.00	98.1	6,5	3.7	4.4						
				8.25	896	6.6	3.7	4.0						
				8.50	140.4	9.8	4.7	6.7						
0.00				8.75	53.2	4.3	2.2	2.5	-					
8.90	9.00	End of hole. Alleratermen		9.00										
		1 John Comment		9.25	-					fines		.012		

GEOLOGICAL LOG BY R. Quartermain DATE <u>17/6/78</u> HOLE # ESSEX MINERALS COMPANY 78-C-25 B-3205 DATE _ LAC COSTEBELLE RADIOMETRIC LOG BY_ CLAIM # LAT. 113+005 LONG. 1 +40W COLLAR ELEV. 94 m DEPTH 9.3 m DIP 900 CORE RECOVERY_ CORE SIZE 364130-4 RADIOMETRICS SP.-44 SAMPLE ASSAYS LOG METER TO REMARKS FROM FROM TOTAL TO U308 2.40 . 616 0.25 595A 255 19.3 21.5 9.30 COARSE (TO MEDIUM) RED GRANITE Refer to log 15. Similar to logs 1 and 24. Dom-3.7 4.0 7.7 92.5 inantly a salmon-red coarse granite with minor 0.50 areas of redder medium granite. All minerals are present though no tourmaline(?) was observed. 27.3 19.6 68.1 25.8 0.75 Bastnaesite occurs in concentrations and these are zones of very coarse granite, grains 4cm. Green 22.3 28.0 28.1 793.8 quartz occurs throughout. 1.00bastnaesite and zircon <10% over 4cm. .25 1.25 84.6 3.7 4.0 6.0 .65 •95bastnaesite ≤10%. In same section, much molybdenite, biotite, hematite, zircon and magnetite. 1.50 205.7 8.3 7.4 10.6 Dominantly medium-grained. 1.29 1.35bastnaesite 43%. 1.75 55.5 5.3 2.5 3.0fracture at 150 to core. 1.50 7.4 4.2 4.1 87.1 2.00 2.1 39.0 5.6 2.1 2.25 4.6 35.1 2.5 2.3 2.50 2.40 4.60 ,008 1.9 2.75 29.1 45 2.1 1.6 4.2 2.1 28.1 3.00 33.0 1.8 5.6 3.35 3.50 very coarse section. 3.50 31.5 Refer to very coarse granite, log 24. 1.9 1.7 5.3 3.75 32.3 1 2.1 11111 4.00 30.6 4.5 2.0 1.8 5.4 2.2 2.1 37.4 4.25 2.6 40.3 2.3

FSSE'	X MINE	RALS COMPANY LAC COSTEBEL	LF	R-1	3205	,		CORE	217F	DAI		PAGE	HOLE #
	I I I I I I	TAC CONTANT					C CD	HW		17/6/	78	2	78-C-25
FROM	то	REMARKS	LOG	METER	TOTAL	METRIC:	5 SP	Th	5/	FROM	то	U ₃ Q ₈	SSAYS
4.60	4.85	Biotite-rich section			37.9	5.6	2.2	2.2		4.60	6.90	-012	
		Biotite 20%; quartz 30; K-spar 50.			44.0	4.6	2.5	2.5					
				5.25	300	5.6	1.8	1.5					
				5.50	38.5	4,9	2.3	2,2					
	5.80	fracture at 20° to core.		5.75	29.5	5%	2.3	1.8					
).00	to core.		6.00	31.1	5 .5	2.2	2,1					
				6.25	25,9	3.8	1,8	1.7					
				6.50	40.3	6.2	2.3	2.0					
				6.75	28.0	4.6	1.8	1.5					4
				7.00	34.6	4.5	2.3	2.3		6.90	9.30	-009	
				7.25	33.2	4.3	2.0	1.8					
				7.50		5.8	2.5	2.2					
				7.75			2.0						
0	0			8.00			2.7	2.6					
8.20	8.50	Similar to 3.35-3.50, though more biotite (15-20)	L	8.25	32.9	6.5	2.6	2.1					
			L	8.50		4.0	1.7	1.7					
				8.75			1.6	,,,,					
	9.15	bastnaesite 5% over 4cm.		9.00	51.4	5.6	2.5	2.5					
	9.30	and of hole. Belliartermore	1	9.25						fines		- 015	

E55E		ERALS COMPANY C COSTEBELLE B-3205 RADIOMET				acteri	main			ATE			78 - C	
LAT. 115			900	COR	E SIZE	HW	C	ORE R		RY	9%		CLAIM #	ŧ
FROM	ТО	REMARKS	LOG	METER	RADIOI TOTAL	METRIC	S SP.	-44		AMPLE			ASSAYS	
					IOIAL	K	U	Th	#	FROM	TO	U308		
0	9.50	MEDIUM (TO COARSE) RED GRANITE Refer to log 15. Similar to log 1 and 25. Medium: coarse ration 80:20. There is not as muc	h 1	0.25	26.5	4.3	2.2	1.9		0	2.00	-009		
,		hematite in the core; as a result it has a salmon- red color. The bastnaesite is also characterized	i	0,50	35.2	4.8	2.5	2.5						
		radiating structures. All minerals in log 15 are present though zircon, tourmaline(?), and molybde	1	0.75	31.4	4.9	2.3	1.8						
		nite are all in trace amounts. Coarse sections w grains up to 2cm extend over 10-15cm of core. Fr	ith	1.00	32.5	5A	2.1	1.8						
•20	1.30	ture traces are 30 to 40° to core.		1, 25	343	5.6	2.4	2.0						
		Biotite occurs as random books and needles lack any foliation.	ing	1.50	29.7	5.0	1.6	1.5						
		Felsics- 65-70%; Biotite 30-35%; otherstrace amounts.		1.75	2.6.7	4.2	1.8	1.7						
				2.00	35,3	5.1	2.4	2.1						
				2.25	30.3	3.9	2.0	2.0		2.00	4.00	.008		
	- (-			2.50	457	5.1	2.9	2.4						
	2.60	bastnaesite ∠ 3% over 4cm.		2.75	61.4	6.3	28	3.2						
				3.00	47.8	5.5	2.5	2.6						
				3.25	52.3	5.6	25	2.9						
				3.50	76.9	6.7	3.2	3.7						
	4.00	hastnaesite∠5% over 5cm.	7///	3.75	323	5.3	1.3	2.6						
					63.7	6.4	2.4	3.0						
					65.0		2.3	2:7		4.00	6.00	.008		
				4.50	822	6.7	2.6	4.0						

ESSE	K MINE	TRALS COMPANY LAC COSTEBEL	LE	B-3	3205	<u> </u>		HW	SIZE	18/6		PAGE 2	78-C-	
			1.00	4====	RADIO		S SP.	44	S	AMPLE			SSAYS	
FROM	ТО	REMARKS	LOG	METER	TOTAL	K	U	Th		FROM	TO	U ₃ Q ₈		
				4.75	57.1	5.4	2.7	2.7						
5.00	5•70	bastnaesite ≤10%. `luch staining of quartz and K-spar.		5.00	74.3		28	3.5						
				5,25	49.5	6.3	2.5	2.7						
	5.48			5.50	66.9	6.2	3.0	3.7						
		feldsnar grains, but it grows around quartz grains and has a 2mm quartz grain in its center.		5.75	185.5	9.6	8.9	9.3						
		Kepar 1		6.00	84.4	7.6	3.6	3.6						
		bast Kapar		6.25	35.3	5.6	2.3	2.0		6.00	8.00	.009		
					49.7		2.7	2.5						
					44.8	1	2.1	2.2						
				7.00	35.0	5.1	2.2	1.7						
				7.25	36.7	4.9	2.1	2.0						
				7.50	52.8	6.1	2.2	2.6						
				7.75	348	5.6	2.2	2.1						
				8.00	40.0	5.8	2.3	2.2						
				8.25	82.8	65	3.1	4.1		8.00	9.50	.009		
			77777	8.50	40.5	5.5	1.9	2.1						
				8.75	41.8	6.4	3.2	4.8						
				9.00	423	6.2	2.2	2.2						
				9.25	43.2	5.8	2.7	2.8						

ESSE	X MINE	RALS COMPANY LAC COSTEBEL	LE E	T	1				SIZE HW	18/6		PAGE 3	78-C-2	26
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS	1	2-44	-	SAMPLE			ASSAYS	
					TOTAL	K	U	Th	井	FROM	TO	U ₃ O ₈		_
	9.50	End of hole. Belliailumais		9.50										
				9.75						fines		,004		
				10.00										
				10.25										
				10.50						1				
				10.75										
				11.00										
				11.25										
				11.50										
				44.75										
				11.75										
				12.00										
				12.25										
				12.50									1	
				12.75										
				13.00										
				13.25										
				13.50					-					
				13.75					1					
				14.00										

## FROM TO REMARKS **O REMARKS** **O REMARKS** **O REMARKS** **O REMARKS** **O REMARKS** **O COARGS (TO MEDIUM) RED GRANTE Refor to log 15. Unlike C-26, much coarser and K-spars are a darker red. All minerals are present, though after 12m, boatnaseite are found throughout. The medium real manual coarse are 10m, the trace warp coarse sections with grain size 5 5m. Green to yellow stained quorts is most abundant in the first 9.15 meters, though it occurs for the most part in books, some chloritized, soes not. **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 10 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1908.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARGS (TO MEDIUM) RED GRANTE REFORM TO 1909.** **O COARG	115		C COSTEBELLE B-3205 RADIOMETR				PO				DATE			78 - C	
0.00 143.45 COARSE (TO MEDIUM) RED GRANITE Refer to log 15. Unlike C-26, much coarser and K-spars are a darker red. All minerals are present, though after 12m, beatnesste, zircon and towns—line decrease in abundance. Only magnetite and trace amounts of molybdenite are found throughout. The medium-grained sections occur in the first 12 met of the hole and from 12.20 to 73.17, there are very coarse sections with grain size 45m. Green to yellow stained quertz is most abundant in the first 10.15 meters, though it occurs elsewhere. Nagnetite in some cases have rad heatite alteration. The biotite occurs for the most part in books, some chloritized, most not. 91core is ground. 91core is ground. 92.74core ground over 10cm. 2.75core ground over 10cm. 2.76core ground aver 10cm.	.AT	LONG.	COLLAR ELEV. 101.94 DEPTH 01.20 DIP	90	COR	E SIZE	METRIC	C				7009		364130	
Oches (TO Medium) RED Grantite Refer to log 15. Unlike C-26, much coarser and K-spars are a darker red. All minerals are present, though after 12m, beatnesette, zircon and tournal line decrease in abundance. Only magnetite and trace amounts of molybdenite are found throughout. The medium-grained sections occur in the first 12 met of the hole and from 12.20 to 73.17, there are very coarse sections with grain size 3cm. Green to yellow stained quertz is most abundant in the first 9.15 meters, though it occurs closwhere. Nagnetite in some cases has rod hensite alteration. The biotite occurs for the most vert in books, some chloritized, most not. O.00 .91core is ground. O.00 .91fracture at 15 to core. 2.74core ground over 10cm. O.25	FROM	ТО	REMARKS	LOG	METER	TOTAL	К	U				ТО	UzOe	ASSAYS	T
0.25 GOARSE (TO MEDIUM) RED GRANITE Refer to log 15. Unlike C=26, much coarser and K- apars are a darker red. All minerals are present, though after 12m, bastnaesito, zircon and tournal line decrease in shundance. Only magnetite and trace amounts of molybdenite are found throughout. The modiun-grained sections occur in the first 12 met of the hole and from 12.20 to 73.17, there are very coarse sections with grain size 4 2m. Green to yel- low stained quartz is most abundant in the first 9.15 meters, though it occurs elsewhere. Nagnetite in some cases has red hematite alteration. The bio- tite occurs for the most yert in books, some chlor- itized, most not. 1.75 2.00 24.2 3.4 2.1 1.7 2.18 2.56 3.3 2.1 18 2.56 3.3 2.1 18 2.50 297 4.2 2.4 2.2 2.50 297 4.2 2.4 2.2 2.50 297 4.2 2.4 2.2 2.50 297 4.2 2.4 2.2 2.50 297 4.2 2.4 2.2 2.50 3.00 3.1 18 1.7 2.00 4.2 3.4 2.1 1.7 2.00 4.2 3.4															
spars are a darker red. All minorals are present, though after 12m, backnessite, zircon and tourmaline decrease in abundance. Only magnetite and trace amounts of molybdenite are found throughout. The medium-grained sections occur in the first 12 met of the hole and from 12.20 to 73.17, there are very coarse sections with grain size 5 5cm. Green to yellow stained quortz is most abundant in the first 1.25)	43.45			0.25								,006	'	
though after 12m, bastnaesite, sireon and tourmaline decrease in abundance. Only magnetite and trace amounts of molybdenite are found throughout. The medium-grained acctions occur in the first 12 met of the hole and from 12.20 to 73.17, there are very coarse sections with grain size 4 50m. Green to yellow stained quartz is most abundant in the first 9.15 meters, though it occurs elsewhere. Nagmetite in some cases has ned hematite alteration. The biotite occurs for the most part in books, some chloritized, most not. 0.00 91core is ground. 91fracture at 15 to core. 2.74core ground over 10cm. 2.75						19 0	21	10	17						
trace amounts of molybdenite are found throughout. The modium-grained sections occur in the first 12 met of the hole and from 12.20 to 75.17, there are very coarse sections with grain size 4 5cm. Green to yellow stained quartz is most abundant in the first 9.15 meters, though it occurs elsewhere. Magnetite in some cases has rad hematite alteration. The biotitic occurs for the most part in books, some chloritized, most not. core is groundfracture at 15 to core. 2.74core ground over 10cm. 2.75			though after 12m, bastnaesite, zircon and tourma-		0.50	11.0	5.1	10	1.1						
of the hole and from 12.20 to 73.17, there are very coarse sections with grain size 45mm. Green to yetle low stained quartz is most abundant in the first 9.15 meters, though it occurs elsewhere. Magnetite in some cases has red hematite alteration. The biotitized, most not. 0.00			trace amounts of molybdenite are found throughout.		0.75										
1.25						242	3.4	21	17						
9.15 meters, though it occurs elsewhere. Magnetite in some cases has rod hematite alteration. The biotite occurs for the most part in books, some chloritized, most not. 9.91core is ground. 9.91fracture at 15 to core. 2.74core ground over 10cm. 2.75			coarse sections with grain size ≤ 3cm. Green to ye		1.00	1.2	,	2.1	1.						
tite occurs for the most part in books, some chloritized, most not. 91core is ground. 91fracture at 15° to core. 2.74core ground over 10cm. 2.75core ground over 10cm. 2.76core ground over 10cm. 2.77core ground over 10cm. 2.78core ground over 10cm. 2.79core ground over 10cm. 2.70core ground over 10cm. 2.70core ground over 10cm. 2.71core ground over 10cm. 2.72core ground over 10cm. 2.73core ground over 10cm. 2.74core ground over 10cm.				e	1.25										
0.00 .91core is groundfracture at 15 to core. 2.00 290 3.8 2.0 1.6 2.5 2.50 29.7 4.2 2.4 2.2 2.5 2.50 23.8 3.2 1.7 1.5 3.25 3.25 3.21 4.4 2.4 2.1 3.75 4.00 49.3 4.8 2.8 2.8 2.9 4.22 4.22 4.22 4.22 4.22 4.22 4.23 4.24 2.1 3.75 4.00 49.3 4.8 2.8 2.8 2.8 4.25 4.25 4.25 4.25 4.25 4.25 4.25 4.25					150	25.6	3.3	2.1	1.8						
2.00 290 3.8 2.0 1.6 2.25 29.7 4.2 2.4 2.2 2.74core ground over 10cm. 2.75 3.00 23A 3.2 1.7 1.5 3.25 3.50 32.1 4.4 2.4 2.1 3.75 4.00 49.3 4.8 2.8 2.8 4.27bastnaesite £3% over 5cm.															
2.74core ground over 10cm. 2.75	0.00				1.75	-				1					
2.74core ground over 10cm. 2.75		•91	to core.		2.00	29.0	3.8	2.0	1.6						
2.74core ground over 10cm. 2.75										1					
2.74core ground over 10cm. 2.75 3.00 2.75 3.00 2.75 3.50 3.21 4.4 2.7 4.27 4.27 4.25 4.25 4.25					2.25		,			1					
3.00 23A 3.2 1.7 1.5 3.25 3.50 32.1 4A 2.4 2.1 3.75 4.00 49.3 4.8 2.8 2.8 4.27bastnaesite 43% over 5cm.					2.50	29.7	4.2	2.4	2.2						
3.00 234 3.2 1.7 1.5 3.25 3.50 32.1 4.4 2.4 2.1 3.75 4.00 49.3 4.8 2.8 2.8 4.27bnstnaesite 43% over 5cm.		2.74	core ground over 10cm-		2.75										
3.25 3.50 32.1 4.4 2.4 2.1 3.75 4.00 49.3 4.8 2.8 2.8 4.27bastnaesite 43% over 5cm.						1	32	1.7	1.5	1					
3.50 32.1 4.4 2.4 2.1 3.75 4.00 49.3 4.8 2.8 2.8 4.27bastnaesite 43% over 5cm.				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	3.00					-					
3.75 4.00 49.3 4.8 2.8 2.8 4.27bastnaesite 43% over 5cm.					3.25	5									
3.75 4.00 49.3 4.8 2.8 2.8 4.27bastnaesite 43% over 5cm.					3.50	32.1	4.4	2.4	2.1						
4.27bastnaesite 43% over 5cm. 4.25 4.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2.8 2										1					
4.27bastnaesite 43% over 5cm. 4.25					3.75					-					
100					4.00	49.3	4.8	2.8	2.8						
1.27		4.27	bastnaesite 43% over 5cm-		4.25	5									
4.50 100.2 5.6 4.3 4.5			The state of the s			1002	5.6	4.3	4.5						

	1			i	IDANIO	UETOS	c cc	44 1	CAL	ID. F		2	Vice was	_
ROM	то	REMARKS	LOG	METER	RADIOI TOTAL	K	S SP	-44 Th	SAMI F	ROM	ТО	U ₃ O ₈	SSAYS	T
			mm											†
				4.75										
				5.00	51.2	4.4	2.8	2.4						
				5,25						5.0	10.0	.008		
	F 1.0	h				4.7	3.4	3.1						
	2.49	bastnaesite ∠ 3% over 5cm.		5.50	66.3	1.1	0. 1	0.1		7				
				5.75										
				6.00	65.6	54	3.3	3.4						
			71111											
					24.2	3.8	2.1	1.9						
			1	6.50	24.2	0.0		1.7						
				6.75										
				7.00	31.3	38	2.5	2.1						
7.16	7.77	Biotite-rich section:	Ļ	7.25										
		Black, medium-grained. Felsics 70%; biotite 25, others 5. No foliation.			277	3.7	1.8	1,7						
			1	7.50	2111	5. 7	1.0	- ''						
			1	7.75										
				8.00	31.4	4.0	2.7	2.5						
				8.25										
					39.9	4.1	2.6	2.3						
				8.50		,	,2.0	2.5						
				8.75										
				9.00	25.6	3.5	2.0	1.1						

		RALS COMPANY LAC COSTEBELLE	1	3-32	IV.	400 100 100 100			BQ	1	6/78	3	78-0	
ROM	то	REMARKS	LOG	METER	RADION TOTAL	K	U	-44 Th	#	FROM	ТО		ASSAYS	\top
					25.0		2.0		1,	T ROW	10	U ₃ O ₈		+
				9.50	23,2	0.1	2.0	1.0						
				9.75										
				10.00	24.6	3.7	2.5	1.8						
				10.25						10.0	15.0	.004		
					25.0	3.7	1.8	1.8						
			111111	10.50										
				10.75		0.0	1.7	1 -1						
				11.00	24.8	3.6	1./	1.7						
				11.25										
				11.50	53.7	4.1	2.6	3.2						
				11.75		4.2	2.2	2.0						
				12.00	262	7.2	2.2	∠ .∪						
			27777	12.25										
12.5	12.8	Magnetite & Bastnaesite < 10%.	,	12.50	23,0	3.1	1.6	1.6						
				12.75										
			+		25.6	3,8	2.2	2.1						
				13.00	-0.0	,								
				13.25										
				13.50	29.0	3.8	1.8	18						
				13.75										
				14.00	32.1	3,9	2.2	1.9						

		ALS COMPANY LAC COSTEBELLE		3-32	1				3Q 		6/78	4		₩ - ₽
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS K	U	?-44 Th	#	FROM	ТО	U ₃ O ₈	ASSAYS	T
14.02	14.63									T ROW	10	0308		
		Light red, grains 3cm. K-spar 50-60%, quartz 20-30, biotite 10-20, other	rs	1425	000	0.6	4.0	10.4						
		trace.		14.50	23.3	3.0	1.8	16.4						
				14.75										
				15,00	28.1	4.1	2.3	2.0						
				15,25						15.0	20.0	.011		
			<i></i>		26.3	4.1	2.0	1.9						
				15.50										
				15.75	24.0	0.7	5.4	- 1						
				16.00	31.2	3.7	2.1	2.1						
				16,25										
				16.50	28.1	4.0	2.1	1.9						
				16.75										
					24.5	3.3	1.9	1.6						
				17.00										
	17.07	with K-spar grains, subhedral with quartz grains		17.25		2.0					À	•		
		and has a 1 mm quartz grain as an inclusion.		17.50	26.2	3.9	2.3	2.1						
				17.75										
				1800	24.0	3.3	2.1	1.8						
			<i></i>		235	3.2	2.2	1.8						
	18.60	fracture at 10° to core.		18.50										1
				18.75										

					BADIO	/ETDICO		1		241451 =	1	5	
ROM	то	REMARKS	LOG	METER	RADION TOTAL	K	U	-44 Th	#	FROM	TO	U ₃ O ₈	ASSAYS
				19.00	23.6			1.6		T KOM	10	- 0308	
				19.25									
				19.50	23.7	3.1	2.1	1.8					
				19.75									
19.82	22.10	very coarse section: Similar to 14.02-14.63.	· \	20,00	30.7	3.8	2.1	1.9					
				20.25	1					20.00	25.00	.008	
				20.50	3 33	2.7	1.8	1.5					
				20.75			-						
		1.42	1	21.00	26.8	3.4	2.0	1.9				20	
				21.26									
			1	21.50	25.6	4.0	1.9	1 .8					
				21.75			4.0						
				22.00	23.3	3.4	1.9	1.6					
				22.25									
				22.50	25.4	4.1	2.5	2.1					
				22.75	220	2.4	-	4.0					
				23.00	23.9	3.4	2.0	1.8					
				23,25	200	40	2.8	71					
				23.50	35.5	4.0	2.0	2.2					

SSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	11			BQ		18/6	/78	6	78-C-2
ОМ	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		-44		AMPLE			ASSAYS
OIVI	10	TENANO.			TOTAL	K	U	Th	井	FROM	ТО	U ₃ O ₈	
				23.75	31.3	3.2	1.8	1.8					
				24.00									
				24.25		21 4							
24.39	25.00	biotite-rich zone. Similar to 7.16-7.77.	mar	24.50	27.7	4.1	2.2	2.0					
				24.75									
			1		33.6	4.3	2.6	1.8					
			H	25.00						25.00	30.00	.007	
				25.25									
				25.50	21.1	3,4	1.7	1.7					
				25.75							-		
					25.1	4.3	2.0	1.8					
				2600									
	-			26.25									
				2.650	24.5	1.6	1.6	2.1					
				26.75									
					22 0	3.1	2.2	2.2					
				27.00									
				27.25									
			22227	27.50	25.7	3.4	1.8	1.6					
				27.75									
		•	1		27,8	3.3	2.1	1.9					
				28.00			-/1	1.7					
			1	28.25									

E22FX	MINER	ALS COMPANY LAC COSTEBE	ELLE	3-32	05			ВQ	1	18,	/6/78	7	78-C	
ROM.	то	REMARKS	Log	METER	RADION TOTAL	METRICS		-44		SAMPLE			ASSAYS	
			1500		TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		+
				2850	23.8	3.0	2.0	1.9						
				2675										
25.00	31:10	very coarse section Similar to 14.02-14.63.		2900	216	2.5	2.0	1.6	:					
				29 25										
				2950	214	2.7	2.0	1.6						
				29 75										
			 	3000	24.5	3.9	2.0	2.0						
										30.00	35.00	.009		+
				3025	2.7.0	4.0	2.3	1.9						
				30 50		1.0	2.0	1. 7						
				3075			4 =	, .						
			<u> </u>	31 00	25.4	39	1.7	1.6						
				31 25										1
				3150	28.4	44	2.1	2.1						
				31 75										
				32 00	27.5	4.3	2.4	2.1						
				32 25										
				32 50	23.2	3.3	1.6	1.6		-				
				32.75										
				3300	26.6	4.1	1,9	1.5						

ESSEX	MINER	ALS COMPANY LAC COSTEE	BELLE E	3-32	05			CORE		18/6,		PAGE 8	78-C-27
ROM	то	DEMARKS	1.06	ACTED	RADION	ETRICS	SF	-44	-	SAMPLE			ASSAYS
OM	10	REMARKS	LOG	VIETER	TOTAL	К	U	Th	#	FROM	TO	U ₃ O ₈	
				33.25									
				33.50	48.3	4.8	23	2.7					
				33.75									
				34.00	25.9	3.6	1.8	1.8					
				34.25									
				34.50	28.8	4.1	2.3	2.0					
				34.75									
				35.00	36.0	4.3	2.7	1.9					
				35.25						35.00	40.00	-009	
35.2	1 38.1	very coarse section.		35,50	23.5	34	2.1	1.9					
		Similar to 14.02-14.63.		35.75									
				3600	22.4	3.2	1.7	1.6					
				36.25									
				36.50	26.0	2.0	2.0	1.8					
				36.75									
				37.00	23.0	20	1.6	1.6					
				37.25									
				37.50	229	3.3	1.8	1.6					
				37.75		-							

ESSE)	X MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE		18/6		PAGE 9	78-C	
20:1	70	DEMARKS	106	METER	RADION	METRICS	1	-44		SAMPLE			ASSAYS'	
ROM	то	REMARKS	1	FIER	TOTAL	K	U	Th	#	FROM	ТО	U308		+
				38.00	30.9	3.4	2.1	1.8						
			4	38.25										
				38.50										
				38.75	29.1	29	2.2	2.3						
				39.00										
				39.25										
				3950	24.1	3.0	2.1	1.8				Ta Carlo		
						0,1								
			1	39.75								i,		
				40.00	11	2=	5.4	10		40.00	45.00	.014		-
				40.25	27.2	35	2.1	1.8						
				40.50										
	40.85	5fracture at 10 to core.		40.75										
		to core.		41.00	33.4	3.8	2.1	2.2						
				41.25										
				41.50										
				41.75	255	364	1 18	2.0						
e	41.77	fracture at 20° to core.		42.00										
	42.07	fracture at 20° to core.		42.25										
				4 2.50	22.3	3.3	1,7	1.5						

E22FX	MINER	ALS COMPANY LAC COSTEBELLE		3-32	00	-		В	Q.	18/	6/78	10	78-C-2	27
			100		RADION	METRICS	SF	-44	S	AMPLE			ASSAYS	
FROM	то	REMARKS	LOG	VEIER	TOTAL	K	U	Th	#	FROM	TO	U308		
			<i></i>	42 75										
				4300	17.3		2:							
				43 25	22.2	3.1	1.8	1.6						
	43.45	contact gradual over 10cm.		43 50										
43.45	51.68	PARAGNEISS (TO AUGENGNEISS) Refer to log 20. Contact with granite is grada- tional and throughout the section there are recry-		43 75										
		stallized zones of granite with a pink color similar to the gneiss, yet lacking any foliation.	1	44 00	229	3.2	2.1	1.8						
		There are minor calcite-coated fractures. Banding varies from 45 to 60 to core with depth. With depth, the foliation of the biotite is not as		4425										
		distinct and bands are wider, giving the felsics (quartz and feldspar) an augen appearance. Miner-		4450										
		alogically, the augen and paragneiss are similar though they may be 5% less mafics in the augengneiss.		44 75	22.4	3.4	18	1.5						
	43.60	Fracture at 45° to corefracture at 15° to core		4500			-			45.00	50.00	·004		-
	44.20			45 25						1,011		7007		
45.27	45.73	Biotite Schist Refer to log 20. At 45.57 there is a faulted		45 50	28.8	4.0	23	2.0						
		fracture at 45° to core. The slickensides are 55° to the longitudinal axis of the core and	<u> </u>	45 75										
		they indicate a reverse faulthanging wall up. There is are minor calcite veins, and much hematite alteration of the schist around the fault.		4600										
	45.73	Medium Red Granite Vein. Contacts are gradual with the paragneiss. It is	5	4625	22.4	3.2	1.9	1.5						
		a light red color and there are 4 euhedral hastn site grains present.		46 50										
				46 75	21.8	3.5	1.9	1.7						
				4700										
				4725										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE		3-32	11			В	1	18/9	/78	11	78-C	-27
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44	#	AMPLE			ASSAYS	_
							U	Th	17	FROM	TO	U308		+
	48.48			47.50	215	3.3	2.1	1.9						
	48.66	Medium red granite vein over 4cm with two bastnaesite grains.		47.75	- 1									
				48.00										
				48,25	225	3.3	1,9	1.7						
				48.50										1
				48,75										40
			<i></i>		24.6	3.3	19	1.7						
				49.00										
				49,25	~,	, .		_						
				49.50	, · · ·	1.1			l					
				49.75	38.6	4.2	2.2	2.2						
				50.00										
				50.25						50.00	55.00	-004		
50 (7 50 01			50.50	210	3.0	1.6	1.5						
50.6	50.84	very coarse red granite vein similar to 14.02-												
				50.75										
				51.00	23.1	3.1	3.1	1.7	,					
				51.25	23.	3.1	3,1	1. /						
, , , par 1 may 1				51.50										
*1	51.68	contact gradation over 10 cm.		51.75										
				52,00	243	8.5	3.5	2.0						

ESSE	X MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE	SIZE	DA.	ΓE	PAGE 12	HOLE	•
EDOV	TO	DEMARKS	100	ATTEN	RADION	METRICS	S SI	2-44	-	SAMPLE			ASSAYS	
FROM	ТО	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				52.25	24.3	3.5	35	2.0						
51.68	53.96	MEDIUM RED GRANITE Refer to log 15. All minerals are present. Minor concentrations of bastnaesite up to 3% over 5cm. fracture at 10 to core		52.50	-									
	52.44	fracture at 10 to core		52.75										
	53.05	Bastnaesite 4% over 5cm.		53.00	23.3	2.9	2.0	1.6						
				53.25										
				53.50										
				53.75	44.2	3,7	2.1	2.0						
	53.96	contact over 5cm.		54.00								2		
53.96	55.49	COARSE RED GRANITE Very coarse section similar to 14.02-14.63.		54.25										
				54.50	50.0	4.7	2.3	2.3						
				54.75										
				55.00										
				55.25	23.2	36	20	1.7		55.00	61.30	,008		
55.49	55.49 56.10	MEDIUM GRAINED GRANITE		55.50										
200.7	00010	Similar to 51.68-53.96		55,75										
	56.10	contact over 5cm.		56.00	25.8	3.2	2.2	1.7						
56.10	56.86	COARSE RED GRANITE Very coarse section similar to 14.02-14.63.	4	56.25										
				5 6.50	11			1 0 7						
		·		56.75	30.5	3.2	3.1	1.7						

ESSE:	X MINER	RALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE Bର୍	3145	18/6	6/78	PAGE 13	HOLE # 78-C-27
FROM	то	REMARKS	1.06	METER	RADION	METRICS	S SF	2-44		SAMPLE			ASSAYS
- KOIVI			LOG	VETER	TOTAL	К	U	Th	#	FROM	TO	U ₃ O ₈	
56.86	56.86	AUGENGNEISS		57.00									
20.00	01.50	Light red, fine-grained, similar to 43.45-51.68. Augens are defined by K-spars and quartz between black biotite layers. Unlike the paragneiss,		57,25	(15	47	2 -7	0.4					
		these biotite layers do not extend through the entire core but only one or two centimeters, then the next layer begins. Banding is at 45 to 50° to core		57.50	675	4.7	2.7	2.4					
				57,75									
			77777	58.00	239	2.8	1,8	1.1					
				58,25									
				58,50	21.6	31	1.9	1.7					
				58.75									
				59,00	24.4	3.4	2.1	1.6					
				59,25									
				59,50	23.6	29	7.8	1.5					
				59.75									
				60,00	22.7	2.6	18	1.38					
				60,25									
				60.50	23.62	2.9	1.9	1.7					
				60,75	2								
					21.8	2.2	1.5	1.3					
	61.28	End of hole. Bluechemes	2000	61,25									
	71067	Birt of hote.								fines		-011	

ESSE		IERALS COMPANY GEOLOGICA C COSTEBELLE B-3205 RADIOMETE				artern	nain			DATE	6/78		78 - C - 2	
LAT. 1153			900	COR	F SIZE	HW	c	ORE R			,70		CLAIM # 364130	
FROM	то	REMARKS	LOG	METER	RADIO	METRIC	S SP.	-44		AMPLE			ASSAYS	
					TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		-
				0.25									1	
0	2.00	Overburden		0.50										
_			_	0.75										
2.00	11.30	COARSE (TO MEDIUM) RED GRANITE Refer to log 15. All minerals present, though tous		. 1.00										
		maline, zircon and molybdenite occur in trace amount only. The rock is 75% coarse-grained and 25% mediagrained. There are some coarse pegmatitic sections	um'	1.25										
		which are lighter in color and dominantly felsic in composition. There is abundant hematite staining	n	1.50										
		where the grain size is \leq 1.4cm and bastnaesite crystals are found in minor concentrations throughout the core. The core has been faulted and fractured		1.75										
		so that 15% of the core has been ground into chips Green quartz is present throughout and bastnaesite	.	2.00						2.0	4.3	.00		_
	2.25	grains display radiating fracturesfracture at 10° to core.		2.25	25.2	6.2	2.0	1.7		2.0	4.3	.00	'	
	2.63	a hagtmangita main bag aphadual acutacta with		2.50	40.2		2.1	2.6						
	2.09	a bastnaesite grain has euhedral contacts with K-spar, anhedral contacts with quartz and has a mm grain of K-spar as an inclusion.		2.75	11		2.1	2.2						
				3.00	354	7.5	2.3	2.1	1				1	
	3.35	bastnaesite ≤ 3% over 5cm.		3.25	60.0	10.8	2.7	2.7						
				3.50	530	9.6	2.2	2.3						
- 0-	1 4-		7	3.75	49.8	8.9	2.4	2.2						
3.85	4.20	Refer to log 20.	4	4.00	1260		1.6	1.3						
			7777	4.2	33.6	6.2	2.1	1.0						
			77777	4.50	35,	6.5	2-9	1.9		4.3	6.6	.00	2	-

	, ,,,,,,,,	ERALS COMPANY LAC COSTEBEL			3205		-	HW		21/6/	78	2	78-C-	-28
ROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC	S SP	44 Th	SA	FROM	ТО		SSAYS	1
					IOIAL	Α		111		F K OM	10	U ₃ Q ₈		
	4.87	fracture at 15° to core.		4.75	38.4	7.8	2.3	2.1						
				5.00	31.3	66	1.9	1.7						
				5,25	35.8	7.1	2.6	1.7						
	5.40	Bastnaesite ≤ 3% over 4cm.			54.0	5.0	1.7	1.4						
5.45	5.62	Black, medium-grained. K-spar 30%, quartz 30-40%,	HH		22.2		2.3	1.9						
		hiotite 30, magnetite 5%. No foliation of biotite books.		5.75	0/ 0	4.6	20	1.8						
5.40	6.20	fracture sub-parallel to core. Much chlorite, hematite, limonite and calcite alteration along		6.00	25.2		2.0	1.7						
6.375	7.50	fracture surfacesfelsic section.		6.25			2.1	1.7						
		The section is very coarse-grained and consists of K-spar and quartz with 5-10% mafics. The quar	zz		50.5 23.3	4.2	1.9	1.7					i.	
		is very white. From 4.8 to 5.0 the core is ground. At 5.0 at 1-2cm, quartz vein cuts the core at 22%. Along the fractured core surfaces		6.75	22.2	5.2	1.5	1.2		6.6	8.9	. 006		
		there is abundant calcite, as well as a lime-to dark green, soft, clay mineral seen in previous	11111	7.00	27.4	4.2	2.0	1,6						
		hole. The grains along the vein are angular with a brecciated appearance and have been altered				16.7	3 A	2.4						
7.50	7.60	kaolinization of K-spars. Biotite-rich section Refer to 3.45-3.62.		7.50	105.1									
7.8	1	core is ground and chipped.		7.75		4.6	2.0	1.7						
0		fractures at 10 and 15° to core.		8.00	32.8	5.2	1.7	1.4	1 - 11					
8.30	8.50	core is ground and chipped.		8.25	25.2	4.3	177.	1.5						
				8.50	25.0	3.7	1.6	1.3						
				8.75	25.8	4.0	1.6	1.5						
				9.00	351	5.8	2.1	15		0.0	11.0			1
			77777	9.25	77-1	11,5	3.2	1.8		8.9	11.3	.006		

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE		21/6		PAGE 3	78-C-2
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		-44		SAMPLE			ASSAYS
	, ,	!	200			К	U	Th	井	FROM	ТО	U ₃ O ₈	
9.15	9.60	Refer to log 24.		9.50	43.9	7.6	2.5	19					
				9.75	27.1	44	2.2	1.8					
10.00	10.20	Refer to 3.45-3.62	ļ	10.00	47.4	7.3	2.2	1.6					
10.30	11.30	Medium-grained section.		10.25	121.7	20.2	4.0	2.4					
		Grain size is ≥ lcm and core is approaching the me dium red granite of log 20.			51.4		2.3	1.4					
				10.75	26.4	4.0	1.8	1.5					
		Α .	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11.00	51.4	7.8	2.6	1.5					
	11.30	End of hole. Phleatuman		11.25									
		70.		11.50						fines		.002	
				11.75									
				12.00									
				12.25									
				12.50		i							
				12.75									
				13.00									
				13.25									
				13.50									
				13.75									
				14.00									

AT11	SLONG	. 1 + 50 COLLAR ELEV. 95.41 DEPTH	21.3 DIP 90°	COR	E SIZE	HW		CORE R		ERY9	7%		36413	0 -3
ROM	то	REMARKS	LOG	METER	RADIO	METRI	CS SF	44		AMPLE			ASSAYS	
	l' v				TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
				0.25									-	-
				0,50										
				0.50				-	1					
	10.00			0.75										
	12.80	Overburden							1					
				. 1.00										
				4.05										
				1.25					1					
				1.50										
				1.75	 		-		4					
				2.00										
				2.00				+	1					1
				2.25										
									1					
				2.50					4					
				2.75										
				2.7					1					
				3.00					_]					
				3.25			-		-					
				3.50										
				3.5										
				3.75	5									
				4.00					╣					1
				4.25	5									
		4 - "		,,,,,					1					1
	4.0		A.9L.1	4.50					1					- 1

		VERALS COMPANY LAC COSTEBE					_	HV		5/78	2	78-C-	.69
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC	S SP	-44	SAMPLE	1		ASSAYS	_
			-		IOTAL	K	U	Th	FROM	ТО	U ₃ O ₈		-
		OVERBURDEN		4.75									
				4.73									
				5.00									
				5,25									
				5.50									
				5.75							-		
				6.00									
				6.25									
				6.50									
								-					
				6.75									
				7.00									
				7.25									
				7.50									
				7.50									
				7.75									
				8.00									
				8.25									
				8.50									
				8.75									
				9.00								1	
				9.25									

		ALS COMPANY LAC COSTEBELLE			BADIO	(CTD)		HW		21/6		3	1001110	
ROM	то	REMARKS	LOG	METER	RADION TOTAL	K	U	1-44 Th	#	FROM	ТО	U ₃ O ₈	ASSAYS	T
											10	-3-6		十
				9.50										
				9.75										
				10.00										
				10.25										
				10.50										
				10.75										
				11.00										
	~			11.25										
				11.50										
				11.75										
				12.00										
				12.25										
				12.50										
2 %0	45 65	AUGENGNEISS		12.75										
2.80	15.65	Refer to log 30. foliation at 50° to core.		13.00						12.8	14.9	.006		†
13.00	15.60	Refer to log 30. Banding varies from 80° to 50°		13.00		2.0	2.1							
		Refer to log 30. Banding varies from 80° to 50° to 70° to core. Minor fractures parallel to ban ding and minor quartz veins and inclusions.	1	13.25		3.8		2.1						
	13.60	some blebs of a coarse red granite up to 2cm x		13.50	22.9	9.4	1.7	1-6						1
	14.00	3cma discontinuous vein of coarse red granite cut core at 50°°	2	13.75	23.2	3.4	1.7	1-8						
		core at 50°°		1400	25.0	4.0	2.0	1.9						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	-320	05			CORE	314E	21/6		PAGE 4	78-C-	
2011	TO	REMARKS	106	METER	RADIOM TOTAL	ETRICS	SP	-44		AMPLE			ASSAYS	
ROM	ТО	REMARIAS	200	VIL. 1 L. 1 V	TOTAL	K	U	Th	#	FROM	TO	U ₃ O ₈		=
		There are blebs of granite up to 2cm square over the next ten cm.		14.25	26.3	3.6	1.8	1.5						
14.2	14.4	penetrate core up to 2cm. Along the contact, the biotite has been altered to chlorite and vermi-		14.50	25.6	3.7	2.1	1.8						
		culite		14.75	24.1	3.7	2.3	2.0						
14.86	14.91	to banding. Fractures at the contacts are coated		15.00	24.3	3.5	2.0	1.7		14.9	.17.0	.008		+
15:19	15.25	with calcitea granite vein cuts the core at 50°.		15.25	22.3	3.0	1.8	1.5						
				15.50	70.5	5.8	4.2	2./						
15.65		FINE TO COARSE RED GRANITE		15.75	23.2	3.6	1.9	1.8						
		Orange to red, .1-2cm grain size. Felsic portion consists of pink to red, subhedral .2-2cm K-spar	mm	16.00	22.1	3.2	1.8	1.6						
		and white to clear, .2-1.5cm anhedral quarts. Mafic portion consists of black biotite in .1-1cm		16.25	40.3	4.6	2.4	2./						
		books. In this section there are minor inclusions of schist, the largest measuring 3cm x 6cm and having a foliation parallel to that of the rest of the		16.50	41.6	4.5	2.4	2.2			-			
	16.05	schist. K-spar 50%, quartz 25, biotite 10, inclusions 15.		16.75	26.0	4.0	2.2	1.9						
•25	17.00	BIOTITE SCHIST		17.00	26.7	3.6	2.0	1.6						
16.4	16.5			17.25	35.4	4-6	2.2	1.8		17.0	19.1	.008		
		of the vein has grains up to 1.5cm which decrease to .lcm at the contacts. There are 2 visible bas tnaesite grains.		17.50	34.Z	5.0	1.9	1.9						
		fracture at 60° to core.		17.75	97.9	6-7	3.3	3.4						
.00	18.6	MEDIUM (TO COARSE) RED GRANITE Refer to log 15. Lacks zircon, molybdenite and tourmaline. Grain size varies from .1 to 2cm and	711111		2.2	4.2	1.7	1.5						
		this occurs randomly throughout the section. There is more biotite in the medium-grained areas, giving			54.7	5-2	2.3	2.7						
		it a dark purple color. There is much alteration of biotite to chlorite and the biotite has developed	d		76.2		3.1	3.2						
	18.6	no foliation at all, unlike the schistcontact at 90° t core.			22.1	2.9		1.6						

ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE HW	SIZE	21/6		PAGE 5	HOLE 78-C-	
FROM	то	REMARKS	100	ÆTED	RADION	METRICS	S SF	2-44		SAMPLE			ASSAYS	
PROM	10	REMARKS	LOG	VETER	TOTAL	K	U	Th	#	FROM	то	U ₃ O ₈		
18.6	21.3	AUGENGNEISS Refer to log 30. Banding at 75° to core.		19.00	22.5	2.9	1.9	1.7						
18.6	20.0	Refer to log 30. Banding subperpendicular to cor	e.	19.25	22.4	2.7	1.6			19.1	21.3	-004		
	18.9	granitic vein at 70 ° to core, 1 cm wide.		19.50	23	3.4	2.1	1.8						
	19.3	granitic vein at 50° to core, 1 cm wide.		19.75	22.4	3.6	2.3	2.2						
20.0	20.7	Medium red granite vein at 80° to core.	1111111	20.00	22.8	3.3	1.9	1.6						
20.4	20.6	Refer to 17-18.6. Medium red granite vein at 75° to core. Refer to 17-18.6.		20.25	37.1	3.4	1.9	1.6						
				20.50	48.0	4.7	2.5	2.0						
	20.8	fracture parallel to core to end of hole.		20.75	27.8	3.5	2.1	1.8						
			<i>mm</i>	21.00	23.3	3.0	1.6	1.6				li i	1-	
21.2	21.3	core ground		21.25	27.3	3.9	2.0	1.6						
	21.3	End of hole		21.50						fines		·00Z		
				21.75										
				22.00				-					+	
+														

ESSEX MINERALS COMPANY GEOLOGICAL LOG BY R. Quartermain DATE ____19/0/70 HULL # LAC COSTEBELLE B-3205 78-C-30 RADIOMETRIC LOG BY____ DATE CLAIM # DIP 900 LAT. 115 + 900NG. 3 + 00W COLLAR ELEV. 97.8 DEPTH 9.4m CORE SIZE ____HW_ CORE RECOVERY___ 364130-3 LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS FROM TO REMARKS FROM TO U308 6.00 2.3 AUGENGNEISS .004 19 4,2 1.6 Grey to salmon pink, fine to medium-grained 0.25 Felsic portion: white to salmon pink, subhedral, 0.50 28.5 4.5 2.0 1.9 striated, frequently hematite-stained, .1-.5cm K-spar and white to clear, anhedral .1-.3cm quartz 0.75 27.2 Mafic portion: black, subhedral .1 -. 2cm biotite and 1.8 6.0 1.8 grey, anhedral, .lcm magnetite. There are other mafics less than .lcm which cannot 1.00 30.3 1.9 2.1 be readily identified. There is minor hematite staining of K-spars and bi-1.25 24.2 5.4 1,8 1.8 otite has been altered to chlorite. Along fracture surfaces, biotite has been altered to vermiculite; limonite, chlorite and calcite occur. Banding varies with depth from 50° to 70° to 50° to core. 1.50 25.4 13 6.1 1.4 There are numerous fractures and the core is ground 1.75 26.3 6.2 30 due to blocking. There are trace amounts of pyrite. The augen-shapes are the result of concentrations of 2.00 2481 1.9 5.2 19 K-spar and quartz between mafic layers. Unlike the paragneiss, the mafic layers do not extend through the core, but end randomly throughout the core. 2.25 24.2 5.2 19 1.8 There are a few coarser granitic sections, some having distinct contacts of veins while others appear 2.50 266 5.4 7.4 1.8 to be zones of recrystallization. 2.3 4.6 .006 Mineral percentages: Felsics- K-spar 50-60, quartz 25-35, calcite 1 22.3 1.8 1.7 4.4 2.75 Mafics- biotite 10-15, chlorite 2, hematite 2, magnetite 1, limonite 41, vermiculite 41, pyrite 3.00 21.6 1.8 4.6 trace. .38 .25core is ground and chipped ...medium red granite vein at 75° to core over 3cm.
...medium red granite vein at 70° to core over 3cm. 5.7 1.9 2.0 .32 30.1 3.25 1.00fracture at 25 to core. 1.02 29.3 5.8 3.50 1.62 3.12fracture sub to parallel to core. Much chipping and grinding of core. Limonite and calcite are 1.7 1.8 8.8 26.6 along fracture surfaces. 3.75 4.00 28.4 1.7 5.2medium red granite vein at 65° to core over 3cm. 4.12 4.25 27.6 5.9 1.9 2.3 4.20fracture trace at 10° to core. 4.8 1.8 1.6 26.6

ESSE	X MINE	ERALS COMPANY LAC COSTEBEL	LE	B-3	3205	5		HW	3166	19/6/	78	2	78-C	-30
FROM	то	REMARKS	LOG	METER	RADIO	METRIC			SA	AMPLE	ТО		SSAYS	1
FROM	10	REMARKS				K	U	Th		FROM	10	U ₃ O ₈		
				4.75	26.1	4.6	2.0	1.5		4.6	6.9	·00Z		
				5.00	298	4.8	2.0	1.6						
				5,25	24.6	3.7	3.3	1.4						
				5.50	20.8	3.5	1.6	1.3						
	5.80	fracture at 70° to core.		5.75	26.7	4.0	1.9	1.6						
6.00	6.27	COARSE RED GRANITE		6.00	24.0	3.8	2.0	1.7						
	6.27	Refer to log 15. Light red in color due to absence of hematite staincontact at 85° to core.		6.25	32.9	4.6	1.7	1.3						
6.27	9.100	BIOTITE SCHIST			15.8		1.6	1.4						
		Black, fine-grained, equigranular. Fèlsic portion: white to clear, .lcm subhedral K- spars, and white to clear, .lcm anhedral quartz.		1	18.3	3.6	1.8	1.5						
		Mafic portion: black, .lcm euhedral biotite and greg .lcm anhedral magnetite. Biotite has been altered			30.6	4.4	2.0	1.4		6.9	9.4			
		to chlorite and vermiculite. There is limonite along fractures and minor disseminated pyrite.			17.3		1,8	1.6		6.7	7.4	,002		
		Mineral percentages: Felsics- K-spar 20-30, quartz 10-15 Mafics- biotite 60-70, chlorite 5, magnetite 1,			16.7	1	1.6	1.3						
	6.65	vermiculite 1, magnetitetrace.		1	11	2.4	1.3	1.1						
6.87	7.00 7.30	Medium red granite vein at 650 to coreMedium red granite vein at 50 to core over 1cm.			16.7	3.8		1.5						
	8.00	fractures at 80 and 15° to core.			150		1.6	1.4						
				8.25	17.6		1.4	1. 1						
					ll .									
9.10	9.40	contact is a fracture at 65° to core.	1	8.75	16.6	1	<u> </u>							
7. 10	7.40	AUGENGNEISS Refer to 0-6.00 of this log.		9.00				1 77						
			mm	9.25	24.9	3.9	1.1	1.7						

ESSE	X MINE	RALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE HW		19.	TE /6/78	PAGE 3	HOLE 3	# 50
FROM	то	REMARKS	106	METER	RADION	METRICS		2-44	·	SAMPLE		-	ASSAYS	
- KOM	10	REPIARIO	100	VEIER	TOTAL		U	Th	#	FROM	ТО	U ₃ O ₈		
	9.40	End of hole. Alleraterman		9.50	25.0	3.1	1,3	1.3		fines		.004		
				9.75										
				10.00										
				10.25										
				10.50										
				10.75										
				11.00										
				11.25										
				11.50										
				11.75										
				12.00										
				12.25										
				12.50										
				12.75										
				13.00										
				13.25										
				13.50										
				13.75										
1			<u> </u>	14.00	<u> </u>		di			1		11		

r. <u>116</u>	S_LONG.	4 + 101 COLLAR ELEV. 103 DEPTH 30ft, 8.5mDIP						ORE R	ECOVE	RY	90%		CLAIM # 364/30
М	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC	S SP.	-44 Th		AMPLE			ASSAYS
									#	FROM	TO 2.1	U308	ó l
	6.00	COARSE (TO MEDIUM) RED GRANITS			34.8		1.6	1.8					
		Refer to log 15. All minerals present. Fedium- grained areas occur over 5 to 10cm intervals. Hema		0.50	42.1	5.2	2.3	2.2					
		tite, green quartz and bastnaesite all present.		0.75	305	3.8	2.0	1.6					
			h		29.0		2.0	1.6					
				1.25	28.3	2.7	1.9	1.7					
	1.60	fractures at 35-40° to core.		1.50	29.0	2.8	2.2	1.8					
				1.75	35.6	3.0	1.6	1.4					
				2.00	32.9	3.2	2.5	2.0					,
					27.1		1.8	1.5		2.1	4.2	.003	,
					28.0		2.0	1.6					
					246		1.8	1.6					
					27.8		1.8	1.6					
					49.4		2.5	1.7					
. 50	7 65	very coarse section. Refer to log 24.	771711		32.5		2.2	1.6					
5.50	3.65				25.8		18	1.4					
.20	4.35				21.0		1.9	1.5					
		€ 1cm up to 25%, K-spar 40, quartz 30.			31.7		2.0	1.4					
		1 ⁴			37.6		2.6	1.8		4.2	6.3	.009	

ESSEX	MINE	RALS COMPANY LAC COSTEBEL	LE	, ,				CORE		22/6,		PAGE 2	78-C	
ROM	то	REMARKS	LOG	METER	TOTAL	METRIC K	S SP	44 Th	SA	FROM	ТО	U ₃ Q ₈	SSAYS	
						3.0	2.9	1.7						
							2.0	1.4						
						2.3	1.7	1.5						
				5.50	26.8	2.3	1.9	1.3						
	5.70	••••fractures at 50° to core.		5.75	35,8	3.1	2.5	1.6						
5.00	6.90	MEDIUM RED GRANITE Refer to log 15.	1			2.1		1.3						
		Note: 00 log 1).		6.25	24.3	2.0		1.3						
			1111	6.50	51.5	3.3	2.4	1.7		6.3	8.5	800.		
				6.75	42.8	3.1	2.7	1.5						
5.90	8.50	COARSE RED GRANITE Refer to log 15.		7.00	42.0	3.0	2.1	1.4						
	7.15	bastnaesite 5% over 8cm.		7.25		 								
	7.60	bastnaesite 5% over 5cm.		7.50	37.0	2.7		-						
	7.85	bastnacsite 5% over 5cm.			54.0			1.5						
7.90		core ground and chinned		8.00	51.6		1.9							
		010		8.25		2.5	1.9	-						
	8.50	End of core. Allracternas	711111	8.50	22.8	2.3	1.5	1.2		0		2011		+
				8.75						fines		,004		
				9.00										
				9.25					Ä					

とううと		C COSTEBELLE B-3205 RADIOMETR				Quart	ermain			ATE2		3	78 - C	
LAT. 1169		5 + 00W COLLAR ELEV. 105 DEPTH 32', 9.25 DIP							ECOVE		98%		CLAIM # 364130	
FROM	ТО	REMARKS	LOG	METER	RADIO	METRIC	S SP.			AMPLE	70		ASSAYS	
					IOTAL		U	Th	#	FROM	ТО	U308		$+\!\!-$
0	3.2	COARSE RED GRANITE Refer to log 15. There are some very coarse section	ons	0.25	29.9	6.8	2.3	2.0		0	2.3	.006		
	•20	with grain size less than 4cmfracture at 15° 'o core.			303		2.1	2.0						
				0.75	27.8	5.6	1.9	7.6						
				. 1.00	28.1	5.7	2.1	2.0						
				1.25	25.1	4.4	1.7	1.4						
1.60	1.85		7		32.5		2.2	1.8						
1.00	1.00	very coarse section. Refer to log 24.	.뉘	1.75	<i>3</i> 86	6.7	2.4	1.9						-
			4	2.00	<i>2</i> 9.3	4.2	1.9	1.6					-	
2.30	2.70	Defende	٦	2.25	61.8	10.1	3.3	2.0						
2.50	2.70	very coarse section. Refer to log 24.	-11	2.50	37.3	7.0	2.1	1.7		2.3	4.6	. 004	4	
			4	2.75	34.9	5.1	1.5	1.4						
	2.80	fracture at 20° to core.			40.6		2.1	1.8						
7 20 1		contact over 1cm at 65° to core.		3.25	26.2	3.8	1.8	1.3						
3.20	6.40	MEDIUM RED GRANITE Refer to log 15. There is an abundance of bastnaesite and red hematite. The quartz is a yellow to	-	3.50	40.0	5.6	2.5	1.7						
3.7	3.8	green color in areas of concentrated bastnaesite. Bastnaesite 5%.		3.75	55.5	7.6	2.4	1.4						
)•(7•0	•••• mastraesite Jos		4.00	422		2.4	1,5						
				4.25	42.9	5.6	2.3	1.5						
				4.50	226	26	1.0	1.1						

ESSE)	K MINE	ERALS COMPANY LAC COSTEBEL	LE	B-3	3205			HW		23/6/		2	78-C	
FROM	то	REMARKS	LOG	METER	RADIO!	METRIC			S	AMPLE	70		SSAYS	
						K	U	Th		FROM	то	UzQe		
				4.75	44.5	5.8	2.4	1.6		4.6	6.9	.007		
				5.00	39.1	4.8	1.9	1.5						
				5,25	285		1.7	1.4						
		1-		5.50	28.1	3.7	1.8	1.6						
5.70	5.80	Bastnaesite 4 3%.		5.75	901	8.7	29	1.5						
				6.00	404	6,2	2.3	1.6						
(6.25	36.8	6.0	2.3	1.7						
6.30	6.40	Bastnaesite 53%contact over 5cm roughly 80° to core.			380	6.1	2.2	1.5						
5.40 .	8.00	COARSE RED GRANITE Refer to log 15. Not as coarse as 0-3.2, but		6.50	30.2	4.1	1.8	1,4						
6.40	6.50	grains 2cmvery coarse section. Refer to log 24.			35.2		1.9	1.3						
					2070	5.4	2.0	1.5		6.9	9.25	. 011		
7.4	7.70	very coarse section. Refer to log 24.		1	21.7									
				7.50				'2					-	
•00	9.25	MEDIUM RED GRANITE Refer to log 15. Granite is more of an orange		7.75	28.2									
9 00	9 40	color with a few white K-spar phenocrysts. Bastnae site is abundant and there is epidote veining.	-	8.00	32.2	3.5	1.7	1.4						
8.00	8.10	bastnaesite = 5%.		8.25	102.7	8.3	2.3	1.4						
8.40	8.50 8.50	three epidote veins cut core at 25°.		8.50	49.6	4.4	1.9	1.3						
8.90	9.10	bastnaesite 45%. There also numerous fractures, some with epidote. They cut core subparallel at 1	D •	8.75	41.0	3.9	1.4	1.2						
9.15	9.25	core is ground. Large grains indicate coarse vein. Core is not as orange and similar to the			492	6.7	2.4	1.4						
	9.25	typical medium red granite.		9.00	153	2:5	2.3	1.2						
		Teller man		9.25					-	BIATE A		.004		

ESSE	X MIN	ERALS COMPANY	GEOLOGICAL	LOG	BY	R	. Quar	terma	in	D	ATE _24/	6/78		HOLE	•
	LAC	C COSTEBELLE B-3205	RADIOMETRIC	LOG	BY					D	ATE			78-C-33	
	D LONG.	5 + 50W COLLAR ELEV. 98 m DEPTH 321	, 9 lm DIP 90								RY 91	+%		364/30	
FROM	ТО	REMARKS		LOG	METER	TOTAL	METRIC K	U	Th		FROM	ТО	U ₃ O ₈	ASSAYS	
0	2.9	COARSE RED GRANITE Refer to log 15. All minerals present e	xcept molyb-		0.25	26.7	5.0	1.9	1.7		0	1.5	.003	3	
		denite, zircon and tourmaline. There are coarse sections with gradual contacts.	Biotite has		0.50	25.2	4.7	2.2	1.9						
		been altered to chlorite and yellow to g quartz occurs throughout. The rock is b	roken up int	р	0.75	41.4	6.1	2.5	1.8	-					
	.625	sections \(\leq 20cm \) due to numerous fractures and perpendicular to core. fracture at 85 to core.	parallel to		. 1.00	306	4.7	1.9	1.6						
	.70 1.0	" " 80° "			1.25	23.1	3.2	1.5	1.3						
	2.1	11 11 11			1.50	31.9	5.1	1.9	1.6						
					1.75	22.6	3.2	1.6	1.4		1.5	2.9	.004	+	
		,			2.00	689	8.4	2.4	1.3						
	2.35	fractures at 45° to core and subpara	ا ا ا	77777	2.25	30.1	4.0	1.9	1.5						
	• J J	•••••• oole and baspara	101/		2.50	26.0	3.1	1.5	1.3						
	2 00					20.3		1.5	1.4						
2.90	2.90 9.10	PARAGNEISS				23.0		1.5	1.2		2.9	5.0	,00	7	
	3.2	Refer to log 20. Banding is variable thbanding at 50° to core.	rough core.			189	2.6	1.4	1.3		2.7	3.0	,00		
	3.4	fracture at 80° to corebanding at 40° to core.			3.50	200	2.3	,9	.8						
	3.5 3.7	banding at 40 to corefracture at 80 to core.			3.75	221	2.6	1.2	1.1						
	3.8				4.00	168	2.4	1.2	1.2						
4.15	4.2	Medium red granite vein at 80° to core.				18.6	2.8	1.5	1.4						
			-		4.20	17.6	3.1	1.6	1.4						

ESSE	K MINE	RALS COMPANY LAC COSTEBEL	LE					HW	JIEL	24/6	/78	2	78-C	-33
FROM	то	REMARKS	LOG	METER	RADIO!	METRIC:	S SP	44 Th	SA	FROM	ТО	1	SSAYS	
T KOM					IOIAL	^	0	111		FROM	10	U ₃ O ₈		
	4.6	banding at 65° to core.		4.75	17.3	2.5	1.5	1.3						
	5.1	••••fracture at 75° to core.		5.00	12.5	2.2	1.2	1.2		5.0	~ .			
				5.25	14.5	2.1	1.2	1.0		5.0	7.1	.004		
5.6	6.6	core is ground and chipped. Fractures run para-		5.50	110	20	1.1	1.1						
		llel to core and there is epidote veining present.		5.75	7.9	2.3	1.2	1.2						
				6.00	13.0	1.5	1.2	1.2						
				6.25	9.4	2.1	1.1	1.0						
6.4	6.5	Medium red granite vein cuts core at 45°: Similar to log 18 granite and like the vein of		6.50	6.A	2.0	-9	.9						
		hole 34 of 8.8m.		6.75	8.7	1.9	.9	.9						
6.85		Refer to log 15.	===		10.5	2.3	1.1	1.1						
	7.0	banding at 55 to cor.	11111	7.25	113		1.0	1.0		7.1	9.1	.007		
				7.50	8.1	2.1	.9	.9		·				
	7.6	••••fracture at 85° to core.			10.5	2.1	1.1	1.0						
				7.75	6.5	1.6	.8	.8			4			
				8.00	57	2.0	.8	.7						
	8.5	fracture at 80° to core.		8.25	.46	2.1	.8	.8						
	8.7	banding at 65° to core.	711111		9.1	2.0	.9	.0						
		DIA .		8.75	50		. 6	.4						
	9.1	End of hole. Mulleatterne		9.00										
				9.25						fines		-006		

GEOLOGICAL LOG BY ____ R. Quartermain DATE 23 / 6 / 78 | HOLE # ESSEX MINERALS COMPANY 78 - C - 34 LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY_____ CLAIM # 1178 LONG. 6 + 50W COLLAR ELEV. 99.58 DEPTH 341, 9.35mDIP 900 HW CORE RECOVERY CORE SIZE 364130-3 RADIOMETRICS SP.-44 SAMPLE ASSAYS FROM TO REMARKS LOG METER TOTAL FROM Th TO U308 Core is ground quite fine -- core loss .6m 2.0 1.00 .007 2.2 25.8 0.25 4.00 COARSE (TO MEDIUM) RED GRANITE Refer log 18. This granite is orange to red in co-19 23.3 2.8 2.0 lour; cut by numerous epidote, calcite, and quartz 0.50 veins; is dominantly white quartz; has few mafics 33.6 3.0 19 1.5 and is unlike the typical red granite. There is 0.75 much fracturing of the core and chloritic alteration 1.8 is abundant. 29.0 2.6 1.6 1.00 .40core is ground and chipped .15 .50 fracture at 10 to core. 2.5 21.4 .65calcite and epidote and chlorite veins cut the core at 25 to 40 over 20cm. 1.25 21.4 1.60core is ground and chipped 1.00 1.50 1.30 1.70a 1-3cm quartz and calcite vein cuts the core at 28.7 2.4 10. Chloritic veins run parallel to these. 1.75 1.90 2.00core ground and chipped. 22.7 2.00 2.0 4.0 .007 203 2.30fracture at 15° to core. 2.90fracture at 20° to core. 2.25 26 2.0 16.1 2.50 33.5 19 2.75 3.10three fracture traces at 15° to core. 20.9 3.20 3.30medium-grained section. More mafics than in the 3.00 rest of core; about 20%. 324 3.25 3.90zone of numerous epidote and calcite veins cutting the core at 20 to 40 with a width .05cm. 3.60 30 7.7 3.50 3.70 Magnetite-rich zone. Magnetite grains 1.5cm, concentrated to 8% over the 29.3 1.4 3.75 interval. 4.00 contact over 5cm. Granite grades into finer-2.2 15.7 1.6 grained augengneiss. 4.00 4.00 9.35 AJGENGNEISS (PARAGNEISS?) 4.0 19 .007 244 4.25 Refer to log 30. This augengneiss does not have augens as well-developed as those seenin previous 1.5 21.1

ESSE)	X MINE	ERALS COMPANY LAC COSTEBEL	LE	B-				CORE		23/6/		PAGE 2	HOLE #
FROM	то	REMARKS	LOG	METER	RADIO!	METRIC	S SP	-44 Th	S	FROM	ТО	U ₃ O ₈	ASSAYS
		varies from 75° to 85° to core. There is a minor			17.8	1.8	1. 1	1. 1		TROM	10	0308	
		epidote and calcite veining through the core. This zone, though of some length, may represent a gradua change into paragneiss as with depths, augens are		5.00	.61	1.8	1.4	1.4					
		difficult to identify and concentrated layers of felsics are more abundant characteristic of para-		5.25	16.5	1.6	1.3	1.3					
4.15	4.20	gneissMedium red granite vein parallel to foliation. Similar to 0-4.		5.50	14.7	1.9	1.5	1.3					
4.40	4.45	Coarse red granite vein parallel to foliation. Similar to 0-4		5.75	183	1.1	1.6						
5.80	5.10	ture surfaces.		6.00	13.0	1.5	1.2	1.2					
6.0	5.90 6.4	Medium red granite vein at 80 to core, but cuts foliation. Similar to 0-4 Numerous calcite and epidote stringers run sub-		6.25		1.7	1.2	1.2					
		parallel to core, with two stringers oriented per pendicular to core. Veins .05cm width.	-	6.50	15.7	1.8	1.3	1.3					
				6.75	13.4	1.7	1.2	1.2		6.7	9.35	.007	
				7.00	11.1	1.4	1.2	.9			, 55	.007	
				7.25	13.5.	13	1.1	1.1	0				-
				7.50	13-2.	1.4	1-2	1.3					
7.8	8.2	Veining similar to 6-6.4.		7.75	27.6	3.8	1.2	, ,					
	8.2	two fractures one cuts care at 80°; the other, subparallel.		8.00	20.7		1.9	1,4					
		subparatter.		8.25		1.8	1.4	1.2					
8.8	8.9	Medium red granite vein at 45° to core, but per-		8.50	169	1.8	1.4	1.3					
		pendicular to banding. Similar to 0-4. With thi vein and those above, the contact with the gneiss		8.75	12.4	1.2	1.2	1.1					
		is not distinct, but over 1 cm. They are probab- ly zones of recrystallization along which heat ha been transferred, mather than a hydrothermal sol-	31111	9.00	13.2	1.5	1-4	.4					
		ution, as such.		9.25									

					RADION	METRICS	SF	-44	5	AMPLE			ASSAYS	
ROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
9.2	9.35	End of core.		9.50						fines		.007		
		1 Stransvers		9.75										-
				10.00										
				10.25										
				10.50										
				10.75										
				11.00										
				11.25										
				11.50										
				11.75										
				12.00										
				12.25							+			
				12.50										
				12,75										
				13.00										
				13.25										
				13.50										
				13.75										
				14.00										

ESS		VERALS COMPANY GEOLOGICAL C COSTEBELLE B-3205 RADIOMETRIC					terbra	in		ATE <u>26/</u>	6/78		78 - C -	
LAT. 11	6LONG.	6 + 50W COLLAR ELEV. 96.76 DEPTH 207', 63. DIP	90°	COR	E SIZE	ВQ	c	ORE R					CLAIM # 364127	ŧ
FROM	ТО	REMARKS	LOG	METER	TOTAL	METRIC	S SP.	-44 Th	\$ #	FROM	ТО	U308	ASSAYS	_
0	3.2	Overburden		0.25							-	0308		
				0,50	22.9	4.9	1.9	1.7						
				0.75										
7.0	1 22 7	GOADGE (MO NEDTHA) THE GOANTHE		1.00	23.1	3.7	2,4	2.2						
3.2	22.3	COARSE (TO MEDIUM) RED GRANITE Refer to logs 15 and 18. From 0 to 12.20, the granite is similar to log 15; however from 12.20-21.9		1.25										
		there is abundant white quartz and minor epidote veining and the granite is similar to log 18. The		1.50	23.6	29	1.9	1.7						
		medium-grained sections occur over intervals up to one meter. Green quartz is present in the core fr	-	1.75										
		quently associated with bastnaesite. There is abudant red hematite and bastnaesite occurs in concentrated areas. All minerals in log 15 and 18 are		2.00	24.0	3.6	1.9	1.7						
		present though magnetite, molybdenite and zircon occur in trace amounts. In the first 6 meters of		2.25										
		the core there is much grinding and chipping.		2.50	25.9	3.6	2.2	2.2						
				2.75	11									
				3.00	23.9	3.3	2.1	2.0						
				3.25						3.20	8.20			
				3.50	38.7	4.0	2.6	2.7		0.20	8.20	.007		
			mm	3.75										
	4.3	rounded pebbles of amphibolite and gneiss indica	es	4.00	25.9	3.8	2.1	1.9						
		a large fracture in core or the pebbles fell in during a run.		4.25										
				4.50	67.7	4.6	3.1	3.6						

					RADIO	METRIC	S SP	44	SAMI			A	SSAYS	
ROM	ТО	REMARKS	LOG	METER	TOTAL	K	U	Th	F	ROM	то	U3 Cg		
				4.75									,	
			mm		37.4	3.8	2.4	2.2						
				5.25	CAF	4.4	3.2	4.1						
				5.50	61.5	7.7	5.2							
6.09	6 74			5.75										
0.09	0.71	vein cuts the core		6.00	22.4	3.3	1.8	1.5						
			L	6.25										
				6.50	23.8	3.3	1.8	1.5						
				6.75				*						
				7.00	0.40	3.6	2.3	2.2						
				7.25	000	3.5	2.3	2.0						
	7.62	bastnaesite / 5% over 5cm.		7.50	25.8	9.5	2.3	2.0						
				7.75										
	7.93	••••large euhedral bastnaesite and tourmaline (?) grains with inclusions of quartz and feldspar	2011	8.00	22.7	2.7	1,9	1.6						-
				8.25						0.20	13.20	225	-	
	8.54	fracture at 45° to core.		8.50	25.5	3.9	2.3	2.1		0.20	15.20	. 005		
	0.74	••••iracture at 45 to core.		8.75										
					223	3.3	1.8	1.6						
	9.00	Bastnaesite 3% over 8cm.		9.00										

1	1-11146-11	ALS COMPANY LAC COSTEBELLE		3-32	1		1		30			3	78-€	5
ОМ	то	REMARKS	LOG	METER	RADIOM TOTAL	ETRICS K	U I	1-44 Th	#	FROM	то	U ₃ O ₈	ASSAYS	T
									T	FROM	10	0308		#
	9.30	Enidote veing at 45° to core.		9.50	23.4	3.8	2.3	2.0						
	9.76	••••fracture at 45° to core.		9.75										
10.06	10.37	core is ground and chlorite veining occurs at 35° to core.		10.00	23.2	3.7	2.2	1.7						
)) to core.		10.25										
10.67	10.82	Bastnaesite and tourmaline? 20%.		10.50	25.7	3.6	2.1	1.5						
			uui	10.75										
				11.00	22.5	3.6	2.3	2.0						
				11.25										
				11.50	288	4.1	2.1	2.1						
				11.75										
				12.00	24.1	4.0	2.1	1.8						
12.20	12.80	Biotite-rich section with biotite 25-30%; fel-	4	12.25										
		sic portion 50-60%; others 10%.		12.50	23.6	3.6	2.1	1.8						
			1	12.75										
				13.00	24.2	3.4	1.9	1.5						
				13.25						13.20	18.20	.005		-
			d	13.50	25.0	3,4	1.9	1.7			,0.0	.003		
			7777	13.75										
				14.00	25.4	3.8	2.1	1.9						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-320	05			CORE	SIZE	DA		PAGE +	78-C	
ROM	то	REMARKS	LOG	METER	RADIOM TOTAL	ETRICS	SP.	-44 Th	#	FROM	то	U ₃ O ₈	ASSAYS	T
					IOTAL	N	U	111	T	FROM	10	0308		+
13.41	14.33	Refer to log 34.		14.25	27.2	3.6	2.2	2.1						
				14.75										
				15.00	28.6	4.0	2.3	2.0						
				15.25				4						
				15.50	62.2	4.8	2.9	3.1						
				15.75	V 2 1	263	21.5	24.4						
16.16	16.46	Biotite-rich section.		16.00	163.4	20,3	21.3	27.						
				16.25	250	3.7	2.2	1.6						
	16.77	fractures at 20° to core.		16.75	,									
-	10011			17.00	30.8	3.8	2.2	2.1						
47. 70	47. (0		ann	17.25							*			
17.38	17.03	Hematite-rich section with hematite 20%, felsion 60%, others 20%.	Β	17.50	24.4	3.1	1.6	1.4						
				17.75										
17.99		Hematite-rich section with hematite 30%, felsion 60%, others 10%.		18.00	23, 1	3. 1	2.1	2.0						
18.29		Bastnaesite and tourmaline (?)		18. 25	27.1	4.2	2.6	2.1		18.20	22.30	.008		
									1					

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE BQ		26/6/7		PAGE 5	78-C-3	-
			1.00	ACTED.	RADION	1ETRICS	SI	2-44		SAMPLE			ASSAYS	
ROM	то	REMARKS	LOG	METER	TOTAL	К	U.	Th	#	FROM	TO	U ₃ O ₈		╪
18.90	22.26	Granite is dominated by milky white quartz.		19 00	29.7	4.2	2.0	1.9						
				19.25										
	19.51	Bastnaesite 3% over 5cm.		19 50	33.4	3.4	2.0	2.0						
19.82	20. 12	fine to medium recrystallized zone.		19 75		2 .								
17.02	20.12	Granitic in nature, though it is dominantly fine- grained and has a weak foliation of grains at 75		2000	31.1	3.6	2.1	2.1						
	20. 27	to core. It is cut by numerous random chlorite and epidote veinsa lcm wide chlorite and epidote vein.		20 25										
	20.27	a icm wide chiorite and edidote vein.		2050			- 1							
20.73	21.04	very coarse section.	0	20.75			71 -	-						
21.04	22.26	Grain size 4cm; white quartz 40%; pink K-spar 5 mafics 10core is cut by numerous calcite and epidote vei		2100	113.9	6.1	4.8	5.6						
				21 25										
				21 50										
				21 75	243	3.4	1.7	1.5						
				2200				1. 2						
2.26	23.78	PARAGNEISS		22 25	64.4	4.5	2.9	3.4		22.30	27.30	.012		-
		Refer to log 20. This gneiss has an abundance of hematite stain. Banding is at 70-80 to core.	mm											
				22 75	43.6	4.2	2.7	2.7						
				23 25										
				2325										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-32	05			CORE BQ		26/6/7		PAGE 6	78-C-35
		DELLA DUC	1.06	METER	RADION	ETRICS	S SP	-44		AMPLE			ASSAYS
ROM	ТО	REMARKS	LUG	VEIER	TOTAL	К	U	Th	#	FROM	TO	U308	
23.48	23.78	Refer to log 20. Banding at 65° to core.		23 75									
3.70	25.91	MEDIUM RED GRANITE Refer to log 15. There are fine-grained zones up t 10 cm in length with a weak foliation indicating	0	24 00	35.1	3.1	26	2.1					
	24.39	association with the paragneisscalcite fracture at 40° to core.		24 25				-					
	24.70	calcite fracture at 45° to core.		24 75									
				25 00	35.6	3.7	2.8	2.1					
25.30	25.91	numerous calcite and epidote veins cut the core at random.		25 25									
		at Tandom.		25 50							.4		
	25.91	contact gradual over 5cm, at approximately 80° to core.		25 75	25.6	3.3	2.5	2.0					
25•91 .	39.94 "	Refer to log 20; it is generally red through where		26 25									
26.30	27.44	it grades into biotite schist, it is grey in color Banding sub-perpendicular to core 75-90numerous hairline chlorite and epidote veins.		26 50									
		fractures at 10 and 15° to core.		26 75		3.6	2.7	2.4					
					36,3	۵.0	2.1	2.1					
				27 25						27.30	32.3	-008	
28. 28.0	5 28.20	Contacts gradual over 3cm with vein soarsening		27 50 27 75									
		from the edges to the center. Much alteration of feldspars to kaolinite and subsequent removal of this material, leaving an abundance 10% of empty		28.00	24,4	3.0	2.6	1.9					=
				28 25									

ESSE)	X MINER	ALS COMPANY LAC COSTEBELLE		3-32	1			BQ	1	26/6/	70	7	HOLE 78-C-))
ROM	то	REMARKS	LOG	METER	RADIOM TOTAL			2-44	#	SAMPLE			ASSAYS	_
NOINI					IOIAL	K	U	Th	11	FROM	ТО	U ₃ O ₈		+
	28.35	vesicles lmm or lessfracture at 20° to core.		28 50										1
				28 75										
				29 00	35.7	3.8	2.9	2.0						
				29.25										
	29.57	fracture at 95° to core.		29 50										
				29 75		3.9	3.0	2.2						
				3000	34.4	0.4	0,0	2.2					-	
				30 25										
				30 50										
				30.75										
				3100	34.6	3.6	2.7	2.1						
				31 2 5										
				31 50	3									
				31 75										
					38.0	4.0	3.3	2.4						
			m							32.30	37.30	007		
				32 50						52.00	300	.007		
				32 75					4					
				33 00	33.8	3.2	2.7	2.6						

ESSEX	MINE	RALS COMPANY LAC COSTEBELLE	Е	-320	05			CORE		26/6/	78	PAGE 8	HOLE 78-C-	35
			1.00	A	RADION	ETRICS	S SF	2-44		SAMPLE			ASSAYS	
ROM	то	REMARKS	LOG	MEIER	TOTAL	K	U	Th	#	FROM	TO	U ₃ O ₈		+
			,	33 25			-							
				33 50										
				33 75					-=					
				34 00	38.0	4.0	3.3	24						
				3425				-						
34.4	5 39.4	Refer to log 20. Banding at 70 to 80° to core		34 50										
				34 75										
				3500	33.8	3.2	2.7	2.0						
				3525	,									
				35 50										
				35 75										
				36 00	33. 1	3Å	2.8	2.0						
				36 25										
	36.5	8fracture at 45° to core.		36.50										
			711111	36.75										
				37.00	31.8	3.4	2.7	2.1						
	37.2	0a lcm medium red granite vein cuts the schist at 75° to core.		37.25										
		20 77 00 0016.		37 50						37.30	42.30	. 005		
				37 75										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	75			BQ	1	26/6/	78	9	78-C-	ク フ
		DENIA DUC	106	METER	RADIOM TOTAL	ETRICS	SF	-44		AMPLE			ASSAYS	_
FROM	то	REMARKS	LOG	VETER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		+
37.80	38.06	75° to core parallel to banding.		38 m	36.7	3.6	2.8	2.4						
	38.26	a .5cm quartz vein cuts the core at 45°.		3825	10 -	_			,					
	38.56	a coarse grey granite bleb 2cm x 3cm in the schist.		38 50	33.5	3.7	3,2	2.7						
	38.72	interlayered coarse grey granite blebs and veir Along the contacts of these two, anhedral pyrite	s.	36 75										
		is concentrated up to 2%.		3900										
				39 25										
	39.48	••••contact at 75° to core.		3950	33.2	3.7	2.5	1.9						
			<i>mn</i>	39 75										
-8 -01		contact at 75° to core.		40.00	37.5	3.7	2.9	2.4	1					
59.94	41.16	COARSE (TO MEDIUM) RED GRANICE Refer to log 15. About 10% is medium-grained, the remainder coarse. About 10% mafics and 90% felsics		40 25										
		Minerals present: quartz, K-spar, biotite, bastnae- site and chlorite.		40 50	36.5	3.5	2.9	2.2						
+1.16	45.43	PARAGNEISS Refer to log 20.		40 75				, =						
				41 00	35.9	3.0	2.7	1.9						
				41 25										
41.62	41.77	biotite schist. Refer to log 20.		41.50										
				41.75										
				42.00	33.9	3.5	2.7	2.1						
				42.25										
										42.30	47.30	-007		+-

ESSE?	X MINE	RALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE BQ		26/6,		PAGE 10	78-C-	# 35
					RADION	ETRICS	SP	-44		SAMPLE			ASSAYS	
ROM	ТО	REMARKS	LOG	MEIER	TOTAL	K	U	Th	井	FROM	ТО	U308		-
			<i></i>	42.75										
				43.00	<i>3</i> 5.7	3.6	2.5	2.1						
				43.25										
				43.50										
				43.75										
				44.00	36.0	3.7	2.5	2.0						
				44.25										
				44.50	-									
				44 75					2					
				44 00	84.2	3.1	2.5	19						
5.43	46.34	CONTACT ZONE		45 25									ŀ	
		Grey to pink, medium-grained granite. It is very similar to the paragneiss in color and composition;		45 50	32.8	3.0	2.5	2.0						
		some areas have a weak foliation, yet it is coarse- grained. There are no distinct contacts and this i probably a zone of recrystallization.	L B	45 75										
		producty a zone of really statisfied.		4600										
				4625										
				46 50	33.0	3.3	2.8	2.3						
				46 75										
				47 X	33.4	3.2	2 4	2.0						
				4725	,									

ESSE	MINER	ALS COMPANY LAC COSTEBELLE	E E	3-32	05			CORE		26/6		PAGE 11	HOLE \$	
ROM	то	REMARKS	1.06	METER	RADION TOTAL	METRICS		2-44		SAMPLE			ASSAYS	_
KON	10	REMARKS			TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		F
46.34	47.56	PARAGNEISS/BIOTITE SCHIST Refer to log 20. Banding is at 75° to core.		47 50						47.30	52.30	.004		
	46.95 47.56	bleb of coarse white granite 2cm by 3cmcontact at 80° to core.	77777		25.8	3.4	2.7	1.8						
47.56	47.71	quartz vein subperpendicular to core.		4800	35.3		-	4						
7.71	50.61	AUGENGNEISS Refer to log 30.		48 25										
	10 -0			48 50										
	48.78	a 5cm granite vein at 70° to core.		48 75										
			min	49 00	42.4	3.6	2.8	2.0						
				49 25								+		
				49 50										
				49 75										İ
				50 00	32.6	3,1	2.7	20						
				50 25										
	50.6	contact gradual over 10 cm.		50 50										
50.61	57.77	PARAGNEISS Refer to log 20.		50 75										
				51.00	34.4	3.5	3.0	2.2						
				51 25										
				51 50										
				5175										
			2000	5200	35.0	29	28	1.9						

ESSE:	X MINER	ALS CO	MPAN	1A	LA	4C	COS.	TEBELL	E E		1			CORE BQ		26/6	778	PAGE 12	HOLE #
ROM	то	REMARKS							1.06	METER	RADION TOTAL	/ETRIC	7	-44	!	SAMPLE			ASSAYS
											TOTAL	К	U	Th	#	FROM	ТО	U308	
	52.13	coarse	white	granit	e veir	n at	75° to	core ove	er 6cm.	52 25									
										5250				-		52.30	57.30	.009	
										52 75								2	
	53.05	11	11	11	11	.,	11	over	10cm.	5300	35.0	3.7	29	2.1					İ
										53 25									
	53.35	"	11	11	11	11	11	over 5	cm.	53 <i>5</i> 0									
										53 75								-	
										5400	34 4	3.5	2.9	2.1					
										54 25									
										54 50									
										54 75									
									277.77	55 00	35.0	3.6	2.6	2.0				-	
										55 25									
										55 50									
										55 75									
										56 00	35.8	3.8	2.8	2.3					
										56 25									
										56 50									
										56.75									

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	11			BQ		26/6,		13	78-C-	
FROM	то	REMARKS	106	METER	RADION TOTAL	ETRICS	S	2-44		SAMPLE			ASSAYS	
- KOM	10	NEMAKKS	200	- I	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
				5700	35.0	3.0	3.0	2.2						
	57 • 32	fracture at 15° to core.		57 25										
				5750						57.30	63.30	.004		
	57.77	contact at 80° to core over 10cm.		57 75										
57.77	60.98	AUGENGNEISS Banding at 75° to core. Refer to log 30.		58 00	35.1	3.4	2.8	2.5						
			27777	58 25										
				58 50			-							,
				5875										
				59.00	35.9	3.4	2.6	1.8						
				59 25										
59.45	60.67	Refer to log 30. The center of this unit has altered grains of hornblende. Banding at 70 to		59 50										
		altered grains of hornblende. Banding at 70 to core.		59 75										
				∞∞	33.2	3.4	2.4	1.7						
				60 25										
				60 50										
60.98	63.71 .	PARAGNEISS Refer to log 20contact over 10cm.		60 75										
	60.9	contact over 10cm.	2000	61 00	35.3	2.9	2-6	4.6					V- 1	
				61 25										
				61 50									100 0 3	

(SSE)	X MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32				BY	1	26/6		PAGE 14	78-C-3
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS	1	-44		AMPLE			ASSAYS
					IOIAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	
				61.75									
				62.00	36.0	3.9	2.7	2.7					
				62.25									_
	(2 50	2			34.7	2.9	2.5	2.1					
	62.50	Coarse red granite vein at 70° to core over 15 cm.	<i></i>	0250									
		4		62.75									
	63.10	End of hole. Alluaternam		63.00									
		19 Caracter Mach		63.25						fines		.007.	
					34.0	3.5	2.8	2.0					
												1	
											-		
													V]

GEOLOGICAL LOG BY _____ R. Quartermain DATE 27/6/78 HOLE # ESSEX MINERALS COMPANY 78 - C - 36 LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY_____ DATE CLAIM # LONG. 6 + 50 COLLAR ELEV. 96.76 DEPTH 44', 12.9 DIP 90 LAT. 116 95 % CORE SIZE HW CORE RECOVERY_ 364127-2 RADIOMETRICS SP.-44 SAMPLE ASSAYS FROM TO REMARKS LOG METER TOTAL Th FROM TO U308 4.2 Overburden 0.25 0.50 0.75 1.00 1.25 1.50 1.75 4.2 12.9 PARAGNEISS 2.00 Refer to log 20. The paragneiss has biotite with minor magnetite as mafic minerals and there is a light green, anhedral .2cm mineral found at random 2.25 through the core--secondary serpentine(?) The core is cut by numerous quartz and epidote veins and is 2.50 highly fractured. Approximately 30% of the core is ground and chipped. 2.75 3.00 3.25 3.50 3.75 4.00 4.25 6.40 4.20 .008 450 228 3.1

ESSE)	X MINE	RALS COMPANY LAC COSTEBELI	LE					CORE		27/6		PAGE 2	78 - C - 36
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC:	S SP	44 Th	SA	FROM	ТО	U ₃ Q ₈	ASSAYS
0 4.6	4.6	core is chipped Coarse red granite vein at 55° to core. Refer		-	25.0	4.2	1.9	1.7					
	4.8	to log 15 Contrate and gradual aven 1 am			30.4		1.6	1.6					
	5.1	numerous chlorite and epidote veins cut the core at 30-50°. Fracture at 35° to core.			28.1		2.3	2.1					
					30 O	4.7	2.3	2.2					
					32.8	4.9	1.9	1.8					
5.8		Coarse red granite vein at 70° to core. As above.		6.00	210	5.0	2.4	1.9					
6.0	8.3	most of the core is fraactured into pieces 8cm in length, all of which are fractured parallel or		6.25	24.3	4.0	2.4	2.0					
		sub-parallel to core and most of which have chlori along these surfaces.	te	6.50	24.2	3.6	1.7	1.7		6.40	8.60	.005	
				6.75	30.7	4.9	2.1	2, 1					
				7.00	23.5	3.3	1.9	1.7					
				7.25	23.3	3,5	2.3	2.0					
				7.50	23.8	3.3	2.0	1.9					
				(4	28.1	1	1.9	1.8					
				8.00	22.6	3.2	1.9	1.7					
	8.4	••••banding at 70° to core.		8.25	25.9	3.9	2.1	1.7					
8.6	8.7	coarse red granite vein at 70° to core. As		8.50	25.2	3.8	2.0	1.6					
	8.8	above.		8.75	350	5.7	2.2	2.1		8.60	10.80	.002	
	1	to core.		9.00	28.3	3.%	1.8	1.5					
			711111	9.25	200	3.9	1.7	1.6					

ESSE)	X MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	1			CORE HW		27/6		PAGE 3	HOLE 78-C-	
FROM	то	REMARKS	106	METER	RADION TOTAL	METRICS		-44		SAMPLE			ASSAYS	1
- KON			200	PETER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
	9.3	••••epidote veins at 30° to core.		9.50	28.7	45	2.2	20						
	9•7	fracture subparallel to core over 20cm.		9.75	318	5.2	2.0	1.9						
					24.8		1.9	1.6						
	10.3	fracture at 45° to core.		10.25	32.1	5.3	2.3	2.1						
	10.6	fracture at 30° to core.			27.5		19	1.8						
					26.7	4.0	1.8	1.6						
	10.9	fracture at 75° to core.		11.00	296	4.5	2.0	1.8		10.80	12.90	.002		+
				11.25	33.3	5.0	2.0	1.9						
	11.3	" " " " " "			31.6	4.7	2.3	1.9						
	11.7	The state of the s			29.5		2.4	2,1						
				12.00	32.5	4.9	2.4	2.3						
					29.7		1.9	1.6						
	12.4	numerous epidote and quartz stringers with ran-			36.0		2.3	1.8						
	12.6	dom orientationsfracture at 15° to core.		12.75	200		2,1	2.0						
	12.9	End of hole. Alleuternan			275	4.6	22	2.0						
				13.00						fines		.005		
				13.25										
				13.50										
				13.75										
				14.00					1				1	

ESSE		ERALS COMPANY C COSTEBELLE B-3205	GEOLOGICAL RADIOMETRIC				R. Qu	arter	nain	ATE	/ 6/78		10LE 78- ⁰ -37	
LAT114			01 ft. .28m. DIP 9	o°	COR	E SIZE	୫ଟ୍	с	ORE R	RY/	00%		364127	
FROM	то	REMARKS		LOG	METER	TOTAL	K	U U	-44 Th	FROM	ТО	U ₃ O ₈	ASSAYS	1
0	9.91	.COARSE (TO MEDIUM) RED GRANITE Refer to log 15all minerals present. is present, as is bastnaesite in minor c			0.25	29.1	3.6	2.3	1.9	0	5.0	. 006		
		Hematite staining is present and biotite concentrated.	is frequent	У	0.50									
0	1.52	core is fractured into lengths 4cm.			0.75	27.0	3.8	2.3	1.8					
					1.00									
					1.25	28.6	3.8	1.9	1.7					
					1.50									
				min	5	27.1	3.6	1.9	1.6					
					2.00								-	
		**				27.9	3.4	1.9	1.7					
					2.50					//				
					2.75	32.2	4.1	2.9	2.4					
3.35	3.66	very coarse sectionrefer to log 24.			3.00									
				mm	3.25	26.8	4.1	2.4	2.0					
					3.50									
					3.75	31.0	4.4	2.7	2.5					
					4.00									
4.27	4.57	Bostnaesite 3%; biotite 25%. Felsics			4.25	32.0	4.0	2.9	2.3					

			-7		RADION	VETRIC:	S SP-	44	S	AMPLE			ASSAYS	
ROM	ТО	REMARKS	LOG	METER	TOTAL	К	U	Th		FROM	ТО	U ₃ Q ₈		
			mm	4.75	30.0	3.7	2.0	1.7						T
4.88	5.49	Biotite-rich section. Biotite 30%, felsics 70%.		5.00										
				5.25	ma	4.2	2.2	1.8		5.0	9.9	.012		T
				5.50										
				5.75	30.0	4.1	2.2	2.0						
6.10	6.40			6.00										
		meter).	um	6.25	30.5	4.2	2.3	1.7						
				6.50					_					
				6.75	50.5	4.6	3.0	2.6						
			×	7.00								1		
				7.25	167.8	8.2	6.4	6.5						
	7.32	Bastnaesite 4 3% over 6cm.		7.50										
			anno	7.75	41.1	4.2	2.7	2.4						
				8.00										
8.08	8.38	Bastnaesite & tourmaline (?) 4 5%.		8.25	32.5	4,0	2.4	2.1						
				8.50										
	2.2	0		8.75	57.4	46	2.9	2.8						
8.84	8.84 9.15	fracture at 10° to coreBastnaesite & tourmaline 4 5%. Numerous chlorite stringers cut the core.		9.00										
		stringers cut the core.		9.25	47.8	4.2	2.5	2.4						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE BQ	SIZE	29/6/		PAGE 3	78-C-	
					RADION	ETRICS	SF	2-44		SAMPLE			ASSAYS	
FROM	ТО	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
9.60	9.76	Bastnaesite 4 5%.		9.50										
				9.75	35.0	4.1	2.4	2.4						
	9.91	contact over 3cm approximately 70° to core.		10.00						9.90	16.50	.002		
.91	16.46	PARAGNEISS Refer to log 20. Banding is subperpendicular to co	re	10.25	26.7	3.6	2.2	2.2						
10.06	10.21	Coarse-grained grey granite vein. Contacts are gradual and the quartz is milky-		10.50										
10.37	10.62	white. Felsics 85%, mafics 15%Coarse red granite vein with gradual contacts	mm	10.75	25.1	3.7	20	1.8			-			
		over 3cm.		11.00										
				11.25										
11.64	11.6	Coarse red granite vein with gradual contacts		11.50										
		over lcm.		11.75	26.3	3.9	2.5	2.2						
				12.00										
			min	12.25										
				12.50						,				
				12.75	26.8	3.9	2.0	1.9						
				13.00										
				13.25										
13.72	12 7	···same as above.		13.50										
17.16	19.7	same as above.		13.75	30.3	3.8	2.3	2.0						
				1400										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE BG	SIZE	29/6,	TE /78	PAGE 4	HOLE 78-C-	势
FROM	то	BEMARKS	106	ACTED	RADION	METRICS	SF	-44	5	SAMPLE			ASSAYS	
FROM	10	REMARKS	LOG	MEIER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
14.48	14.53	Medium red granite vein with gradual contacts over lcm.		14. 25										
		This vein is concordant to the banding and has as mineralogy K-spar, quartz, biotite, bastnaesitchlorite, zircon, molybdenite, tourmaline (?).	e,	14.50	43.9	4.0	2.5	2.9						
14.86	14.99	Medium red granite with gradual contacts over lcm.		14.75 15.00	, , ,									
				15.25										
45.5	45.64			15.50										
15.5	75.61	Medium red granite with gradual contacts over lcm. Bastnaesite 4 5%.		15.75	44.7	4.3	2.7	2.6						
16.00	16.08	Medium red granite with gradual contacts over lcm. Bastnaesite and tourmaline (?) 48%.		16.00										
				16.25										
	16.46	contact over 3cm. Fracture at 60° in contact zone.		16.50										+
16.46	29.88	COARSE (TO MEDIUM) RED GRANITE Refer log 15. Fraction of coarse/medium is 80/20. All minerals present. Some very coarse felsic area		16.75	25.9	9.1	2.4	2.0		16.50	21.50	- 001		
		scattered throughout this section, as well as biotite-rich sections. Green quartz occurs at random		17.00										
		as does bastnaesite with its characteristic radiating structure.		17,25	39.9	4.9	2.8	2.1						
17.68	17.99	Bastnaesite 4 5%.		17.50										
				17.75	77.3	5,2	3.5	4.3						
17.99	18.29	Bastnaesite 4 5%.		18.00										
				18.25	27.4	4.0	2.8	2.5						
				18.50				,						
				18.75	26.0	4.0	2.6	2.5						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-32	05			CORE EQ		29/6	TE 5/78	PAGE 5	HOLE 78-C-3	# 37
			1.00		RADION	ETRICS	SP	-44	_	AMPLE			ASSAYS	
ОМ	ТО	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		-
				19.00										
19.36	19.82	Biotite-rich section. Black books of biotite 35%, grey quartz 45, pink		19.25	24.7	3.4	1.9	1.8						
		K-spars 30.		19.50										
				19.75	24.4	3.9	2.2	1.8						
				20.00										
				20.25	24.0	3.4	2.1	1.7						
				20.50		09								
				20.75	24.4	3.9	2.1	1.7						
				21.00		3.4	2.0	1.7						
			<i></i>		27.0	0,1		1. 1				1		
				21.50	24.8	3.6	1.9	1.7		21.50	26.50	-001		+
				21,75	24.0	0.0	",	1. /						
22.26	22.46	Biotite-rich section.		22,25	29.3	4.3	1.5	2.2						
		Medium-grained, bastnaesite 4 3%, biotite 25-30, felsics 65-70.		22,50										
22.76	24.03	Biotite-rich section. Refer to 22.6-22.46.		22.75	000	3,4	2.1	2.0						
23.07	23.17	Biotite-rich section. Refer to " " .		23.00										
				23.25	25.3	3.7	2,1	1.9						
	1			23.50										

ESSEX	MINER	ALS COMPANY LAC COSTEBEL	LE E	3-32	05			EG		29/6/	78	PAGE 6	78-C-	非 ·37
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS	1	2-44		SAMPLE			ASSAYS	
23.17	24.00	very coarse section.			TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
25011		Refer to log 24.		23.75	24.4	3.5	2.2	1.8						
				24.00	31.4	3.9	2.3	1.9					designation of the second seco	
				24.25	31.4	3.9	2.3	1.9						
			mm	24.50										
				<u>2</u> 4.75	26.2	3.5	2.0	1.8						
				25.00										
				25.25	26.3	3.6	2,1	1.9						
				25.50										
25.91	27.19	Biotite-rich section.		25.75	27.5	3.6	2.0	1.6						
	27.17	Biotite 40%; quartz 30, K-spar 25, bastnaesi	te 5	26.00	-									
				26,25	47.6	4.1	2.4	2.3						
				26,50										
				26,75	45.2	4.2	2.7	3, 1		26.50	31.50	. 008		
				27,00										
				27.25	24.4	4.0	2.3	2.3						
27.74	28.39	very coarse section.		27.50										
	- 10//	Refer to log 24.		27.75	25,2	3.6	2.0	1.7						
				28.00										
				28,25	25.1	3,7	2.1	1.8						

E35E.	\ IVIINER	ALS COMPANY LAC COSTEBELLE		3-32	J 5			В	ત	29/6/	70	7	78-C-3	21
ROM	то	REMARKS	LOG	METER	RADIOM TOTAL			-44		SAMPLE			ASSAYS	_
NOI4		NEI-PARCO			TOTAL	К	U	Th	#	FROM	TO	. n ³ 08		+
				28.50										
		·		28.75	24.7	3.9	2.0	2.0						
				29.00										
				29.25	24.6	3.8	2.1	1.8						
				29.50										
	29.88	contact over 5cm.		29.75	27.5	4.0	2.2	2.0						
9.88	48.17	MEDIUM RED GRANITE		30.00										
		Refer to log 15. There are coarse-grained sections however, these are minor. Bastnaesite is more abundant than in the coarse granite. This section has	-	30,25	26.0	4.0	2.3	2.0						
		some areas of concentrated biotite; in general, it is equigranular with a consistent composition.		30.50										
		There are occasional fractures at 50 to 60° to core and the core splits sub-perpendicular to the ver-			35.7	4.1	2.6	2.5						
	30 - 90	tical axis when hammeredBastnaesite \(\frac{5\%}{2} \) over 3cm.		31.00										
				31.25	27.8	3.7	2.3	2.1						
				31.50										
				31.75	28.5	3.6	2.0	1.7		31.50	36.50	- 004		
	32.01	•••• " \(\frac{20\%}{20\%}\) over 5cm.		32.00						-				
	32.32	" 45% over 15cm.		32,25	42.1	~4.6	2.6	2.8						
				32.50										
				32.75	45.7	3.7	24	23						
				33-00										

SSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	-32	05			CORE ଞ୍ଚିତ୍		29/6,		PAGE 8	78-C-	
			1.06	ACTED.	RADION	METRICS	SF	-44		SAMPLE			ASSAYS	_
ROM	ТО	REMARKS	LOG	VEIER	TOTAL	К	Ų	Th	#	FROM	TO	U ₃ O ₈		+
				33.25	27.9	3.6	2.1	1.8						
33·5 ^l	33.84	Bastnaesite 4 3%. Magnetite and tourmaline (?) also present.	mann	33.50			-							
		arso prosent.		33.75	40.9	4.6	2.8	2.6	-					
				34.00				,						
				34.25	26.9	3.5	2.0	1.8						
				34.50										
				34.75	26.2	3.7	1.9	1.6						
				35.00										
				35.25	24.2	3.8	2.1	1.7						
				35,50										
				35.75	26.7	3.6	2.3	2.0						
				36,00										
	36.25	••••quartz and calcite vein .5cm cuts the core at		36.25	26.2	3.3	1.8	1.8						
		45° Bastnaesite concentrated to 5% over 5cm.		36.50										
			2000	36.75	84.2	3.7	23	2.0		36.50	41.50	-002	-	
				37.00							-			
37.20	37.80	Biotite-rich section. Biotite 30%, felsics 65-70, bastnaesite 2%.		37.25	23 9	3,6	2.0	1.8						
	37.50	a fine-grained grey siliceous vein at 85° to		37.50										
		core and lcm wide; refer to		37.75	309	4.0	2.5	2,3						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	JO			BQ		29/6	78	9	78-C-3	37
ROM	то	REMARKS	106	METER	RADIOM TOTAL	ETRICS		-44	-	AMPLE			ASSAYS	_
KOM	10	NEMANIA	200	-LILK	TOTAL	K	U	Th	#	FROM	TO	U ₃ O ₈		+
37.99	39.11	Biotite-rich section. As in 37.2-37.8.		38.00							•			
				38.25	26.1	3.5	2.3	1.9						
				38.50										
	38.72	fracture at 40° to core.		38.75	29.8	3.9	2.4	2.1						
				39.00										
				39.25	26.4	3.5	1.9	1.8	-					
	39.48	Breccia vein. Grey, aphanitic groundmass with angular particles	22277											
		2mm of K-spar, quartz and biotite. There is minor pyrite mineralization and a minor foliation	mm	39.75	25.6	3.2	1.9	1.5						
38.63	41.46	developed parallel to the distinct contacts of the vein at 75 to core.	€	40.00										
20.03	41.40	Refer to 0-9.91. At 39.5 there is a 20-cm section with a soft (1)		40.25	24.2	3.9	2.2	2.0						
		lime green, lcm anhedral mineral (clay?) which seems to have replaced some of the K-spers. It		40.50										
		was seen in hole 17 at 23m.		40.75	24.2	3.6	2.0	1.8					,	
				41.00										
				41.25	25.5	3.9	2.2	1.7						
				41.50										
				41.75	24.8	3.5	1.9	1.7		41.50	48.00	.002		
				42.00										
				42 25	24.6	3.0	2.2	1.7						
				42.50										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE BQ		29/6	6/78	PAGE 10	HOLE #	-
2014	TO.	DEMARKS	1.06	ATTER	RADION	ETRICS	SF	2-44	s	AMPLE			ASSAYS	
ROM	ТО	REMARKS	LOG	VEIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈	•	
42.68	42.94	Bastnaesite 3%.		42.75	24.7	3.1	1.7	1.8			,			
				43.00										
43.45	43.90	Biotite-rich section.		43.25	36.3	4.0	2.5	2.6						
		Refer to 37.2-37.8.		43.50	46.0	A.4	2.8	2.8						
				43.75			2.0	2.0						
	44.21	Bastnaesite 4 10% over 5cm.		44.00	28.4	3.9	2.3	2.1						
	44.66	Bastnaesite = 30% over 5 cm.		44.50										
				44.75	24.3	3.7	2.0	1.9						
				45.00										
				45.25	27.0	3.5	2.1	2.0						
				45.50		3.6	0.0	1.0						
			2000	45.75	28.6	3.6	2.3	1.8						
				46.00	06.4	3.7	2.2	1.9						
				46.25	20.1	0.,								
				46.50	36.7	A.1	2.6	2.7						
	46.95	Bastnaesite 10% over 5 cm.		47.00										
					26.4	3.4	2,1	2.1						

					RADION	KETDICE		-44		ALADI E			1001115
ROM	то	REMARKS	LOG	METER	TOTAL	K	U	-44 Th	#	FROM	ТО	U ₃ O ₈	ASSAYS
	47.26	bastnaesite less than 10% over 5cm.								1 KOM		3,00	
				47.50									
				47.75	98.4	6.3	4.0	4.5					
		contact over 3cm.		10.00									
8.17.	61.28	AUGENGNEISS Refer to log 30. The gneiss has numerous zones of		48.00	31.5	4.3	2.5	2.3		48.00	53.00	.002	
		coarse to medium red granite and in areas, the gner is medium-grained with white quartz and has the ap-	ss	48.25	31.3	4.3	2.5	2.5		0.00	20.00	.002	
		pearance of a grey granite; however, the biotite		48.50									
		exhibits a foliation sub-perpendicular to core. There is minor fracturing sub-parallel to core.			277	3.5	2.3	2.1					
	48.09	Medium red granite vein over 10 cm. Contacts are gradual and bastnaesite 43%.	<i></i>	48.75	,								
				49.00									
				49.25	2-								
				49.50									
				47.50	0/ 7	3.4	2.2	1.9					
				49.75	26.7	5.4	2.6	1.7			•		
	49.85	Bedium red granite vain over 8cm. Contacts are gradual and bastnaesite 42%.		50.00									
				50.25									
50.30	50.76	contact zone. Coarse to med red granite interlayered with							p				
		zones of augengneiss. There are no distinct con-		50.50									
		tacts and the core blends from augengneiss to granite to gneiss to granite to gneiss.		50.75	45.5	3.7	2.5	2.4					
				51.00									
												h pd	
				51.25									
				51.50								11	
				51.75	27.0	3.5	2.1	1.9					
					, ,								

	I MINEL	ALS COMPANY LAC COSTEBELLE		3-32				BQ	I	29/6/	10	12	78-C-37	1
ROM	то	REMARKS	LOG	METER	RADION TOTAL	ETRICS K	U	-44 Th	#	FROM	то	U ₃ O ₈	ASSAYS	Т
				52.25	TOTAL	***				T ROW	10	0308		t
				52.50										
					40.0	4.6	2.3	2.3						
				53.00										
				53.25						53.00	61.30	-004		1
	57.00			53.50										
53.51	53.96	Coarse red granite section. Contacts are gradual. Bartnaesite occurs in trace amounts; however at 53.96, magnetite is		53.75	24.0	3.7	2.3	1.8						
		nresent 20% over 3cm.		54.00										
				54.25										
				54.50										
				54.75	23.8	3.6	20	1.8						
				55,00										
				55.25										
				55.50										
				54.75	23.3	3, 1	1.8	1.6						
56.1	56.40	Coarse frey to red granite section with gradual contacts over 5cm.		56.00										
		Bradaar contacts over Jon.		56.25										
				56.50								•		
				56.75	23.6	3.7	2.2	1.8						

ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE Bq		29/	TE /6/78	PAGE 13	HOLE # 78-0-37
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44		SAMPLE			ASSAYS
			===		TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	
				57.00									
				57.25									
				57.50									
					24.2	2.8	1.8	1.8					
EG 07	E9 27	Construction with gradual		51.15									
57.93	50.25	Coarse grey to red granite section with gradual contacts over 5 cm.	j 6	57.00					*				
				58.25									
				58.50									
				58.75	21.9	1.9	1.9	1.8					
				59,∞									
59.15	50 /15	same as above											
J7 • 1J	J3•4J	•••• Same as anove		59.25									
				59.50									
				59 .75	23.3	33	1.9	1.7					
				60.00									
				60.25									
60.37	60.67	••••same as above						_					
				60.50	n z 91	3.3	9.9	1.8					
					23.9	ر, د	1.7	1.0					
			mm	61.00	*								
.28		End of hole. Straiternan		61.25	24. 3	3.4	2.3	1.9					
		U/J		61.50						fines	٠	007	

ESSE		ERALS COMPANY C COSTEBELLE B-3205	GEOLOGICAL RADIOMETRIC						in	ATE			78-C-38	
		4+50W COLLAR ELEV. 98.21 DEPTH 8.1	.9 ft. 8 _m DIP	90	COR	E SIZE	HW	C S SP.	ORE RE	 RY	9370		CLAIM # 364/27 ASSAYS	
FROM	то	REMARKS		LOG	METER	TOTAL	METRIC K	U	Th	FROM	ТО	U308	ASSATS	
0	8.8	PARAGNEISS Refer to log 20. Banding varies from 70				30.4		2.1	3. 2	٥	2.20			
		core. There are coarser zones with graduation over a few centimeters. There is minor frank chipping.				29.3			2.2					
	.40	fracture at 90° to corefracture at 10° to core.			0.75	26.5		2.1	2.0					
	1.2	fracture at 10° to core.				27.3		1.9	1.7		h.			
	1.4	fracture at 10° to core.				29.3		2.0	1.8				1	
					1.75	28.9			1.7					
2.0	2.5	core is chipped and ground with fractionsubparallel to core.	ure traces			26.5		2.2	1.9 2.0					
						26.7		2.0	7.8	2.20	4.40	.006		
						25.0		2.4	2.2					
					3.00	28.7	6.0	1.9						
					3.25	II	6.3							
					3.50	213	6.4	2.2	2.2					
					3.75 4.00	277	6.1	1.9	1.7					
l _{+ •} l ₊	4.46	Coarse red granite vein at 60 to core			4.25	281	6.5	2.1	2.0					
	4.40	soarse rea grantee voin as so to core	ال	-==	4.50	27.6	6.2	2.1	1.9	4.40	6.60	- 009		

LJJL	1 IVIIINE	ERALS COMPANY LAC COSTEBEL			3205			HW	 30/6/7	8	2		C - 3
EBOM	TO	DENAADKS	100	METER	RADIO	METRIC			APLE			SSAYS	
FROM	ТО	REMARKS			TOTAL	K	U	Th	FROM	ТО	1308		
				1	210	6.4	2:1	17					
				4.75	26.3	6.1	۲,۱	1.6					
				5.00	28.2	6.5	1.9	1.9					
5.3	5.45	Coarse red to grey granite section. Has inter-			26.6	6.3	2.2	2.2					
2.4.2	1	layers of paragneiss. White quartz is abundant. Re-						2 (
		fer to logs 15 and 18.		5.50	25.5	5.7	2.1	2.0					
					26.8	6.2	1.9	1.8					1
				5.75	-		0.2						i i
				6.00	31.3	7.1	2.3	1.9					
6.3	6.45	Coarse (tomedium) red to grey granite section.		6.25	28.5	6.2	2.1	2.0					
		Refer to 5.3-5.45.			273	6.3	2.2	1.8					
				6.50									
	6.7	fracture trace at 15° to core.		6.75	28 8	8.4	2.0	1.8	6.60	8.80	.002		
		9-3/-			312		2.2	2.1					
	7.0	••••fracture trace at 15° to core.		7.00	10								
				7.25	31.0	7.1	2.3	1.8					
					32.0	6.3	2.0	1.9					
			111111	7.50									
				7.75	28.5	6.5	2.2	2.0					
				8.00	30,4	6.5	2.1	1.9					
				8.00			0.2	1.0					
				8.25	31.0	7.1	2.2	1.8					
				8.50	29.7	8.6	2.0	1.8					
		200		0,00		6.3	1.2	10					
	8.8	End of hole. Alluartuman		8.75	27.9	6.7	1.2	1.8					
		. 0		9.00					fines		.008		
				9.25									

GEOLOGICAL LOG BY R. Quartermain DATE ______30/6/78 HOLE # ESSEX MINERALS COMPANY 78 - C - 39 LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY_ CLAIM # CORE SIZE _ HW LAT. 112 +005 LONG. 4+25 w COLLAR ELEV. 93.51 DEPTH 9.3m, 30.501P 90 CORE RECOVERY 364127-3 LOG METER TOTAL RADIOMETRICS SP.-44 SAMPLE ASSAYS REMARKS FROM TO FROM U3OB Th TO 9.3 COARSE (TO MEDIUM) RED GRANITE 2.3 .003 5.4 8.6 359 Refer to log 1. This granite is similar to that of 0.25 Nole C-1 both in texture and the characteristic salnon min' color. All minerals are present as describ-0.50 40.1 89 2.3 2.6 ed in 78-C-15. The medium-grained sections, though not abundant, are characterized by more abundant red 1.8 359 8.0 2.2 0.75 hematite staining and grains. Bastnaesite and tour maline ("yrochlore?) occur in concentrated areas rat-83.8 17.3 3.1 4.8 domly throughout the core. 1.00 Bastnaesite exhibits its radiating structures and green quartz is present. The tourmaline (pyrochlore 51.5 10.4 2.8 2.1 1.25 ?) mineral which is radioactive -- high thorium, is black, sub to euhedral, with a hardness of approxi-1.50 64.4 3.0 3.2 13.2 mately 5-6, though on its conchoidal fracture surfaces it is greater than 8. 3.3 1.75 60.1 2.6 12.4Bastnaesite 10%. .12fracture at 45° to core. .40 27.9 5.4 2.00 158.9 6.2 .88Bastnaesite 5% over 5cm. 2.25 87.5 44.9 7.6Biotite-rich section. 1.1 1.2 Biotite 30%, felsics 70. 22.9 5.0 5.1Bastnaesite 10% over 5cm. 2.50 24.3 1.25 2.3 .003 Bastnaesite 5% over 5cm. 2.5 2.75 112.5 20.91 4.2 4.7 3.00 118.4 21.3 4.7 4.6 3.25 29.5 24.3 5.1 5.5 3.3 3.8very coarse granite section. Refer to log 24. 2.0 7.8 33,3 3.50 6.8 1.7 1.7 34.0 3.75 4.00 28.1 2.0 6.6 2.2 93 43.1 4.25

ESSE	X MINE	ERALS COMPANY LAC COSTE	BELLE					CORE		30/6/		PAGE 2	78-C-3
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRIC K	S SP	44 Th	S	FROM	ТО	i in the second	SSAYS
										FROM	10	U ₃ O ₈	
				4.75	35.3	8.8	2.1	2.0		4.6	6.9	-002	
				5.00	33.6	7.5	2.0	1.9					
				5.25	31.0	7.1	2.4	2.0					
				5.50	35.1	7.1	2. 3	2.0				,	
				5.75	31.7	6.8	2.1	1.8					
				6.00	110 3	21.0	4.6	4.4					
					10 2	9.7	2.6	2.3					
				6.50	55.4	11,7	3.0	2.7					
				6.75	46.8	10.2	3.1	2.6					
				7.00	060	18.3	4.1	4.2					
				7.25	60.0	13.9	2.6	3.7		6.9	9.3	.004	
				7.50	40.6	9.3	2.1	2.1					
					53.0	11.1	2.5	2.6					1
					133.3		5.4	5.5					
	0.0	Donato and the 70' and 50'			60.6	12.8		2.8					
8.4	8.2 8.55	Bastnaesite 3% over 5cm.		8.25	2	16.0	3.7	3,6					
		Refer to 1.1 to 1.2.		8.50	74.2			36					
				8.75		15.4							
				9.00	39.7	8.8	2.3	1.9					
				9.25									

ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	E	3-32	05			H		30/6/	78	3	78-C-3	#F 59
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44		SAMPLE		-	ASSAYS	
1 KOM	9.3	End of hole. Bethanluman			TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
	7.0	and of note.		9.50						fines		.010		
				9.75										
				10.00										
				10.25										
				10.50										
			-	10.75										
				11,00										
				11.25		_								
				11.50										
				11.75										
				12.00										
				12.25										
				12.50										
				12.75										
				13.00										
				13.25										
				13.50										
				13.75										
				14.00										

GEOLOGICAL LOG BY _____ R. Quartermain DATE _ 4/7/78 HOLE # MINERALS COMPANY ESSEX 78 - B - 1 RADIOMETRIC LOG BY_ 5. Yatabe LAC COSTEBELLE B-3205 CLAIM # 364057-2 LAT. 10 + OONLONG. 3 + OOE COLLAR ELEV. DEPTH 30.5m. 100 LDIP_ CORE SIZE _ CORE RECOVERY_ LOG METER RADIOMETRICS SP.-44 SAMPLE ASSAYS TO FROM REMARKS U Th FROM U308 TO 5.0 .012 30.5 WHITE COARSE - GRAINED GRANITE 0.25 37.0 4.6 2.5 2.0 Light grey to pink, fine to coarse grained. Felsic portion: white to light red, striated, sub-25 3.8 328 hedral, .2cm-4cm, stained K-spars; clear to white 0.50 to smoky-green to gray, anhedral to subhedral, .2 0.75 24.3 1.8 2.1 2cm quartz. 3.4 Mafic portion: black, sub to euhedral, .lcm-2cm big tite; rey, anhedral .2-.5cm magnetite. 19 34.9 Core fractures subperpendicular to the axis withmid 1.00 nor fractures at 10-20 to the core. Such fractures 4.9 33 2.1 489 have calcite and chlorite along surfaces. There is 1.25 minor alteration of biotite to chlorite and red. 1.50 38.6 subhedral 4.5cm spiral garnets occur in some areas 40 2.8 1.9 (high metamorphic grade). There is minor hematte staining of K-spars. 2.7 A1.1 4.0 2.4 The coarser pegmatite sections with grains up to 4c are characterized by books of biotite and dark smo-1.8 23.8 36 2.1 ky quartz. 2.00 There are medium grained sections which are equigranular .4-.5cm with an even distribution of min-18 313 2.25 erals. Generally, the grain size is variable, as is the 55 65.2 color of the granite. Biotite occurs as small .1 2.50 cm grains, as lcm needles or in books. 2.75 30.2 3.5 1.9 Mineral Percentages: 2.3 K-anar 60, quartz 30-40 Biotite 5-10, chlorite 1, garnet ≤ 1, magnetite--3.5 295 3.00 trace. .5 .75very coarse section. HILLI 37.0 Grey, coarse-grained 2-4cm. 3.25 Felsic portion: white, subhedral, striated, 2-4cm 3.50 26.4 3.3 K-spar; gmoky gray anhedral 2-3cm quartz. 1.5 2.0 Mafic portion: minor hiotite. K-spar 60%, quartz 30-40, others--trace. A.1 32.4 1.6 2.2very coarse section. 3.75 Similar to .5-.75. More biotite present as well 2.3 4.00 32.7 3.7 1.7 as red subhedral lcm garnets. K-spar 50-60%, quarta 30-40, biotite 5, garnet 1-4. 4.25 31.4 3.9 2-2 3.9 1.6

E33E/	\ IVIIIVE	ERALS COMPANY LAC COSTEBEI	-LC					BQ		4/7/	78	2	78-B	- 1
FROM	то	REMARKS	LOG	METER	RADIO	METRIC	S SP		SAMPL	E OM	ТО		SSAYS	1
							U	Th	FR	OIM	10	U ₃ C ₈		
				4.75	32.4	3.8	2.5	1.9						
				5.00	26.9	3.9	2.2	1.6						
				5.25	207	3.9	2.1	1.5	5.	0	10.0	.011		
				5.50	29.1	3.9	2.1	1.7						
				5.75	264	3.6	2.0	1.5						
					26.2	3.9	2.0	1.8						
6.1		fracture at 15° to core.			252		1.9	1.7						
6.3	6.6	ve y coarse section. Refer to .575	٦	1	24.5		1.9	1.7						
			4	6.75	200	3.6	2.1	1.7						
					28.8	4.1	2.2	1.9						
				7.25	m		2.1	1.7						
					36.1	4.2	2.1	1.6						
					23 1	4.4	2.9	2.3		1				
					24.7	3.3	1.9	1.6					7	
				8.25	m 7	3.4	2.0	1.6						
					202	3.9	2.3	2.2						
				8.50	360 1		2.3	2,1						
				8.75	849	4,1	2,9	2.1						
9.1	9.3	Ref r to White Coarse-Grained Granite; contains	1	9.00		4.3								
		A CONTRACTOR OF A 12 CO.	٦	9.25	51,1	4.5	2,0	44						

ESSEX	MINEF	RALS COMPANY LAC COSTEBELLE	E	3-32				B ව		4/7		3	78-B-1
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS	1	2-44		AMPLE			ASSAYS
							U	Th	#	FROM	ТО	U ₃ O ₈	
		about 20% of a smoky grey quartz.		9.50	25.7	3.5	2.3	1.9					
				9.75	30.6	3.7	2.3	1.8					
				10.00	36,4	4.1	2.7	1.7					
				10.25	35,3	4.3	3.1	2.0		10.0	15.0	.019	
				10.50	478	48	2.7	1,7					
					22 2	3.6	2.2	1.7					
			211111	10.75	27,4	3.2	1.7	1.5					
					24.9								
				11.50	41.2	3.9		18					
				11.75	290	3.4	2.2	1.8					
				12.00	30.8	3.7	2.2	1.7					
15				12.25	26.1	3.7	2.3	1.8					
12.	12.4	very coarse section. Refer to .575.	ļ — —	12.50	29.4	A.1	2.4	2.0					
				12.75	240	3.6	23	1.6					
			mm	2	22 0	4.0	2.2	1.7					
				13.00	32.7	3,7							
				13.25		3,9	2.1						
				13.50				1,5 1.5					
				13.75	32.1	3,4	2.1						
				14.00	26.2	3,2	1.8	1.5					

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-320	05			BO		4/7/7		A 4	78-B-1	
FROM	то	REMARKS	1.06	METER	RADIOM TOTAL			-44		AMPLE			ASSAYS	
FROM	10	REMARKS	100	VETER	TOTAL	К	U	Th	#	FROM	TO	U ₃ O ₈		
				14 25	36.2	3.7	2.6	2.1						
				14 50	40,4	4.3	2.8	1.6						
				14 75	74.2	5.9	4.5	2.3						
				15 00	26.6	3.7	2.2	1.5						
				15 25	36.8	3.6	2.3	1.4		15.0	20.0	.010		
				15 50	31.7	4.0	2.4	1,7					h. 91	
				15 75	339	35	2.4	1.8						
15.88	19.3	Medium to Coarse White Granite Refer to O. The feldspars are now pink in color and garnets occur randomly throughout.		16 00	27.0	3.7	1.9	1.6						
	16.13	fracture at 10° to core.	<i></i>	16 25	25.8	3.7	2.1	1.8						
				16 50	25.3	3,5	2.0	1.8						
	16 9	fracture at 80° to core with chlorite on frac-		16 75	29.7	4.1	2.2	1.8						
		ture surfaces.		1700	30.1	4.1	2.6	1.9						
	17.2	fracture at 70° to core with epidote on fracture surfaces.		17 25	28.6	3.8	2.1	1.9						
	17.6	fracture at 30° to core.		17 50	32.4	4.3	2.7	2.0						
		epidote veining at 80° to core.		17 75	28.5	4.0	23	1.8						
				1800	30.4	36	1.8	1.4					W. 3	
				18 25	<i>3</i> 9.5	4,6	3,1	2.0						
			1	18 50	38.2	4.2	26	1.7						
			1	18 75	32.6	3.1	22	1.5						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE	SIZE වූ	DA 4/7/		PAGE 5	HOLE 78-B-	
FROM	то	REMARKS	106	METER	RADION TOTAL	ETRICS	S SF	-44		AMPLE			ASSAYS	
FROM	10	REMARKS	100	VICTOR	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				19.00	30.2	3,1	2.3	1.8						
				19 25	32.6	3.9	2.4	1.7						
				19 50	27.7	3.5	2.2	2.0						
				19 75	34.1	3.8	2.6	2.6						
			mm	20 00	27.2	3.6	2.0	1.6						
				20 25	26,1	3.7	2.1	1.8		20.0	25.0	.011		
				20 50	32.8	4.0	2.6	1.6						
				20 75	49,5	4.7	3.2	2.2						
				21 00	52.9	4.9	3.3	1.7						
				21 25	55.7	5.4	3.6	1.8						
				21 50	27.6	4.0	1.8	1.6						
	21.6	at 35° to core over .5m.		21 75	28.5	3.8	25	2,0						
				22 00	3O;>	3,6	2.2	1:7						
				22 25	27.7	3.4	2.2	1.7						
				22 50	27,4	3.6	2.3	1.7						
				22 75	41.9	4.3	2.6	1.7						
23.3	28~8	Medium to Coarse White Granite.		23 ∞	\$8.6	4.0	2.5	1.8						
[2).)	20.0	Refer to 15.88-19.3.		23 25	-0.1	3.7	24	1,8						
			4	2350	37.2	4.2	2.8	2.0						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-32	05			CORE BQ		DA 4/7/		PAGE 6	78-B-1	•
					RADION	ETRICS	SF	-44		AMPLE		-	ASSAYS	
FROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
				23.75	33.7	4.0	2.4	1.5						
				24 00	28,4	35	2.4	1.8						
				24 25	44.2	4.2	3.3	2.						
				24 50	53.1	4.9	3,1	1.7						
				24 75	80.1	6.5	4.3	1.6						
			77777	25 00	37.8	3.8	2.7	1.6		25.0	30.5	.016		
				25 25	26.1	3.3				23.0	30.5	.010		
25.6	26.1	very coarse section. Refer to .575.		2550	30.6	3.2								
				25 75	40.7	4.2	3.0	1.9					1	
				2600	40.0	4.2	2.8	1.8						
			+	26 25			2.5	1-8						
	26.5			2650	26.5			1.9						
					21.8		2.2	1,9						
			mm	27 00	27.8	3.8	2.4	2.0						
27.4	28.8	Coarse pink section:	וָרָ	27 25	27.4	4,0	2.2	1.6						
		Pink to red, coarse-grained. Felsic portion: pink, subhedral 3cm, K-spar 60%		27 50	41.5	4.6	2.8	1.9						
		clear to smoky gray, nhedral 1.5cm quartz 30. Mafic portion: black, subhedral 41cm biotite 10.		2775			2.7							
	20.5	Much of the red coloration is due to hematite staining.	ור	28 00	43.6	4.6	3,1	1.9						
	23.0	fracture at 15 to core with chloritic alteration. From here to end of hole, green quartz is	;	28 2	5									

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE B	SIZE Q	DA 4/7		PAGE 7	78-B	
					RADION	IETRICS	SF	-44	S	AMPLE			ASSAYS	
FROM	то	REMARKS	LOG	MEIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				2850	41.7	4.4	28	1.9						
				28 75	29.9	3.4	2.1	1.5						
	29.0	••••fracture at 80° to core.		29 00	1025	7.2	6.6	2.1						
			1	1	38.1		2.7	1.7		-				
				29 50	39.8	4.7	3.0	2.6						
			Mille	29 75	36.6	4.1	2.8	2.0						
				30 00	79.0	6.5	4.9	2.1						
				30 25	58.3	5.0	3.8	1.7						
	30.5	End of hole. Returnan		30 50	73.9	6,4	5, 1	2.0		fines		-04		
										TINES		-084		
								-						

IVIINERALD CUMPAINT こうりにく 78 - B - 2 LAC COSTEBELLE B-3205 RADIOMETRIC LOG BY_____ DATE _ CLAIM # LAT. 8 + 50N LONG. 3 + OOE COLLAR ELEV. DEPTH 30.3m, 99.40IP 90 CORE SIZE _ CORE RECOVERY 364057-2 LOG METER TOTAL RADIOMETRICS SP.-44 SAMPLE **ASSAYS** FROM TO REMARKS # FROM Th TO U308 5.0 .011 0.25 28.7 1.9 2.3 5.4 3.7 COARSE GRAINED WHITE GRANITE Thite to grey, medium to coarse-grained (.2-2cm). Felsics: white to pink, striated, subhedral, .2-2cm 0.50 45.1 1.6 4.5 2.9 hematite-stained K-spars; white to smoky-grey, anhedral .2-1 cm quartz. 349 3,5 2.6 1.6 Mafics: black, subto euhedral, .2-1.5cm biotite. 0.75 This section is more equigranular than the granite 3.7 23.8 2.1 1.7 viewed in B-1, with the average grain size being 1 1.00 cm. Smoky quartz and hematite staining occur randomly throughout. Biotite has been altered to chlorite 1.25 25.6 3.5 2.5 2.1 and vermiculite. Natural fractures are oriented subnerpendicular to core. 1.9 3.1 1.50 42.9 4.6 Mineral Percentages: Felsics- quartz 40, K-spar 50-55. 4.1 60.1 5.4 Mafics- biotite 5-10 1.75 370 1.9 3.0 4.4 2.00 2.25 28.4 3.6 2.2 1.5 2.50 42.4 5.0 3.1 1.8 4.1 2.7 2.75 38 2.5 28.9 16 3.00 THITT 53.5 4.9 3.6 1.8 3.25 3.50 265 1.9 8.2 7.0 2.4 3.7 30.1 3.75 4.3 26 34.7 2.0 4.00 7.9 3.5 2.5 33.2 4.25 3.9 38.6 2.6 4.50

LOSE.	A IVIIIVE	ERALS COMPANY LAC COSTEBEL							ତ୍	6/7/7	8	2	78-B-2
FROM	то	REMARKS	106	METED	RADIO TOTAL		S SP		S	AMPLE		1	SSAYS
		NE PIANO	1.00	VIC IEX	TOTAL	K	U	Th		FROM	ТО	U ₃ O ₈	
	5.4	contact gradual over 5cm.	1111111		58.2	5.2	3.9	1.8					
5.4	9.1	AUGENGNEIS		4.75									
		Grey to pink, fine to medium grained.		5.00	42.3	4.3	2.9	1.7					
		Felsics: white to pink, subhedral .13cm K-spar; white to clear, anhedral .13cm quartz.					n 0	4.0		5.0	10.0	.016	
		Mafics: black, subhedral .12cm biotite.		5,25	39.4	4.7	2.9	1.8				.010	
		The augens consist of K-spar and quartz and are well	-		91,1	6.6	5.7	1.7					
		developed. They occur up to 2cm wide and extend through the quartz. The bi tite layers have a max-		5.50	1121	0.0	0.1	1,					
		imum thickness of .2cm. There is minor hematite			41.0	4.7	3, 1	2.0					
		staining and biotite is altered to chlorite and ver-	-	5.75									
		miculite. Banding is generally of 45° to core. Throughout this section, there are zones of white		6.00	22.7	3.1	1.8	1.5					
		granite. Some have distinct contacts with the gnei	ss				0.7	. 0					
		but most have gradual contacts, indicating the gra-		6.25	34.0	4.1	2.7	1.9					
		nite has been sweated out of the gneiss. Mineral percentages:			54.2	5.6	3.8	1.9					
		K-spar 50, quartz 30	 	6.50	02	3,0	5.0						
(=	(0	Biotite 20.		6.75	84.2	7.0	5.6	2.0					
6.5	0.0	Coarse white granite. Refer to 0-5.4; with gradual contacts over 5cm.	 	0.75									
7.0	7.2			7.00	27.0	3.9	2.2	1.9					
7.0	1 • 4					20	0.2	11					
	5.6			7.25	28.7	3-8	2.2	1.6					
7.5	7.6	Biotite Schist. Black, fine-grained. Felsic portion consists of			31.0	4.4	2.5	2.1					
		white, subhedral .lcm K-spar 10%; white, onhedral	4	7.50	01.0	1.1	- 1						
		.lcm quartz 10%. Mafic portion consists of black			49.3	5.2	3.4	1.9					
		euhedral .1 cm biotite 80%. Banding is at 40° to core and red K-spar grains		7.75	1								
		are concentrated along the contacts with the gnei	88.	8.00	25.2	4.1	2.5	2.0					
8.1	8.2	Coarse white granite. Refer to 0-5.4 Contacts				. 0	- ^	4 4					
		at 45° to core over 1cm.		8.25	28.8	3.3	20	1.4					
		fracture at 85° to core over lcm.				0.5	7.2	2.1					
8.9	9.0	Coarse white granite. Refer to 6.5-6.8.		8.50	116.2	0. /	1.2	21					
					64.1	5.8	4.3	1.7					
			mm	8.75									
	0.4			9.00	GA.1	5.8	4.9	1.7					
	1.1	cont of gradual over 5cm.		3.00		0.5	7 .						
				9.25	32.2	3.8	Z.A	1.6					

ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE		6/7/		PAGE 3	78-B-	
FROM	то	REMARKS	1.00		RADION	METRICS	SF	2-44		AMPLE			ASSAYS	
TROM		REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
9.1	13.6	COARSE WHITE GRANITE Refer to 0-5.4 This section has much gray quartz;		9.50	44.4	4.6	3.2	1.5						
		as a result it is dark in color.		9.75	48.9	5.1	3.5	1.9						
				10.00	23.8	3.6	2.4	1.9						
10 12				10.25	54.7	4.7	3.8			10.0	15.0	.020		
	10.6	calcite fracture at 85° to core.		10.50	56.4	5.0	3.9	1.9						
			<u></u>	10.75	25.8	3.4	23	1.6						
	11.1	fracture at 45° to core.		11.00	22.6	3.2	2.2	1.9						
				11.25	29.7	3.6	2.4	1.6						
				11.50		3.9								
				11.75			36	, 0						
				12.00	54.1	5.2	3.8	2.0						
				12.25			2-8							
				12.50	90,5	6.8								
	12.7	fracture at 20° to core.		12.75		3.0								
	13.00	calcite fracture at 50° o core.		13.00		4.1	2.8	1.9						
				13.25			2.0	1.7						
	13.6	contact over 5cm gradual.			24.9	3.4	1,9	1.5						
13.6	16.4	AUGENGNEISS Refer to 5.4 to 9.1 This section of	mm	13.75	34.2	3.6								
				14.00	564	5,4	3,8	1.9						

				3-32	PARIO	ACT DICC		BG	1	6/7/		4	78-B-	-
ROM	ТО	REMARKS	LOG	METER	TOTAL	K	U	2-44 Th	# #	FROM	то	U ₃ O ₈	ASSAYS	T
		augengneiss is continuous. Banding at 45 to core	•	14.2.5	22.2	3.1	1-9	1.7	11	FROM	10	0308		
	14.2	calcite fracture at 50° to core, but perpendi- cular.		14.50	212	3.2	1,8	1.7						
				14.75	21.4	3.3	2.0	1.8			t			
15.0	16 li	Biotite Schist.		15 00	20.8	3.2	19	7.6						
17.0	10.1	Refer to 7.5-7.6. Banding varies from 45-60 to core. Fractures are parallel to banding.		15.25	21.1	3.2	19	1.7		15.0	20.0	.013		
				15.50	22.1	3.1	1.9	1.8						
				15.75	41.9	4.8	3.2	1.7						
	16.0	fracture at 50° to core with chloritic alteration. On some fracture chips, there is a bright		18,00	\$8.1	4.5	2.9	1.8	400					
	a ()	yellow minerallimonitecontact at 50° to core.		16.25	25.5	3.6	2.0	1.7						
5.4	30.3	COARSE WHITE GRANITE		16.50	25.0	3.6	2.0	1.7						
		Refer to 0-5.4. This section is generally lighter in color, due to more abundant white quartz. Garnet is also present, as is muscovite; however,	m	16.75			3.4	2.0						
		these appear to be restricted to a section of graphic granite.		17.00	50.0	5.2	3.8	2.3					F	
17.0	17.2	very coarse section. White to pink, grains 3cm. Mineralogically significant to the white coarse granite.					2.9	1.8	N A					
		milar to the white coarse granite.		17.50	53,1	5.3	37	1.8						
				17.75	44,3	4.9	8.2	1.9						
				18.00	56,0	5.2	3.5	1.5						
				18.25	63.7	5.9	4.1	2.0						
				1850		3.3	2.5	2.0						
				1 <i>8.7</i> 5	29.1	4.0	22	1.8						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	-320	05			Bo		6/7/	/78	5	78-B-	2
ROM	то	REMARKS	LOG	METER	RADIOM TOTAL			-44		AMPLE			ASSAYS	
					TOTAL	К	U	Th	#	FROM	TO	U ₃ O ₈		
				1900	24.0	3.2	24	2.0						
			<i></i>	19 25	27.2	3/5	22	1,7						
				19 50	21,7	2.9	1.7	1.4						
				19 75	22.4	3.6	19	1.8						
				20 00	23,5	3.1	2.2	1.7						
				20 25	24.6	3.8	1.9	1.6		20.0	25.0	.002		
				20 50	21.8	3.1	1.6	1.6						
20.5	27.0	Graphic Granite Section White, medium to coarse-grained. Felsics: white, subhedral .1 to lcm striated K-		20 <i>7</i> 5	24.4	3.3	1.7	1.4						
		spar; clear to white .l to lcm quartz. Mafics: black .l3cm biotite. The section is		21 00	225	3.6	1.7	1.5						
		not entirely graphic granite; there are zones of the white granite; however, compositionally,	f	21 25	22.9	3.2	1.8	1.7						
		the section is relatively homogeneous. There is alteration of biotite to chlorite and in some areas, there are flakes of light freen mus-		21 50	293	3.6	2.1	1.8						
		covite (primary?) and grainslcm of red sub- hedral garnet. There are orimary fractures sub-		21 75	24.2	4.0	2.1	1.9						
		parallel to core, and the core splits easily sub-			010	29	2.1	1.6						
		p rpendicular to the core axis. In the graphic granite ensolution, lathes of quartz are generally oriented at 70° to core though this varies. Mineral percentages:		22 25	22.9	36	1.6	1.4						
		Quartz 40, K-spar 55-60 Biotite 1-3, others 1.		22 50	224	3.5	1.8	1.5						
all departments	22 22 . 5	fracture at 25° to corefracture at 10° to core with calcite on frac-		22 75	21,9	3.1	2.3	1.9		-				
		ture surfaces.		2300	23 6	4.0	2.2	2.0						
	23.5	fracture at 80 to core.		23 25	23,5	3.7	1.6	1.5	į					
	<i>CJ</i> • <i>J</i>	••••IIACUIE AU OO LO COIE.		23 50	22.5	32	1.8	1.5						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	Е	3-32	05			BQ	SILE	6/7/	/78	PAGE V	78-B-2	# 2
FROM	то	REMARKS	LOG	METER	RADIOM TOTAL			-44		SAMPLE			ASSAYS	
, KOM	10	TENANO .		LICK	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
				23 75	23.5	3.5	2.6	1.7						
				24 00	23.9	3.3	1.7	1.6						
				24 25	25.7	3.2	2.0	1.5						
				24 50	26.1	3.5	2.3	1.8						
				24 75	283	3.6	2.3	1.8						
				2500	27.4	3.	1.8.	1.4						
				25 25	23. 2	3.2	2.0	1.9		25.0	30.3	.019		
				25 50	27.2	3.2	2.4	2.6						
				25 75	25.3	4.1	2.6	2.1						
				2600	26.2	3,7	2.6	2.2						
				2625	26.7	3.7	2.3	2.0						
		0		2650	02.4	3.6	2.1	1.8						
	26.5	fracture at 10° to core with calcite and minor kaolinization of feldspars.		26 75	77 9	5.7	4.1	2.2						
				2700	115	4.3	3.2	2.1						-
				2725	52.9	4.3	3.2	2.0						
				27 50	40 9	4.6	3.1	1.9						-
				27 75	77.6	5,9	4.4	1,1						
				28 00	75.9	2.9	1.9	1.5						
	28	fracture at 10° to core.	<i>1111111</i>		25 Q	2.9	1.9	1.5						
		*	1	20 25	ll		ļ		l	1			L	I

			T		RADION	METRICS	SE	Bର୍ 2-44	1	6/7/			ASSAYS
MOM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈	A33A13
	28.5	calcite vein at 80° to core over .1 cm.		28 50	11 2	3.7	2.7	1.9					
	20.7	dicte vein at vo acte over 11 cm.		28 75	-277	3.5	2.4	1.7					
	29.0	fracture at 10° to core.		29 00	37.7	3.9	2.5	1.7					
				29 25	377	3.9	2.5	1.7					
				29 50	40.0	4.1	2.8	1.8					
				29 75	42.9	4.1	3.1	1,9					
			211111	30 00	65.5		4.4	2.1					
	30.3	End of hole. Patteratumper		30 25	57.0	5. 1	4.1	2.1				-	
				30 50						fines		.123	

ESSEX MINERALS COMPANY GEOLOGICAL LOG BY R Quartermain DATE _ 6/7/78 HULL # LAC COSTEBELLE B-3205 78 - B - 3RADIOMETRIC LOG BY____ DATE_ CLAIM # LAT. 7.00 N LONG. 3.25 E COLLAR ELEV. DEPTH 30.8m, 1030IP CORE SIZE BQ CORE RECOVERY_ 364057-2 RADIOMETRICS SP.-44 SAMPLE ASSAYS FROM TO REMARKS LOG METER TOTAL Th # FROM TO U308 5.0 .007 4.3 36.7 2.7 2.0 5.25 WHITE COARSE GRAINED GRANITE 0.25 White to gray to light pink, medium to coarse-1.7 3.9 28.0 2.1 grained. 0.50 Felsic portion: white to pink, striated, subhedral .2-2cm K-spars; white to smoky-grey to green an-2.5 3.9 2.2 31.6 0.75 hedral 1-1.5cm quartz. Mafic portion: black, sub to euhedral, .1 to 2cm 2.3 4.2 3.1 37.0 biotite. The biotite is altered to chlorite in 1.00 some areas and to vermiculite along fractures. 1.9 43.2 3.0 7.4 Green quartz occurs throughout and is more abundant 1.25 than the smoky grev variety. In the medium-grained sections the granite is equigranular; however, in 1.9 32.9 7.1 2.6 1.50 the coarser sections, grain size is variable. The MILLER core splits perpendicular to its vertical axis and 34.5 7.4 29 2.2 there are few primary fractures. There is minor 1.75 red hematite staining and red subhedral garnets 4.2 29.7 19 cm are weakly developed. Biotite is more abundant 6.3 25 2.00 in the medium-grained portions. Mineral Percentages: 33.4 7.0 2.7 2.0 Welsics- quartz 30-35, K-spar 55-65 2.25 Mafics- biotite 2-6, others 41. 29.5 1.6 5.9 2.2 2.50 2.3 1.8 30.4 6.1 2.75 5.8 1.6 2.1 27.7 3.00 5.9 25 28.8 2.0 3.25 5.8 2.3 27.4 2.0 3.50 2.1 59 2.4 26.5 3.75 mm 1.9 5.7 2.2 25.8 4.00 23 60 1.8 28.1 4.25 26.4 5.0 1.4

					RADIO	VETOK	c cp	BQ		6/7/7		2	78-B-3
FROM	то	REMARKS	LOG	METER	TOTAL	K	S SP:-	Th	SA	FROM	то	U ₃ Q ₈	SSAYS
				4.75	n.	6.6	2-9	2.2				3.0	
				5.00	211	6.0	2-2	1.6					-
	5.25	contact gradual over 5cm.		5.25	27.9	6.1	2.4	2.1		5.0	10.0	.013	
5.25	5•75	AUGENGNEISS	<i></i>	5.50	28.8	5,7	2.2	1.7					
		Dark grey, fine-grained, equigranular. Felsic portion: subhedral white, .lcm stricted feld spars; white to clear, anhedral.1cm quartz.	-	5.75	31.0	6.6	2.2	2.0			-		
		Mafic portion: block, subhedral .1cm biotite. The section is almost a schist and the augens are sub	-	6.00	29.5	5.9	2.0	1.7			-		
		rounded quarter grains .5cm which are scattered randomly through the section. Foliation is at 45° to core. Bottom contact is gradual over 1cm		6.25			2.7	2.2					
		with biotite concentrated and particles of gran- ite 1.5 intruding the gneiss.		6.50		5,8	2.2	1.7					
5.75	5.75	contact over lcmrelatively distinct. WHITE COARSE GRAINED GRANITE		6.75			1.8	1.7					
		Refer to 0-5.25. There is abundant lime green quartz throughout the coarser-grained sections, while the medium-grained sections have more pink		7.00			2.1	1.8					
		with the medium-flathed beetlong have more pink		7.25		6.2	2.5 2.5	1.7					
				7.50		7.0 6.2	2.4	2.0					
				7.75	28.6 38.3		2.5						
				8.00	302	6.4	2.6	2.1					
				8.25	30.3	6.3	2.4	1.8					
				8.50	29.7	6.2	2.8	2.2					
				8.75		8.8	3.0	1.8					
			<i></i>	9.00	380	7.6	2.3	1.8					

ESSE	MINE P	RALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE		6/7/		PAGE 3	HOLE 78-B-3	
FROM	то	REMARKS	106	METER	RADION	ETRICS	SF	2-44		SAMPLE			ASSAYS	
		The Figure 1	LOG	FIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				9.50	34.6	6.6	2.5	1.9						
				9.75	43.7	8.5	3.2	2.1						
				10.00	31.5	6.4	2.5	1.9						
				10.25	41.8	7.3	2.6	1.7		10.0	15.0	.027		
				10.50	137.6	22.4	7.3	2.0						
				10.75	32.2	6.8	2.5	1.7						
		hematite staining. The core is split at 90° to		11.00	35.8	68	2.4	1.6						
		core, but there are few primary fractures.		11.25	56	9.0	3.3	2.2						
				11.50	36.4	6.7	2.8	1.8						
				11.75	96.8	165	56	2.4						
				12.00	42.1	7.8	2.9	1.78						
				12.25	30.1	60	1.6	1.9						*
				12.50	25.0	6.6	2.5	1.8						
				12.75	31.5	6.6	2.8	2.3						
				13.00	41.1	8.5	3.0	2.2						
				13.25	\$9.0	7.1	2.8	2.2						
				13.50	30.1	6.4	2.2	1.7						
				13.75	41.6	7.8	3,0	1.9						
				14.00	33.9	6.4	2.3	1.8						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE BQ	SIZE	DA' 6/7/		PAGE 4	HOLE 78-B-3	
FROM	то	DEMARKS	1.00		RADION	METRICS	SP	-44	S	AMPLE			ASSAYS	
FROM	10	REMARKS	LOG	MEIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
				14 25	48.1	9.1	3.3	2.1						
14.3	14.5	Biotite-rich section. Biotite up to 15% with K-spar 50%; quartz 30-35. There are a few red subhedral .3cm garnets.		14 50	30,4	6.0	8,1	1.4						
		Some grow within the feldspars while others grow over biotite.		14 75	29.5	5.8	2.3	1.7						
				15 00	34.4	6.7	2.3	1.6						
				15 25	72.2	12.1	4.4	2.6		15.0	20.0	.020		
			minn	15 50	29.2	5.9	2.2	1.7						
				15 75	34.3	6.6	2.2	1.6						
				1600	31.8	5.8	2.1	1.7						
				16 25	50.2	9.0	3.5	2.0						
				16 50	45.8	4.9	3.1	1.8						
16.5	21.2	Medium-grained section. Refer to 0-5.25. Compositionally similar; how-		1675	42.8	4.5	2.7	1,8						
		ever, this section is equigranular with the average grain size .3cm. It has more abundant hema-		17 00	34.4	4.3	2.5	1,8						
		tite staining than the coarse-grained section.		17 25	28.5	3.7	2.1	1.8						
				17 50	33.1	3.7	2.3	2.1						
				17 75	38.5	4.0	2.5	1.9						
				1800	33,0	4.0	26	2.3						
				18 25	31.0	3.9	2.3	1.6						
				18 50	31.2	4.2	2.5	1.00						
				1875	426	4.5	3.0	2.0						

ESSE	X MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE BQ	SIZE	7/6/7		PAGE 5	HOLE 78-B-3	#
FROM	то	REMARKS	106	METER	RADION	METRICS	SF	?-44	-	AMPLE			ASSAYS	
1 1000		nerano -	LUG	VEIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
		*		1900	48.5	4.5	3.1	1.8						
		There are a few garnets and the quartz is dom- inantly lime green in color. There are as well a few grains of a brown to black subhedral .5cm	mm	19 25	46.7	4.8	3.2	1.9						
		slightly altered, hardness 5 mineralstaurolite?		19 50	53.4	4.2	3.0	2.3						
				19 75	74.2	5.6	4./	2.1						
				20 00	44.6	4.7	3.0	2.0						
				20 25	36.4	4.0	28	2.0		20.0	25.0	.004		
				2050	41.2	5.0	3.2	2.						
				20 75	42.0	3.7	29	1.9						
				21 00	27.9	3.6	2.1	1.5						
21.2	22.4	Coarse pink section.		21 25	33.9	· 4.2	2.5	1.8						
		The felspars are salmon pink in color throughout the entire section. Compositionally it is similar to the granite 0-5.25.		21 50	25.6	3.6	2.0	1.7						
				2175	33.8	4.2	3.6	1.8						
			<i></i>	22 00	29.1	3.9	2.5	2.0						
				22 25	23.3	2.9	1.8	1.8						
	22.4	contact at 45° to core.		22 50	22	3.3	2.0	1.6						
				22 75	/									
				23 00	210	2.5	1.8	1.5			-			
				23 25								*		
				23 50	/									

ESSEX	MINE	RALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE BQ	1	6/7	/78	PAGE 6	78-B-3
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44		AMPLE			ASSAYS
2.4:	30.8	AMPHIBOLITE Black, fine-grained .2cm. Felsic portion: white to pink, subhedral 2cm K-spar and clear to grey anhedral .2cm quartz. Mafic portion: black to green, striated .2cm horn-blende. There is minor pyrite mineralization. Fractures occur at random, both parallel and cross-cutting the foliation of the hornblende. Foliation varies from 52 to 42 to core. There is minor quartz veining. Mineral Percentages: Felsics- quartz 70, K-spar 10-15 Mafics- hornblende 70-75, pyritetrace	, annua	23 75 2400 24 25 24 50 2475	21.9	3.3		7h , 2.1	#	FROM 25.0	30.8	U ₃ O ₈	
25.5	23 24 25 26.0	fracture at 45° to corefracture at 85° to corequartz-rich veins cut the core subparallel to it, and the veins are comprised of fine-grained quartz 60%, K-spar 20, hornblende 20. This vein is up to 3cm wide and from 25.5 to end of core, similar veins cut the core randomly, most of them being .3cm in width.		25 25 25 50 25 75 26 00 26 25 26 50	22.8	3.5	2.0	1.9		20.0	20.0	.001	
				26 75 27 00 27 25	22.1	2.9	2.0	1.6					
			3113113	27 50 27 75 28 00	22.6	3.6	1.9	1.7					
				28 25		,-							

									1	6/7/		/	78-B-
КОМ	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		-44		SAMPLE			ASSAYS
					IOIAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	
28.5	29.3	biotite schist.		28 50									
		Black, very fine-grained .05cm.		00 -									
		Felsic portion: white to clear, subhedral .05 cm K-spars; clear to white anhedral .05cm quartz.	minim	28 /5									
		Mafic portion: black, euhedral .05cm biotite with trace amounts of hornblende. Banding in		2900	225	2.9	2.1	1.7					
		the schist is very weak and appears to be at 70 to core, cross-cutting the foliation of the		29 25								-	
		amphibolite. Contacts with the amphibolite											
		are distinct at 45° to core and quartz is concentrated along the contacts to 50%.		29 50									
		Mineral Percentages: K-spar 25-30, quartz 20		29 75									
		Biotite 50, others 1		30 00	22.6	3.1	2.0	1.7					
	29.5	fracture at 20° to corefracture at 30° to core.											
	29.8	fracture at 30 to core:		<i>3</i> 0 2.5									
			minn	30.50				7					
		00		30 75				-					
	30.8	End of core.								fines		.070	
				31 00								.070	
			1										
							1						

		RALS COMPANY C COSTEBELLE B-3205 RADIOME	TRIC LO							ATE			78-B-4	
LAT. 7+	DON LONG.	4.50 E COLLAR ELEV. DEPTH 30.5m DIP			E SIZE			ORE R		RY				57-2
FROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	ASSAYS	T
					34.4		2.5	1.7		0	5.0	.006	>	
0	26	WHITE COARSE GRAINED GRANITE White to gray, medium to coarse grained.			29.4		2.0	1.7						
		Felsics: white, subhedral .3-2cm striated K-spars and clear to smoky, .2-2cm quartz.		0.75	27.0	5.7	2.2	1.6						
-		Mafics: black, subhedral .1-1cm biotite. The bio tite is altered in places to chlorite. There i minor red hematite stain between grains in the		1.00	345	6.8	2.6	1.7						
		more medium grained sections. The dominant grain size of this unit is .57cm.		1.25	35,5	6.8	25	1.8						
		There are no very coarse-grained sections as seen previous holes. There are few primary fractures;	in			7.9	2.8	1.8						
		most are the result of drilling.		1.75	33.0	6.2	2.0	1.8						
				2.00	29.4	6.3	2.6	1.9						
				2.25	35.1	6.6	2.6	1.7						
					34.5		2,9	1.8						
				2.75	69.6	11.8	4.0	1.9						
				3.00	47.9	7.9	3,0	. 0						
				3.25	26.9	5.8	2.4	1.9						
				3.50	23.3	5.3	2.0	1.7						
				3.75	25.0	5.8	2.0	1.6						
				4.00	21.0	4.3	1.6	1.5						
	4.5	fracture at 10 to core.		4.25	26.7	6.1	2.3	1.7						
			min	4.50	21.9	5.3	1.7	15						

ESSE:	X MINE	ERALS COMPANY LAC COSTEBEL	LE					CORE BQ		6/7/		PAGE 2	78-B-L	
FROM	то	REMARKS	LOG	METER	RADIO!	METRIC K	S SP	-44 Th	S	FROM	ТО	U3 Q8	SSAYS	
4.6	5.0	Felsic-rich section. White, grains 2cm. Quartz 40%, K-spar 55-60,			24.0	5.0	1.8	1.6						
		others 3%.		5.00	22.7	5.1	2.1	1.7						
				5,25	25.9	5.5	2.4	2.0		5.0	10.0	.011		
	5.5	fracture at 10° to core.		5.50	28.0	5.6	2.3	1.6						
				5.75	30.3	6.6	2.5	2.0						
				6.00				1.6						
				6.25	44.0		2.6	1.6						
				6.50										
					580		3.6	۱، کې						
					56.9			-						
				7.25	32.8		2.4							
			nain.	7.50			2.8							
7.6	8.0	Felsic-rich section. Similar to 4.6-5.0.	TITIAL S	7.75	35.6 40.8	6.9 7.6	2.5							
				8.00	42.7	7.9	3.1	2.0						
				8.25	30 1	65	2.6	1.8						
				8.50	25.4	5.0	2.4	1.9						
				8.75	242		2.2	2.1						
				9.00	24.5	5.5	2.2	1.5						

		ALS COMPANY LAC COSTEBELLE	1	3-32	1			BQ		6/7/	78	3	78-B-4	+
ОМ	то	REMARKS	LOG	METER	RADIOM TOTAL	ETRICS K	U	-44 Th	#	AMPLE	70		ASSAYS	Т
							-		TT	FROM	TO	U ₃ O ₈		ŧ
9.0	9.4	Similar to 4.6-5.0.	1	9.50	36.1			2.0						
				9.75	49.4	8.8	3.2	1.7						
				10.00	28.7	5.9	2.5	2.1						
				10.25	26.8	5.6	1.9	1.7		10.0	15.0	.015		
10 E	40.7	fracture parallel to core.		10.50	26.4	5.3	20	1.7						
10.5	10.7		4 – ·				2.2	1.%						
				10.75	00.5	5.6								
				11.00										
				11.25	25.8		2.6	13						
				11.50	27.0	5.4	2.0	1.6			+			
			11111	11.75	38.8	7.3	2.8	1.8						
				12.00	64.7	10.9	3.9	1.9						
				12.25	32.6	6.6	2.3	1.9						
				12.50	201	7.8	3.0	2.0						
					20.2		20	2.0						
				12,75			2.8							
	13.0	a 2cm quartz vein cuts the core at 45°.		13.00	64.3		3.8	2.0						
				13.25	55.6	10.6	3.7	2.1						
				13.50	36.4		2,6							
				13.75	40.5	7,5	2.8	1.9						
	14.0	banding of biotite in granite at 40° to core.		14.00	28.4	6,3	2.4	2.0						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE BQ	SIZE	6/7/		PAGE 4	78-B-	
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44		SAMPLE			ASSAYS	
					TOTAL	K	U	Th	#	FROM	TO	U ₃ O ₈		
			<i></i>		38.4	8.1	3.1	2.2						
14.5	14.8	Felsic-rich section.		14 50	41.9	7.9	2.8	2.0						
		Similar to 4.6-5.0.		14 75	46.2	8.4	3.2	1.9						
				1500	34.2	6.4	2.5	1.6						
45.4	A.F. (15 25	27.2	5.4	1.8	1.5		15.0	20.0	.011		
15.1	75.6	over this section of core there is abundant green quartz not seen elsewhere.		15 50	28.7	6.2	2.5	1.9						
				15 75	31.2	6.4	2.2	1.6						
				1600	30.8	6.2	2.3	1.8						
				16 25	36.1	7.5	2.8	2.0		•				
				16 50	36.2	7.0	2.7	1.9	(*)					
				1675	26.0	5.0	1.9	1.6						
				1700	29.0	6.4	2.5	1.7						
			mm	17 25	27.9	6.2	2.7	1.9						
				1750	36.0	7.1	2.5	1.7						
				17 75	32.4	7,0	2.5	2.0						
				18 00	41.9	8.0	3.1	2.0						
				18 25	42.8	7.8	3.0	1.9						
				18 50	29,9	6.2	2.3	1.7						
				18 75	28.6	6.0	2.3	1.7						

-	ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	Е	3-32	05			CORE Bର୍		6/7/		PAGE 5	HOLE # 78-B-4
	FROM	то	REMARKS	1.00	ATTER	RADION	METRICS	SF	-44	5	SAMPLE			ASSAYS
	- ROM	10	REMARKS	LUG	MEIER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈	
					19 00	27.0	5.8	2.2	1.7					
Sand Several Printers and Column					19 25	29.5	6.5	2.0	1.7					
					19 30	33.6	7.3	2.7	1.8					
					19 75	27,5	62	2.8	2.2					
				TILLIA .	2000	26.6	5.6	2,4	1,97					
					20 25	33./	6.4	2.4	1. 8		20.0	25.0	.015	
					2050	32.3	6.2	2.4	1.7					
					20 75	50.1	8.3	3.2	1.8					
					21 00	46.6	8.5	3.1	2.1					
					21 25	36.3	6.6	2.5	1.7					
					21 50	32.3	6.5	2.5	2.0					
					21 75	58.4	11.0	21.1	2.1					
	22.0	22.5	over this section the granite is fine-grained		22 CC	82.1	13.8	4.8	2.8					
			(.3cm) and in areas there appears to be a very weak foliation at 45 to core, possibly a rem-		22 25	29.1	5 1	2.5	2.0					
			nant foliation.		22 50	35.6	7.3	2.6	1.8					
					22 75	36.4	7.5	2.6	1.7					
		23.0	fracture at 15° to core.	mm	23 00	34.7	7.1	2.9	2.0					
					2325	51.2	9.1	3.2	1.5					
					2350	50,8	9.6	3,5	2.2					

ESSE	MINER	RALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE BQ		7/6/	78	PAGE 6	HOLE ₩	
ROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44		SAMPLE	7		ASSAYS	
					TOTAL	K	U	Th	#	FROM	ТО	U308		
				23 75			3.2	2.1						
				24 00	36.6	6.8	2.9	1.6						
				24 25	41.6	7.1	2.4	1.2						
				24 50	74.8	12.	4.9	2.1						
				24 75	31.1	6.6	2.6	2.0						
25	25.2	Biotite-rich zone		25 00	38.0	7.4	3.0	2.1						
-2		Biotite 30%, quartz 30, K-spar 40. Coarse-grained (1cm).		- 25 25	29.1	6.2	2.6	1.9		25.0	30.5	.012		
	26. 9	BIOTITE SCHIST(AUGENGNEISS)		25 50	32.0	7.1	2.7	2.0						
5.5	26.8	Black, fine-grained. Felsics: white, subhedral striated 1cm K-spars		25 75	28.2	5.8	2.1	1.9						
		and white to clear anhedral .lcm quartz. Mafics: black, subhedral .lcm biotite. Biotite		2600	24.9	5.4	2.3	1.7						
		is altered to hlorite and vermiculite. The schistosity is well developed and the rock		2625	805	6.6	2.5	1.6						
		fractures very easily along the plane of the foli- ation at 45 to core. Mineral Percentages:		2650	26.0	5.7	2.1	1.8	1					
		Felsics- K-spars 30, quartz 20. Mafics- biotite 50, others 2%.		26 75	34.7	6.5	25	1.7						
	26.0	Ther is a minor augening of the feldspars and quartz.	mma	27 00	33,5	6.8	2.6	1.7						
6.8	26.8	WHITE COARSE GRAINED GRANITE		27 25	43.3	7.8	2.8	1.7						
	27.0	Refer to 0-26fracture at 15° to core.			52.8	9.3	3.2	1.8						
				27 75	17 6	1	2.9	1.8						
				2800	39.8	7.0	2.4	1.8						
				28 25	35,4	6.9	2.6	1-8					-	

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE		1	1			BQ)	7/6/	78	7	78-B-
ROM	то	REMARKS	1.06	METER	RADION TOTAL	METRICS		2-44		SAMPLE			ASSAYS
NOIMI	10	REMARKS		LILIN	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	
				28 50	22.2	5:2	2.1	1.8					
A	20.0	contact over 5cm at 45° to core.		28 75									
9.0	30.5	BIOTITE SCHIST		29 00	21.2	4.9	1.9	1.5					
		Refer to 26.5-26.8. This section of schist is finer grained than the above .05cm and there is more abundant biotite. It is not as altered and	mm	29 25									
		is not as schistose. It has a foliation developed along 40° to core. There is minor pyrite mineral-		29 50									
		ization. K-spar 20%, quartz 15, biotite 65.		29 75									
				30 00	36.6	6.8	2A	1.5					
30.3	30.5	the schist is intruded by quartz with a random		30 25									
		orientation. May be the contact with the white granite.		30 50						fines		.060	
	30.5	End of hole. Maltination		3C 75						Inco		.000	
				31 00									
				31 25									
				31 50									
				31 75									
				32 00									
				32									

LOSEA MINERALS COMPAINT IV. Yuur Cermain LAC COSTEBELLE 78-A-1 B-3205 RADIOMETRIC LOG BY DATE CLAIM # LAT. 8+00 N LONG. 14.75 W COLLAR ELEV. DEPTH 61.3 m DIP 600 E CORE SIZE _____BO CORE RECOVERY_ 364066-1 RADIOMETRICS SP.-44 SAMPLE ASSAYS FROM TO REMARKS LOG METER TOTAL Th FROM TO U308 0 5.0 .004 1.93 AUGEN GNEISS 0.25 24.2 3.4 2.0 Black to red, fine to medium grained, dominantly equigranular. Felsic portion - consists of white to red, striated, 0.50 subhedral, <.2 cm, hematite-stained K feldspars and clear to smokey grey, <.2 cm, angular to subrounded 0.75 243 3.2 quartz. Mafic portion - consists of black, subhedral, <.1 cm 1.00 biotite and black to grey, anhedral, <.2 cm magnetite. 1.25 23.9 3.1 Hematite staining is associated with the K feldspars 2.1 along grain contacts with minor amounts occuring along twin planes. Some of the biotite is altered 1.50 to chlorite and the magnetite frequently displays peacock colours when fractured on a fresh surface. 1.75 23.1 3.4 2.0 Augens of pink K feldspars are usually well developed with a length of 2-3 cm and a width of .5 cm. 111111 Biotite occurs between augens. However, magnetite 2.00 occurs at random. Banding is visible with depth. Primary fractures occur 2.25 24.6 3.4 2.1 1.7 sub-parallel to core axis, while the core splits sub-perpendicular to core axis. 777777 2.50 Minor pyrite mineralization. K feldspar Felsics: 50 - 60% 30 - 35% Quartz 2.75 22.8 3.2 2.0 1.9 10 - 15% Mafics: Biotite Magnetite < 2% 3.00 **Others** < 1% In this first section, augens are not as well devel-3.25 23.7 3.6 2.3 2.0 oped and there are zones of medium grained size which may be zones approaching recrystallization. These areas are less than 10 cm across. 3.50 .40Fracture at 150 to core.Fracture at 200 to core. 3.75 23.7 3.0 1.6 1.93 Contact gradual over 5 cm. 1.93 COARSE RED GRANITE 2.25 Red, grains <2 cm. 4.00 Felsic portion - consists of white to red, subhedral 4.25 22.2 3.0 1.7 4.50

ESSE	X MINE	ERALS COMPANY LAC COSTEBEL	LE	,				BO		JULY	8,1978	2	78-A-1	
FROM	то	REMARKS	LOG	METER	RADIO TOTAL	METRIC K	S SP	1	S	AMPLE TEROM	ТО	1	ASSAYS	
2.25	2.25 8.5 3.0 5.0	<pre> <2 cm, striated, hematite-stained K feldspars and clear to smokey, anhedral <1 cm quartz. Mafic portion - consists of black, subhedral, <.5 cm, biotite and black, anhedral <1 cm magnetite. Minor alteration of biotite to chlorite. Hematite staining occurs between grains. A fracture cuts the entire section at about 10° to core axis. There is much limonite staining on the fracture. Felsics: K Feldspars 50 - 60% Quartz 30% Mafics: Biotite 5% Magnetite 5% Magnetite 5 - 10% Others <1%Contact over 5 cm, partially distinct at 80° to core axis. AUGEN GNEISS Refer - Ø - 1.93Banding at 80° to core axisBanding at 80° to core axis A core axis. A core axis</pre>		4.75 5.00 5.25 5.50 6.00 6.25	23.8 24.2 22.4 23.0	3.0 3.5	2.0	1.9 1.7 1.8	S	FROM 5.0	70.0	.005	ASSAYS	
8.5	7.0 7.5 8.0 8.5	Fracture at 10 ⁰ to core axisCoarse red granite vein at 70 ⁰ to core axis over 8 cmBanding at 70 ⁰ Contact gradual over 5 cm. PARAGNEISS Purple to black, fine to medium grained, dominantly		7.00	25.2		1.8							
		fine grained and equigranular. Felsic portion - consists of white to pink, subhedral, striated, <.2 cm, K feldspars and clear to white, anhedral, ≤.1 cm, quartz. Mafic portion - consists of black, subhedral, ≤.1 cm biotite and black, anhedral, <.2 cm, magnetite.	2000	7.50 7.75 8.00	22.6	3.1	1.9	1.6						
		Minor alteration of biotite to chlorite. Banding is variable with depth. Gneiss is much darker colour than that in area C. Few fractures.		8.25	22.5	2.9	/.8	1.7						
		Felsics: K feldspars 45 - 50% Quartz 25 - 30% Mafics: Biotite 20 - 25% Magnetite <2% Others <1%		8.50 8.75 9.00	23.9	3.4	1.9	1.6						
	9.0	Contact over 3 cm.			24.0	3.2	2.1	1.8						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE				CORE		1	TE 8,1978	PAGE 3	HOLE 78-A-			
ROM	то	REMARKS	106	METER	RADION	ETRICS	S SF	2-44		SAMPLE			ASSAYS	
NOM .	10	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		\downarrow
00	10.00	AUGEN GNEISS Refer 0 - 1.93.		9.50										
				9.75	22.5	3.2	2.1	1.9						
		Contact over 3 cm.		10.00										
.00	17.50	Refer 8.5 - 9.0.		10.25	21.6	2.8	1.3	1.2		10.0	15.0	.005		
			77777	10.50										
				10.75	22.5	3.1	1.9	1.8						
11.20	11 25	Coarse white granite vein at 50° to core axis.		11.00				,						
11.20	11.25	Contact distinct. White to pink, subhedral, ≤ 1 cm, K feldspars 60%;			22.1	3.1	1.8	1.7						
		white to smokey, anhedral, ≤1 cm, quartz 30%. Black, subhedral, ≤ 5 cm, biotite 5-10%; black,		11.50			•							
11.30		anhedral, <u>< .2 cm, magnetite < 2%.</u> Coarse, white granite veins at 48° to core. Refer to 11.2.	_	11.75	23.4	3.3	1.7	1.6						
11.90	12.05	Coarse white granite vein at 85° to core axis. Refer to 11.2. This section has less biotite < 5%]	12.00										
		and more magnetite 5-7%.		12.25	23.9	3.0	2.0	1.7						
				12.50										
				12.75	25.0	3.4	1.9	1.8						
	13.00	Banding at 50 ⁰ to core axis.		13.00										
			zimz	13.25	23.3	2.8	1.9	1.6						
				13.50										
				13.75	22.7	3.3	1.9	1.3						
	14 00	Fracture at 100 to core axis.		14.00										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	В	3-32	05			BO			8,1978	A 4	78-A-1	
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44		AMPLE			ASSAYS	
					TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		
				14.25	23.0	3.5	2.3	2.0						
				14.50										
					23.4	3.8	2.3	1.8						
				15.00						15.0	20.0	.008		
					22.7	3.6	2.2	2.0						
15.50	15.90	Coarse red granite. Refer to 16.2 - 16.3. 3 veins 5-10 cm in width and 4 cm apart cut the core at 20°, 45° and 75° res-		15.50		- 4								
		pectively. They do not contain as much magnetite as the previous section, only < 1%.			26.9	3.5	2.2	2.0						
15.90 16.20	16.00 16.30	Core is fracturedRed course grained granite.		16.00		4. 0	3.0	1.6						
		Salmon red, course grained. Consists of pink, subhedral, < 2 cm, striated K feldspars 60%; white to smokey, < 1 cm, anhedral quartz 30-40%.		16.50	36.4	4.2	2.8	1.8						
		black, subhedral < l cm, biotite, < 2%. Minor hematite staining.			22.5	3.9	2.4	1.8						
16.60		Contacts with gneiss are gradual over 5 cm or soRed coarse grained granite. Refer to 16.2 - 16.3.	minn											
16.90	17.50	Banding of gneiss reflects a gentle 'S' shaped fold which grades into augen gneiss.			23.8	3.0	1.9	1.8						
		Contact over 5 cm.		17.50										
17.50	17.90	AUGEN GNEISS Refer to 0 - 1.93.		17.75	28.5	3.1	2.2	1.5						
17.90	18.60	RED COARSE GRAINED GRANITE Refer to 16.2 - 16.3.		18.00										
					30.6	4.2	2.7	2.3						
18.60	18.80	BIOTITE SCHIST (Augen Gneiss) o	utitu	18.50										
, 5.00		Black, fine grained. Banding at 70 to core axis.		18.75	39.0	4.5	3.1	2.1						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			ВС)	JULY	8,1978	PAGE 5	HOLE 78-A-1
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS	S SF	?-44 Th	#	AMPLE			ASSAYS
		White, subhedral, < .1 cm, K feldspars 30%; clear,			IOTAL			111	T	FROM	TO	U ₃ O ₈	
	10.70	anhedral, < .1 cm, quartz 20%; black, anhedral, < .1 c biotite 50%. Fracture at 10° to core.	m		31.8								
	18.80			19.25	34.5	3.6	2.2	1.4					
18.80	28.50	WHITE COARSE GRAINED GRANITE White to grey, medium to coarse grained.		19.50	113.9	7.6	6.2	2.3					
		Felsic portion - consists of pink to white to green, striated, subhedral, < 3 cm, K feldspars and clear to smokey, anhedral, < 2 cm, quartz.		19.75	26.8	3.1	2.2	1.7					
		Mafic portion - consists of black, subhedral, < 1 cm, biotite and grey, anhedral, < .5 cm magnetite.		20.00	32.4	3.6	2.4	1.8					
		Minor alteration of biotite to chlorite and hematite. Staining of K feldspars occurs at random.		20.25	34.9	3.9	2.3	1.7		20.0	25.0	.047	
		Rock is more fractured than seen elsewhere, with cal- cite coating on many fractures. Minor disseminated pyrite and chalcopyrite.		20.50	98.7	6.4	5.5	2.6					
		Grain size varies randomly throughout the section. Felsics: K Feldspar 55 - 60%		20.75	52.0	5.7	3.2	2.1					
		Quartz 30 - 35% Mafics: Biotite 10%		21.00	74.7	6.0	4.6	2.2					
	10.00	Magnetite 1-2% Others traceBiotite schist.		21.25	43.3	4.8	2.8	2.0					
		Refer to 18.6 - 18.8. An 8 cm inclusion in the granit	e.	21.50	69.6	5.7	4.8	2.3					
		Calcite fracture at 75° to core axis with chalcopyrite mineralization < 1%.	777777	21.75	11.9	8.0	6.1	3.4					
	21.50	Fractures at 20 ⁰ to core axis.		22.00	33.2	3.5	2.6	1.9					
				22.25	124.6	7.9	6.6	2.6					
22.50	23.00	Fracture runs parallel to the core and core is	1	22.50	45.7	4.6	2.3	2.1					
		chipped over this interval.		22.75	30.9	3.8	1.2	1.7					
23.00	25.00	oral or granted occorrent when the graces	1	23.00	34.4	4.1	2.7	1.7	b l				
		staining.		23.25	38.9	4.3	2.3	1.5					
					30.2		2.0	1.6					

ESSE	K MINE	ERALS COMPANY LAC COSTEBELL	E E	3-32	05			CORE B(JULY 8	TE 3,1978	PAGE 6	78-A-1	+
FROM	то	REMARKS	106	METER	RADION TOTAL	METRICS		2-44		SAMPLE			ASSAYS	
NOI4	1	NECONO .			TOTAL	K	U	Th	#	FROM	то	U ₃ O ₈		
				23.75	32.9	3.4	2.1	1.7						
				24.00	32.0	4.0	2.1	1.8						
				24.25	37.3	4.2	2.3	1.9						
			711177	24.50	32.5	3.8	2.4	1.9						
				24.75	44.1	4.4	3.0	2.3						
					30.5		2.7	2.1		25.0	30.0	.019		_
				25.25	41.0	4.4	2.7	2.0						
				25.50	33.8									
					33.1		2.6							
					30.5		1							
					34.6									
					36.4									
					45.0									
					53.1									
					33.7									
			1		31.6				=					
					31.6									
				28.00	36.8	3.9	2.9	2.0						
				28.25										

					RADION	METRICS	S SF	2-44	9	SAMPLE			ASSAYS		
ROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		I	
	28.50	Contact over 5 cm.		28.50	25.2	3.4	2.2	2.1							
3.50	54.60	AMPHIBOLITE (Biotite Schist) Black, fine grained.		28.75									AND AND AND AND AND AND AND AND AND AND		
		Felsic portion - consists of white to pink, subhedral, < .2 cm, striated K feldspars and white to smokey grey, anhedral, ≤ .1 cm, quartz.		29.00	24.1	3.5	2.1	1.8							
		Mafic portion - consists of black, subhedral, ≤ 1 cm, biotite and dark green, subhedral, <.3 cm, horn-		29.25											
		blende. The amphibolite has a weak foliation from 75° to 85° to core axis. Where the amphibolite contacts the		29.50	25.1	3.3	2.3	1.8							
		granite, there is a zone ≤ .5 meters of biotite schist. There is minor alteration of biotite to		29.75											
		chlorite and vermiculite and some kaolinization of K feldspars at fractures.		30.00						30.0	a ~	222		_	
		Fractures occur at random and most have minor calcite coating. Felsics: K Feldspar 15 - 20%		30.25						30.0	35. 6	.002			
		Quartz 15 - 20% Mafics: Biotite 20 - 40%	11111	30.50	23.2	2.9	1.9	1.5							
		Hornblende 30 - 40% Others <2% There is pyrite and chalcopyrite mineralization. The		30.75											
	29.60	amphibolite is cut in places by white granite veinsWhite granite vein, width 5 cm at 30° to core axis;		31.00											
	30.10 30.10	White granite vein, width 4 cm at 10 ⁰ to core axis. Fracture at 30 ⁰ to core.	1		31.25										
31.00	31.50	Quartz rich section. Very fine grained <.05 cm with quartz 40%, K feldspar 20%, hornblende 10%	ļ	31.50	24.5	3.1	2.1	1.8							
				31.75											
	32.00	Fractures at 60° to core axis.		32.00							Control of the Contro				
				32.25											
				32.50	22.7	3.1	2.0	1.8							
				32.75											
				33.00											

					RADION	METRICS	5 55	-44		SAMPLE			ASSAYS	
ЮМ	то	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	ASSAIS	T
				33.25										
					23.1	3.5	2.2	1.9						
			711111											
	34.00	Fractures at 60° to core axis.		34.00										
	34.00	ractures at our to core axis.												
				34.25		2								
					23.0	3.0	1.8	1.5						
34.80	35.40	Coarse White granite. Refer to 18.8-28.5. Contacts distinct at 80° to core		34.75										
	35.20	axis over 1 cm		35.00						35.0	40.0	.007		+
	35.20	racture at 20° to core axis.		35.25							, 0.0	.007		
				35.50	25.4	3.5	1.7	1.6						
				35.75										
				36.00										
36.20	36.60	Coarse white granite. Refer to 34.8-35.4.		36.25										
				36.50	23.6	2.9	1.7	1.5						
				36.75										
				37.00										
				37.25										
					24.6	3.3	2.4	2.0						
				37.75		2.5	-							

					RADION	METRICS	SF	2-44	9	AMPLE			ASSAYS	
ROM	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		I
			111111											T
				38.25										
				38.50	23.7	3.1	1.9	1.6						
				38.75										
				39.00										
				39.25									A .	
						20	10	, ,						
				39.50	22.9	2.8	1.8	1.6						
				39.75										
	40.00	Quartz vein at 45° to core axis and 3 cm wide.		40.00										
				40.25						40.0	45.0	.005		
				40.50	23.6	3.1	1.9	1.8						
				40.75										
				41.00										
				41.25										
				41.50	23.6	3.3	2.0	1.9	-					
				41.75										
	42 00	Quartz vein at 85° to core axis and 4 cm wide.		42.00										
	72.00	Transcation at the first and t												
				42.25										
				42.50	23.1	3.1	1.9	1.7						

		RALS COMPANY LAC COSTEBELLE	1		RADION	AET DICS		-44		SAMPLE			ACCAVC	_
ROM	то	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	ASSAYS	Γ
				42.75										Ī
				43.00										
				43.25										
							0.2	2.1						
					23.5	3.5	2.3	2.1						
				43.75										
				44.00		ļ								
				44.25										
				44.50	24.2	3.1	2.2	1.7						
				44.75										
				45.00										
				45.25						45.0	50.0	.004		
				45.50	22.8	3.3	1.9	1.8						
				45.75										
	46.00	Calcite fracture at 20° to core.		46.00										
				46.25										
					23.0	3.6	2.0	1.9						
				46.75										
46.70		Quartz rich section. White, fine grained. Quartz 60%, K feldspar 20%,	1	47.00										
	47.00	biotite_20%. at 150 to core.	-1											
				47.25										

ESSE:	X MINER	RALS COMPANY LAC COSTEBELLE	E	3-32	05		ř	CORE B(JULY	8,1978	PAGE 11	HOLE \$	
					RADION	/ETRICS	S SF	2-44		SAMPLE			ASSAYS	
ROM	ТО	REMARKS	1		TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		I
	47.50	Quartz vein at 80° to core axis and 5 cm wide.	777777	47.50	23.4	3.3	2.2	1.8						
				47.75										
			,	48.00										
			777777	48.25										
				48.50	22.2	3.1	1.8	1.7						
				48.75								-		
	49.00	Fracture at 20 ⁰ to core axis.		49.00										
				49.25										
				49.50	22.8	3.0	2.2	2.0						
				49.75										
				50.00						50.0	55.0	.004		
				50.25							:			
				50.75	23.6	3.1	2.0	1.7						
				50.75										
				51.00										
				51.25		2.5	2.5							
				51.75	23.6	3.2	7.0	1.7						
				52.00	-		-							

ESSE	X MINER	RALS COMPANY LAC COSTEBELLE	Е	3-320	05			CORE		JULY	TE 8,1978	PAGE 12	78-A-	
ROM	то	REMARKS	106	METER	RADION	ETRICS	S SF	2-44		SAMPLE			ASSAYS	
ROM	10	REMARKS	200	VETER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈		
				52.25	24.4	3.5	2.4	2.0						
				52.50										
				52.75										
				53.00										
				53.25										
				53.50	24.1	3.1	2.2	1.9						
				53.75										
				54.00	22.8	3.2	1.9	1.6						
				54.25										
	54.60	Contact at 60° to core axis distinct.		54.50	30.3	3.6	2.2	1.6						
.60	55.80	COARSE WHITE GRANITE Refer to 18.8-28.5	1	54.75										
			201711	55.00										
				55.25						55.0	61.3	-009		
				55.50	22.9	3.4	2.2	1.8						
	55.80	Contact at 10 ⁰ to core axis (partially gradual).		55.75										
.80	58.70	AMPHIBOLITE Refer to 28.50-54.60.		56.00										
	56.20			56.25										
				56.50	22.7	3.0	1.9	1.6						
				56.75										

ESSE	X MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE		JULY 8		PAGE 13	HOLE # 78-A-1
FROM	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44	#	AMPLE			ASSAYS
							U	Th	11	FROM	то	U ₃ O ₈	
	57.00	Fracture at 10 ⁰ to core axis.		57.00									
				57.25									
				57.50	26.0	3.4	2.1	1.8					
				57.75									
			ji.	58.00									
		7	777777										
				58.25	245	3.6	2.1	2.0					
	58.70	Contact at 50° to core axis.		58.50									
58.70	61.25	COARSE WHITE GRANITE Refer to 18.8-28.5.	ZZZZZ	58.75									
	59.00	Fracture at 10 ⁰ to core axis.		59.00	27.9	3.7	2.1	1.7					
				59.25	35.9	4.0	2.7	1.9					
	59.50	Fractures at 15° to core axis.			27.0								
					37.8								
	60.00	Fractures at 10° to core axis.		60.00	27.8	3.5	1.9	1.9			,		
				60.25	24.6	4.0	2.0	1.7					
	60.50	Fractures at 10° to core axis, with calcite on fracture surfaces.		60.50	25.9	3.2	2.4	1.7					
		Tracourt Surraces.		60.75	28.0	3.3	2.2	1.8					
					28.7								
	61.25	Contact at 70° to core axis.			25.8			Í					
61.25	61.30	BIOTITE SCHIST (Amphibolite?) Refer to 28.5-54.6. Refer to 28.5-54.6.	}=			3.4	۵.0	1.7		C			
	61 20	Refer to 28.5-54.6.		61.50	U					fines		.027	

ESSE		IERALS COMPANY C COSTEBELLE B-3205	GEOLOGICAL RADIOMETRIC								ATE <u>Jul</u> ATE			HOLE 78 - A -	
LAT. 7+0		15+25 N COLLAR ELEV. DEPTH 61.5	m DIP 60	^о Е	COR	E SIZE	BQ	c	ORE RI					CLAIM # 36407.	
FROM	то	REMARKS		LOG	METER	RADIO	METRIC K	S SP.	-44 Th		AMPLE			ASSAYS	
0	55.8	PARAGNEISS				IOIAL		U	Th	#	FROM	TO	U ₃ O ₈		
O	55.6	Purplish grey to grey to brown. Fine to me Dominantly fine and equigranular. Felsic portion - consists of pink to white striated <.3 cm, K feldspars and clear	, subhedral,		0.25		3.0	1.9	1.6		0	5.0	.012		
		grey, anhedral, <.2 cm quartz. Mafic portion - consists of black, subhedr			0.75										
		biotite and black, anhedral, <.2 cm mag Banding is variable with depth from 40-85 ^o axis.			1.00	21.2	3.0	2.0	1.8						
		There is minor alteration of biotite to ch vermiculite and along some fracture surf	aces there		1.25										
		is abundant white calcite and lime green Some of the epidote has been subsequentl	y altered		1.50	22.5	2.9	2.1	1.7						
		to clay minerals. In some areas there is hematite staining of the K feldspars. Over the first interval of core, there is			1.75										
		turing and chipping of core and througho section there are abundant fractures, so	ut the me parallel		2.00	22.6	3.0	2.1	1.8						
		to banding; others not. There are numero granite veins and sections cutting the c with pyrite mineralization.			2.25										
		There is no folding in the paragneiss. How folds occur in the granitic sections. T	he gneiss		2.50	21.7	2.7	1.7	1.6						
		varies in colour after displaying a dist contact between a purple section and a g There are as well, variations in grain s	rey section.		2.75										
		some sections ≤.05 cm. Felsics: K Feldspar 50 - 60%			3.00	22.7	3.3	21	1.9						
		Quartz 30 - 40% Mafics: Biotite 10 - 20% Magnetite 2%			3.25										
. 50		Others < 2%Core is ground and chipped.			3.50	24.5	3.3	2.0	1.7						
2.50	2.00	Fracture at 100 to core axis.			3.75				_						
2.50	2.65	Coarse red granite section. Red, grains < 1.5 cm. Pink to white, K fe 50-60%; white to clear quartz 30-40%; bl			4.00	22.7	30	1.9	1.7		: 0				
		10-15%, Others < 2%. Minor hematite stai alteration of biotite to chlorite. Conta	ning and		4.25								The second secon		
		gneiss are semi-distinct over 1 cm at 75			4.50	225	3.1	1.9	1.6						

SSEX	MINE	TRALS COMPANY LAC COSTEBEL	LE.	B-	3205)		BQ		JULY 9	,1978	2	78-A-2
ом	ТО	REMARKS	LOG	METER	RADIO TOTAL	METRIC	S SP	44 Th	SA	FROM	то		SSAYS
3.20	3.30	Coarse red granite section.	1		IOIAL	N.	0	111		FROM	10	U ₃ Q ₈	
3.20	5.50	Refer to 2.5-2.65. Contacts at 70° to core axis		4.75									
	3.50	over 1 cm. Calcite fracture at 50° to core.	4		254	2 ^	1.5	1.4					
	5.20			5.00	25.0	5.0	7.5	7. 7		5.0	10.0	.015	
	5.20	K feldspar? quartz) 2 cm wide. Folded in a tight		5,25								0,0	
		'S' fold over 5 cm.		5.50	21.9	3.2	1.7	1.6					
				5.75									
	6.00	Calcite fracture at 30° to core axis.		6.00	21.0	2.8	1.9	1.7					
6.20	6.30	Coarse white granite. Refer to log 78-A-1. Has distinctive lime green]	6.25									
	7	guartz. Contacts at 70° to core axis.	J										
	6.50 6.60			6.50	20.8	2.7	1.6	1.6					
				6.75									
					22 //	2.9	1.6	1.5					
7.10	7.20		1	7.00	23.4	2.7	7.0	7.5					
		Refer to log 78-A-1. Contacts gradual over 1 cm.	+	7.25									
	7.30	Fracture at 30 ⁰ to core axis.		7.50	21.8	2.5	1.5	1.4					
7.80	7.85	Coarse red granite. Refer to 2.5-2.65. Contacts at 80 ⁰ to core axis	1	7.75									
		distinct]	8.00	21.1	2.7	1.9	1.6					
7.90	10.20 8.00			8.25									
				8.50	21.5	2.7	1.7	1.6					
				8.75									
9.00	9.30	Red coarse grained granite.	1	0.00	20.9	26	20	1.8					
2.00	5.50	Refer to 2.5-2.65. Contacts over 2 cm, variable.	+	9.00	20.7	2.0	2.0	7.0					
				9.25									

					RADION	/ETDICS		BQ			9,1978	3	78-A-2
М	то	REMARKS	LOG	METER	TOTAL	K	U	-44 Th	#	FROM	ТО	U ₃ O ₈	ASSAYS
	9,60	Fracture at 45 ⁰ to core axis.			24.1		1.6					3.6	
				9.75									
	10.00	Epidote fracture at 15 ⁰ to core. Epidote extends into core for .5 cm.		10.00	22.0	2.4	1.9	1.5		10.0	15.0	.008	
10.40	10.45	Coarse red granite vein at 80° to core axis.		10.25	1-	26	10	10					
10.60	10.67	Coarse red granite v n at 75° to core axis.	<u> </u>		21.6	2.5	7.8	1.7					
				11.00	22.9	2.5	1.9	1.6					
				11.25			•						
				11.50	20.5	2.1	1.7	1.5					
				11.75									
				12.00	21.8	2.5	1.7	1.5					
	12.30			12.25									
12.70	12.50				27.0	3.5	2.0	1.7					
12.70	12.75	Refer to 2.5-2.65. Contact gradual over 2 cm.	#==	12.75		20	10	10					
	13.20	Fracture at 40° to core axis.			22.6	7.7	1.8	1.7					
				13.25	21.6	3.2	2.2	1.8					
				13.75									
14.00	14 10	Biotite schist.	1		25.7	20	10	1.8					

		RALS COMPANY LAC COSTEBELLE	1	3-32	1			BQ		JULY 9	,13/0	4	78-A-2
ОМ	то	REMARKS	LOG	METER	RADION TOTAL	METRICS		2-44		SAMPLE			ASSAYS
		White, fine grained. White K feldspar 20%, clear			IOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈	
		quartz 10-15%, black biotite 70%.		14.25									
14.50	14.6	Banded at 750 to core axis. Hornblende rich section.		14.50	20.8	2.9	2.1	1.7					
		Paragneiss with green hornblende grains ≤ .3 cm. K feldspar 35%, quartz 25%, hornblende 40%.	,,										
				14.75									
				15.00	20.9	2.5	1.8	1.6		15.0	20.0		
				15.25						15.0	20.0	.006	
				15 50	225	2.5	1.8	1.5					
15.80	15.9	OCoarse red granite section. Refer to 2.5-2.65. Contact gradual over 2 cm.] 	15.75			-						
		Refer to 2.5-2.05. Contact gradual over 2 cm.		16.00	22.1	2.9	2.1	1.8					
				16.25									
				16.50	21.1	27	1.8	1.4					
				16.50	0.1.1	-	7.0	1.7					
				16.75									
				17.00	23.1	3.0	2.3	1.9					
				17.25									
	17.5	0Epidote fractures at 20° to core axis.		17.50	22.8	24	10	1.6					
17.60		OCoarse red granite section. Refer to 2.5-2.65. Contacts distinct at 75° to	1			2.6	1.7	1.4					
	17.0	core axis.		17.75									
	17.9	Fracture at 10 to core axis.		18.00	22.6	2.5	1.9	1.6					
				18.25									
	18.4	0Epidote fracture at 15 ⁰ to core axis.				20	10	10	-				
				18.50	21.0	7.8	1.9	1.8					
				18.75									

					RADION	AETRICS	SF	2-44		SAMPLE			ASSAYS
МС	то	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	то	U ₃ O ₈	A J J A I J
	18.80	Epidote fracture at 45° to core axis.		19.00	22.1	2.2	1.5	1.4					
	19.30	Fracture at 50° to core axis.		19.25									
				19.50	21.5	2.3	1.8	1.5					
19.90	20.00	Coarse red granite.		19.75									
	20.20	Refer to 2.5-2.65. Contacts at 80° to core axis.		20.00	26.1	2.3	1.8	1.5		20.0	25.0	.006	
	20.20			20.25								.000	
				20.50	20.9	2.5	1.8	1.7					
20.80	20.80	Fracture at 10 ⁰ to core		20.75									
	20.00	Paragneiss with 30-35% epidote alteration.		21.00	19.9	2.3	1.9	1.5					
	21.30	Fracture at 45° to core axis.		21.25									
				21.50	26.9	2.4	1.5	1.4					
				21.75									
					21.5	2.5	1.9	1.6					
	22.40	Fracture at 25° to core axis.		22.25									
				22.50	21.0	2.5	1.9	1.8					
				22.75									
23.10	23.00 23.40	Coarse red granite.			22.8	2.6	2.2	21					
		Refer to 2.5-2.65. Contacts distinct at 95 ⁰ to core axis. Much hematite staining.		23.25				1.9					

					RADION	METRICS	S SF	-44		SAMPLE			ASSAYS
ОМ	то	REMARKS	LOG	METER	TOTAL	К	U	Th	#	FROM	TO	U ₃ O ₈	
	23.80	Fracture at 45° to core axis.		23.75		-		-					
	24.00 24.10			24.00	21.4	1.8	1.8	1.8					
	24.30	Fractures at 100 to core axis.		24.25				. ,					
	24.50	Red granite veining at random over 10 cm.		24.50	229	35	2.3	1.7					
				24.75									
				25.00	24.4	3.3	2.3	1.9					
	25.20	Epidote fractures at 20° to core axis.		25.25						25.0	30.0	.008	
	25.40	Red granite vein - width 1.5 cm at 10 ⁰ to core axis.				21	1.9	1.6					
	25.50	Fracture at 20° to core.		25.50	23.1	2.6	1.7	1.0					
				25.75									
	26.00	Fracture at 60° to core axis.		26.00	20.0	2.4	1.8	1.6					
				26.25									
	26.50	Fracture at 10° to core axis, cut at 26.55 by		26.50	20.7	2.4	1.9	1.7					
	26.50	fracture at 45° to core axisBanding at 50° to core axis.		26.75									
				27.00	19.8	23	1.7	1.5					
	27.30	Fractures at 45° to core axis.		27.25									
	27.50	Red granite section.		27.50	22.0	2.4	2.0	1.7					
		Refer to 2.5-2.65. Contacts distinct at 85° to core axis.		27.75				,					
	27.80	Fracture at 30° to core axis.			21.5	22	17	1.5					
				20.00	21.5	7.4	1. /	7.5					

ESSEX	MINER	RALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE B(JULY 9	TE 9,1978	PAGE 7	78-A-2	
ЮМ	то	REMARKS	106	METER	RADION	METRICS	S SF	-44	-	SAMPLE			ASSAYS	
		REMARKS	100	VILIER	TOTAL	К	U	Th	#	FROM	ТО	U ₃ O ₈		
28.60	28.65	Coarse red granite veins at 70° to core.		28.50	22.1	2.1	1.5	1.3						-
				28.75										
	29.00	Banding at 50° to core axis.		29.00	21.9	2.2	1.6	1.5						
29.20	29.35	Coarse red granite section. Refer to 2.5-2.65. Contacts distinct at 70° to core axis.		29.25							*			
00.70	00.75			29.50	21.1	2.1	1.7	1.5						
29.70	29.75	Epidote altered section. Lime green, perpedcicular to banding. Cut by fractures at 150 to core axis.	==	29.75										
	30.00	Fractures at 35° to core axis.		30.00	20.8	2.4	1.8	1.6						_
				30.25						30.0	35.0	.009		
	30.40	Epidote fracture at 15 ⁰ to core axis.		30.50	21.5	3.0	21	1.9						
				30.75										
	31.00	Coarse red granite vein 1-2 cm wide, folded in a tight 'S' fild over 5 cm.		31.00	21.7	2.1	1.8	1.6						
		The tight 3 The over 5 cm.		31.25										
	31.50	Banding at 75 ⁰ to core axis.		31.50	20.8	1.9	1.6	1.4						
	31.80	Chlorite fracture at 15 ⁰ to core axis.		31.75										
	32.00	Coarse red granite vein at 75° to core axis over 4 cm.		32.00	20.9	2.3	2.0	1.5						
				32.25										
32.50	32.70	Few 1 cm wide red granite veins separated by 4 cm are tightly folded. They have 'S', 'W' and 'V'	4		20.8	1.9	1.5	1.2						
32.80	32.90	shapes. Gneissosity is similarly foldedCoarse red granite section.	 	32.75										
	32.90	Refer to 2.5-2.65. Contacts distinct over 70°. Fracture at 15° to core axis.		33.00	20.1	21.5	1.8	1.6						

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	11			CORE		JULY 9	TE 0,1978	PAGE 8	78-A	
ом	то	REMARKS	LOG	METER	RADION TOTAL	METRICS	S SF	?-44		SAMPLE	1		ASSAYS	_
			-		TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		+
				33.25										
				33.50	20.4	1.9	1.6	1.4						
33.80	34.00	Coarse red granite.	7	33.75										
		Refer to 2.5-2.65. Contacts at 80 ⁰ to core axis.		34.00	22.7	2.3	20	1.6						
				34.25										
	34.50	Fracture at 10° to core axis.		34.50	21.1	2.0	1.6	/.3						
34.80	35.00	Coarse red granite. Refer to 2.5-2.65. Contacts at 70° to core axis.	7 1	34.75										
	34.90	Refer to 2.5-2.65. Contacts at 70° to core axisFracture at 15° to core axis.	L	35.00	20.7	2.2	1.7	1.5						
	35.20	Epidote and chlorite fracture at 15° to core axis.		35.25						36.0	40.0	.001		
	35.50	Fracture at 40° to core axis.		35.50	21.4	2.2	1.7	1.6						
				35.75										,
36.00	36.05	Red granite vein at 70° to core axis.		36.00	20.4	2.0	1.6	1.4						
			† - -	36.25										
	36.50	Banding at 75 ⁰ to core axis. Fracture at 30 ⁰ to core axis.		36.50	22.8	3.1	1.8	1.5						
		oo oo oo oo oo oo oo oo oo oo oo oo oo		36.75										
	37.00	Fracture at 20° to core axis.		37.00	23.4	3.4	1.9	1.8						
				37.25										
				37.50	23.6	4.6	2.0	1.6						
				37.75										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE		JULY	9,1978	PAGE 9	HOLE 78-A-	
ом	то	REMARKS	1.06	METER	RADION	METRICS	S SF	-44		SAMPLE			ASSAYS	
OIVI			LOG	VIETER	TOTAL	K	U	Th	#	FROM	то	U ₃ O ₈		\downarrow
	37.80	Fracture at 20 ⁰ to core axis.		38.00	23.5	4.6	1.8	1.6						
				38.25										
			-	38.50	21.4	3.4	2.0	1.8						
38.90	39.00	Biotite schist section.		38.75										
39.00		Refer to 14-14.1.		39.00	223	4.1	1.9	1.7						
		Refer to log 78-A-l. Contacts destinct at 80° to core axis.		39.25										
39.40	39.55	Refer to 14-14.1.	<u> </u>	39.50	23.3	4.4	2.0	1.8						
				39.75										
				40.00	22.3	4.1	2.0	1.7		40.0	45.0	000		1
				40.25						40.0	45.0	.004		
	40.70	Epidote fracture at 20 ⁰ to core axis.		40.50	20.4	3.7	1.9	1.7						
	40.80	Fracture at 15° to core axis.		40.75										
41.05	41.00 41.20	Coarse red granite section cuts core at 850.		41.00	229	4.2	1.8	1.5						
41.20	42.00	Numerous small 'S' shaped folds occur in the paragneiss.		41.25										
				41.50	19.9	3.5	1.7	1.6						
				41.75										
	42.20	Banding at 75° to core axis.		42.00	19.5	3.5	1.9	1.5						
42.20				42.25										
			 	1/2 50	22.6	43	2.0	1.7						

					RADION	AETRICS		2-44		SAMPLE			ACCAYC	
РОМ	то	REMARKS	LOG	METER	TOTAL	K	U	Th	#	FROM	то	U ₃ O ₈	ASSAYS	T
				42.75										1
								1-						
43.30	43.50	Coarse red granite section cuts the core at 75°.		43.00	20.3	3.4	1.6	1.3						
				43.25										
				43.50	21.3	3.8	2.1	1.8			-			
				43.75										
						21	1.7	1.4						
44.20	44.40	Coarse red granite section cuts the core at 75°.	11	44.00	21.9	3.6	1.1	7.4						
				44.25										
44.50	44.60			44.50	18.6	3.2	1.7	1.4						
	44.70	Fracture at 40° to core axis.	 	44.75										
					18.3	43	19	1.8						
						7.7	/ /	7.0		45.0	50.0	001		1
				45.25										
	45.50	Banding at 50° to core axis.		45.50	19.9	3.3	1.9	1.7						
				45.75										
46.10	46.40	Coarse red granite section.		46.00	204	3.4	1.5	1.4						
40.10	40.40	Refer to 2.5-2.65. Contacts distinct at 60° to core axis. Bands of gneiss run through section.		46.25										
		core axis. Bands or gherss run through section.						-						
				46.50	18.6	3.9	2.3	1.9						
				46.75										
	47.00	Fracture at 60° to core.		47.00	16.6	2.6	1.4	1.3						
	47.20	Fracture at 20° to core.		47.25										

ESSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE B(JULY 9		PAGE 11	78-A-2
ROM	то	REMARKS	100	ACTER	RADION	/ETRICS	SF	-44		AMPLE			ASSAYS
TOM			LUG	VEIER	TOTAL	К	U	Th	#	FROM	то	U ₃ O ₈	
	47.40	Fracture at 20 ⁰ to core axis.		47.50	16.8	2.7	1.4	1.2					
				47.75									
				48,00	15.8	3.3	1.8	1.6					
				48.25									
	48.50	Banding at 80° to core.		48.50	23.6	4.4	2.0	1.6					
				48.75									
				49.00	20.1	3.7	1.8	1.5					
				49.25									
				49.50	17.4	3.1	1.6	1.5					
				49.75									
50.00	52.40	Coarse white granite. Refer to log 78-1-A. This granite varies in grain size ≤ 4 cm and it is a dark colour due in part to			29.4	1.8	1.8	1.5		50.0	55.0	.002	-
		light pink K feldspars and dark smokey grey quartz. There are some areas of light green quartz.		50.25		, -							÷
					65.1	65	2.3	1.4					
				50.75		22	1,	111					
					21.0	5.5	1.6	1.4					
				51.25	26.6	211	10	1.4					
						3.4	1.9	1.7					
				51.75	18.0	0-	1-1	1 11					

SSEX	MINER	ALS COMPANY LAC COSTEBELLE	E	3-32	05			CORE		JULY	9,1978	PAGE 12	78-A-2	-
ом	то	REMARKS	LOG	METER	RADION TOTAL	METRICS	SF	-44		SAMPLE			ASSAYS	
				T.C.I.C.I.	TOTAL	K	U	Th	#	FROM	ТО	U ₃ O ₈		\neq
				52.25										
				52.50	14.8	1.7	1.4	1.4						
				52.75			-							
		Banding at 65 ⁰ to core axis.		53.00	16.0	3.1	1.6	1.4						
53.00	53.50	Biotite schist. Refer to14.0-14.10.		53.25										
					19.6	2.9	1.5	1.4		-				
				53.75										
				54.00	18.2	3.6	2.0	1.8						
				54.25										
				54.50	18.4	3.2	3.2	1.3						
				54.75										
	55.00	Banding at 75 ⁰ to core axis.		55.00	1.9	3.2	1.6	1.4						
	55 40	Fracture at 60° to core axis.		55.25						55.0	61.5	.∞3		
	33.40	racture at ou to core axis.		55.50	19.6	3.1	1.8	1.6				-		
		0		55.75										1
0	55.80	Contact is at 75° to core axis and cross cuts banding of the gneiss. COARSE WHITE GRANITE		-	18.9	3.0	16	1.5	-2					
	01.50	Light pink, medium to coarse grained < 4 cm. Felsic portion - consists of pink, subhedral, < 4 cm,		56.25										
		striated, hematite stained K feldspars; and clear to smokey grey to green, anhedral, < 2 cm quartz.		56.50	15.7	2.9	1.3	1.3						
	1 - 9	Mafic portion - consists of black, subhedral, < 1 cm biotite and black anhedral < .3 cm magnetite.		56.75										

ESSEX	MINEF	RALS COMPANY LAC COSTEBELLE	Е	3-320	05			CORE		JULY 9		PAGE 13	78-A-2
ROM	то	REMARKS	LOG	METER	RADION TOTAL		S SF	2-44		SAMPLE			ASSAYS
					TOTAL	K	U	Th	#	FROM	TO	U ₃ O ₈	
		Within this section there are zones of finer grained semi-recrystallized gneiss. They display a weak foliation similar to the gneiss and have gradual		57.00	15.7	2.6	1.4	1.4					
		contacts with the granite. Felsics: K Feldspar 60%		57.25									
		Quartz 30 - 35% Mafics: Biotite 5 - 10%		57.50	17.6	2.7	1.4	1.3					
56 20	56.50	Magnetite < 2% Others 1%Finer grained section. (Recrystallized paragneiss)		57.75									
56.30 56.70 58.00	56.80	Finer grained section.		58.00	138	2.8	1.5	1.4					
				58.25									
				58.50	15.7	2.6	1.4	1.2					
				58.75									
			-	59.00	15.5	2.7	2.8	1.6					
				59.25					-				
59.50	60.00	Finer grained section.		59.50	13.8	2.7	1.4	1.4					
				59.75									
	60.20	Fracture at 80° to core axis.		60.00	20.3	3.1	1.5	1.6					
				60.25									
				60.50									
				60.75									
				61.00									
		DIA 1		61.25									
	61.50	End of core.		61.50									