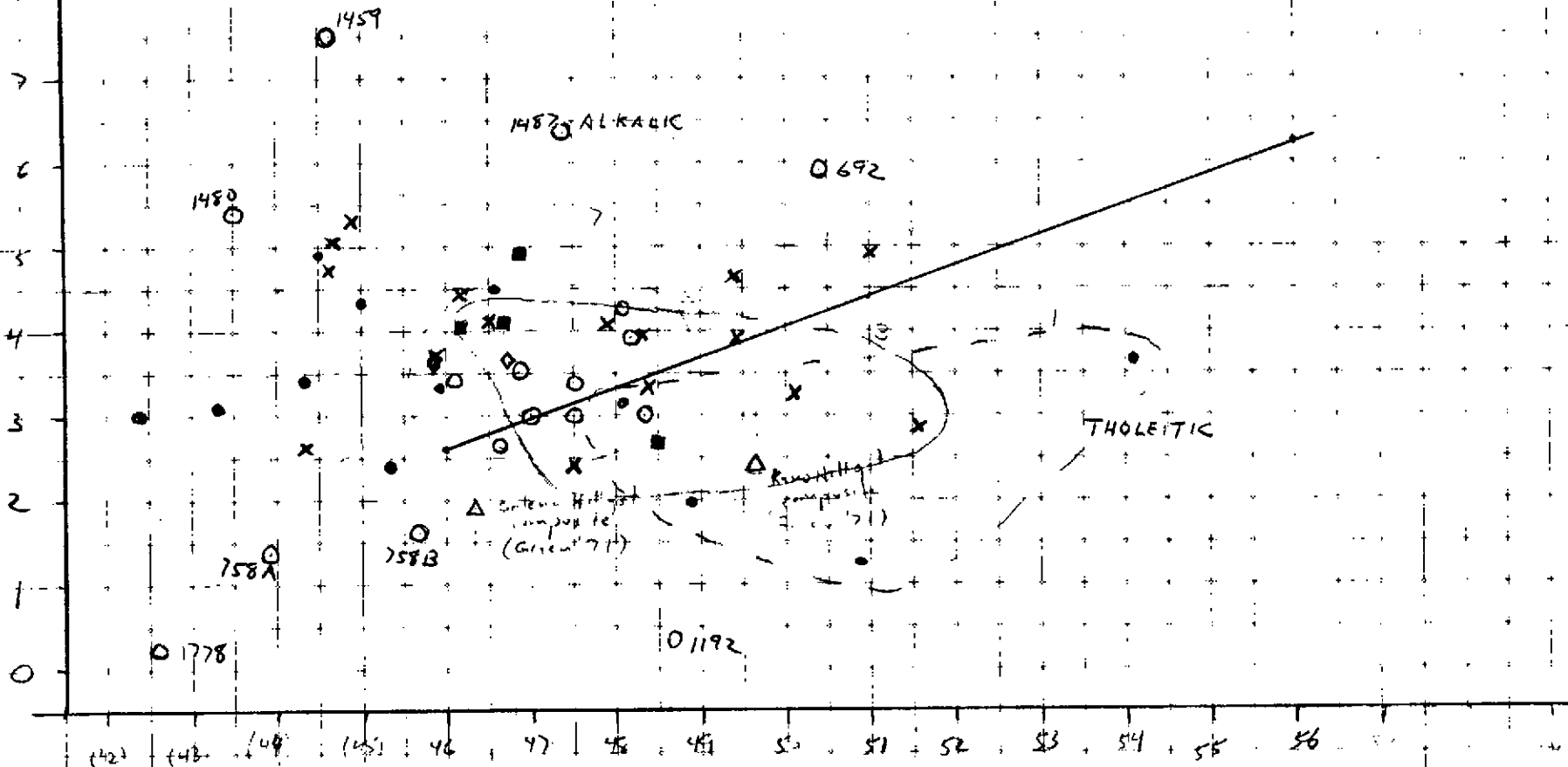


015077

Pearce-Cann plots
 Anvil area - Faro mine
 Al₂O₃ - SiO₂ plot of
 Templeman plots analysis

% Na₂O + K₂O

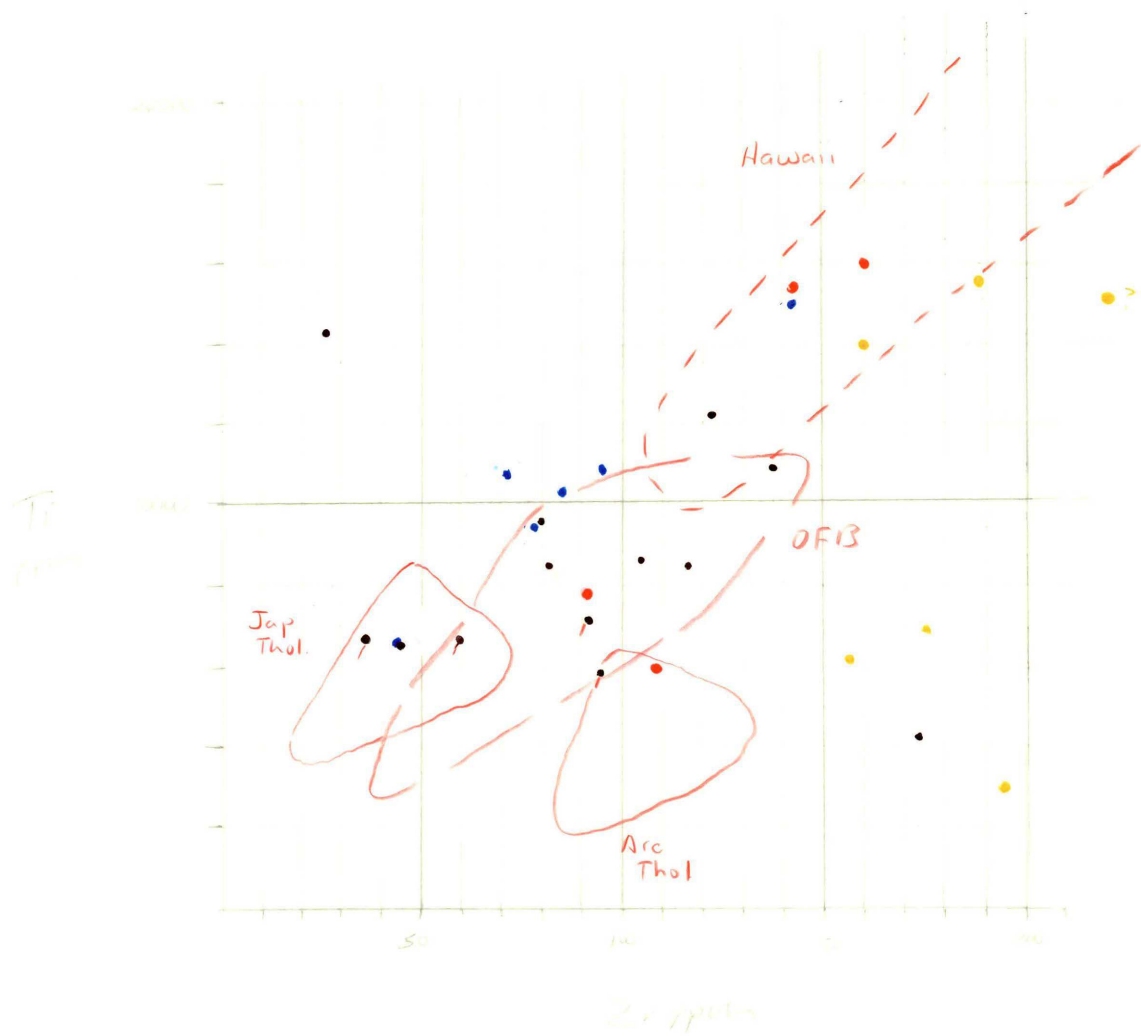


- 30% trachyte
- 50% batholith
- 100% batholith
- ◆ av. alk basalt

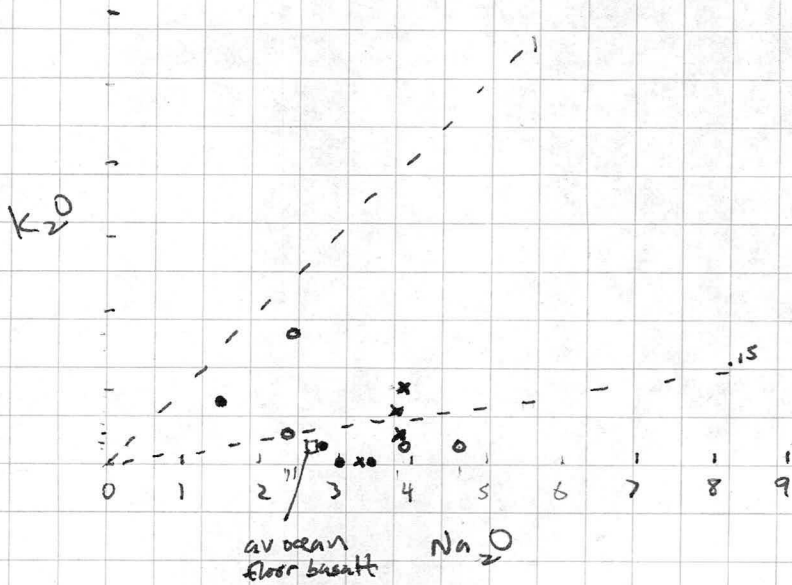
% SiO₂

- = #0
- x = #04
- = #05
- x = #06

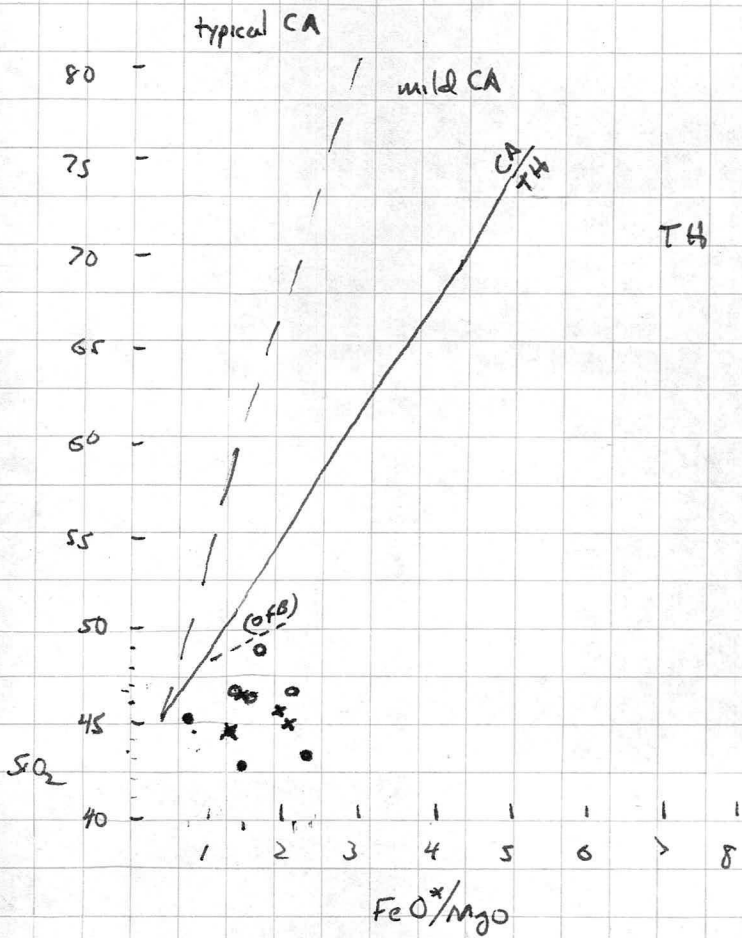
S.A. MacDonnell & T. Katsuta



- Unit 5
 - Unit 1
 - Unit 3
 - Unit 7
- Alk hi
 Alk low } Bammers on Alk/Si Plot



"Anvil Range GP"
 • Table II No of Batholiths
 x Table II S of Batholiths
 o Table I



	SiO ₂	NaO	K ₂ O	NaO+K ₂ O	Cr	Ni	Sr
<u>Unit 1 FO</u>							
1863	48.1	2.75	0.40	3.15	192	79	390
788	54.1	3.55	0.10	3.65	88	84	223
1907	48.8	1.70	0.25	1.95	118	56	178
812	50.8	1.10	0.15	1.25	155	112	88

	SiO ₂	NaO	K ₂ O	NaO+K ₂ O	Cr	Ni	Sr
<u>Unit 3 CO</u>							
1922	47.5	2.20	0.20	2.40	420	144	444
1025	49.4	3.50	0.40	3.90	165	56	485
1917	47.8	4.00	0.05	4.05	305	112	970
366	50.1	2.80	0.40	3.20	280	80	507
1559	46.5	3.60	0.50	4.10	20	29	450
151	48.4	3.10	0.32	3.42	250	120	401
1552	51.6	2.70	0.15	2.85	235	116	187

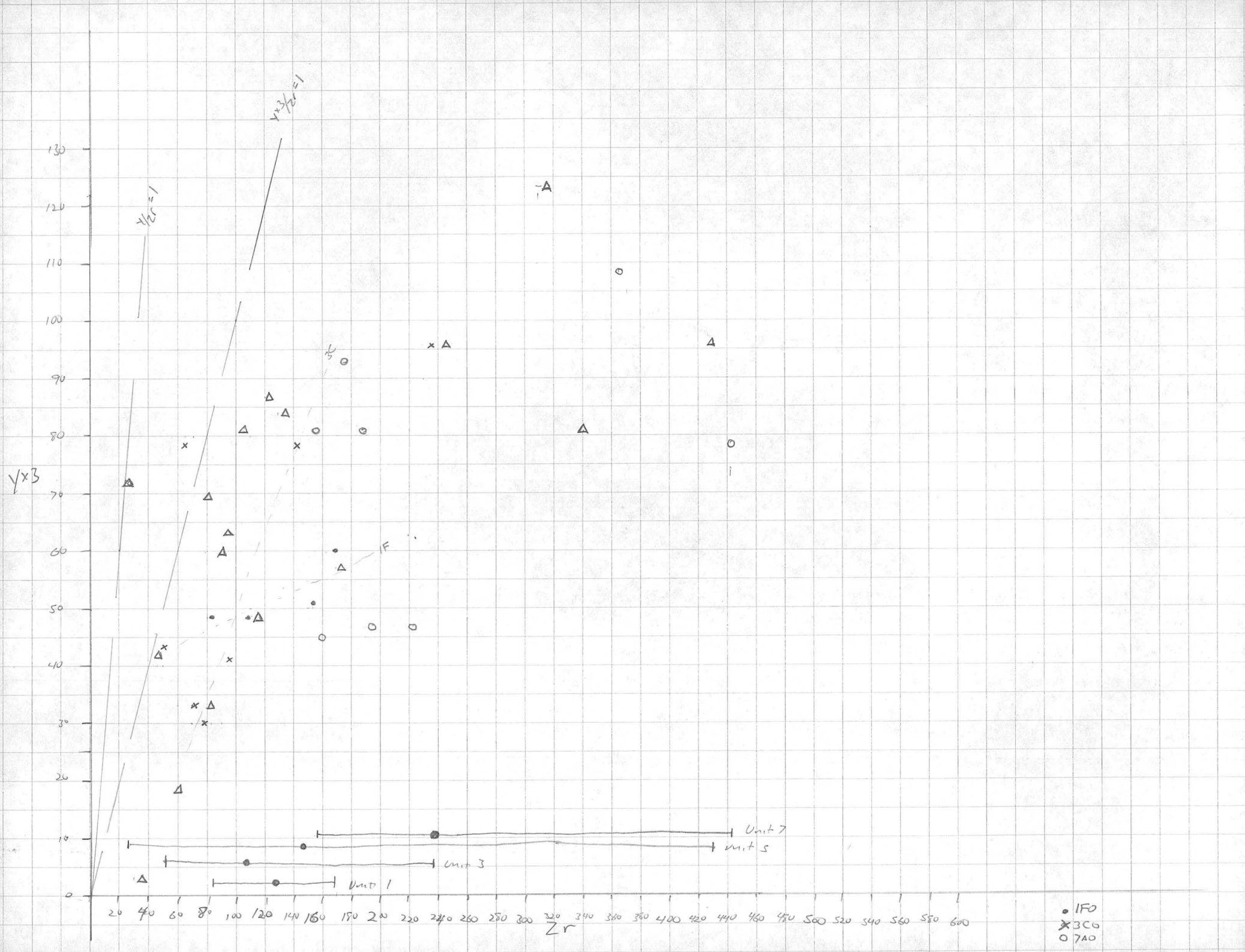
	SiO ₂	NaO	K ₂ O	NaO+K ₂ O	Cr	Ni	Sr
<u>Unit 5 CO</u>							
758A	43.9	1.30	0.10	1.40	610	252	197
758B	45.7	1.45	0.15	1.60	660	264	186
1497	46.8	3.45	0.05	3.50	140	85	662
1402	47.0	2.90	0.10	3.00	140	93	3000
1778	42.6	0.20	0.03	0.23	1030	790	69
1142	48.1	2.90	1.35	4.25	230	112	372
1192	48.7	0.20	0.10	0.30	1200	740	23
1329	47.5	2.60	0.70	3.30	4600	154	650
1080	46.1	2.30	1.15	3.45	445	154	208
1241	60.4	5.50	0.25	5.75	165	141	139
1776	46.7	2.60	0.05	2.65	1060	268	143
1214	48.2	2.00	1.90	3.90	332	148	296
742	47.5	2.80	0.20	3.00	225	105	359
1459	44.6	3.50	4.05	7.55	20	33	216
1487	47.4	4.35	2.05	6.40	10	6	362
692	50.4	4.70	1.20	5.90	15	2	176
1480	43.5	4.70	0.70	5.40	15	25	263

SiO₂ Na₂O K₂O Na₂O+K₂O Cr N₂ Sr

Unit 7A0

1129	46.2	3.60	0.85	4.45	190	68	214
1135	44.3	2.55	0.05	2.60	240	182	197
1912	44.6	4.50	0.28	4.78	90	72	74
1138	48.3	0.33	3.55	3.88	130	96	39
1481	51.0	4.10	0.80	4.90	20	22	45
1458	44.8	4.90	0.45	5.35	215	125	282
1505	45.8	3.25	0.45	3.7	65	47	264
1617	49.4	4.10	0.50	4.6	185	98	333
830	44.7	3.80	1.25	5.05	10	13	506

	MRS 1				SY 2			SY 3		
SiO ₂	39.2	38.9	39.4	40.0	60.3	60.2	60.1	59.2	60.1	59.6
TiO ₂	3.60	3.50	3.56	3.40	0.12	0.13	0.14	0.13	0.14	0.13
Al ₂ O ₃	8.20	8.6	8.3	8.8	12.1	12.0	11.9	11.5	11.8	11.9
Fe ₂ O ₃	17.0	18.0	19.2	17.6	6.62	6.69	6.63	6.88	6.79	7.05
MnO	0.17	0.15	0.17	0.17	0.31	0.32	0.32	0.34	0.30	0.33
MgO	13.5	13.4	13.5	13.0	2.68	2.62	2.72	2.66	2.62	2.66
CaO	15.0	13.8	13.7	13.8	8.50	8.10	8.5	9.00	8.5	8.50
Na ₂ O	0.71	0.84	0.82	0.78	4.20	4.50	4.60	4.80	4.40	4.30
K ₂ O	0.15	0.20	0.20	0.20	4.20	4.55	4.40	4.80	4.35	4.15
P ₂ O ₅	0.04	0.18	0.10	0.07	0.41	0.42	0.46	0.52	0.49	0.65
total	97.57	97.95 97.57	97.95	97.82	99.44	99.53	99.77	99.43	99.49	99.27



PEARCE - CANN PLOT CALCULATIONS

SAMPLE #	TiO ₂ (%)	Ti/100 (ppm)	Δ %	Zr (ppm)	Δ %	Y (ppm)	Y x 3	Δ %
UNIT 1F								
788	1.31	79	37.8	82	39.2	16	48	23.0
812	2.58	155	43.2	153	42.6	17	51	14.2
1863	1.00	60	27.6	109	50.2	16	48	22.1
1907	2.66	160	41.0	170	43.6	20	60	15.4
UNIT 3C								
1025	1.81	109	44.3	95	38.6	14	42	17.1
1552	1.09	65	40.9	43	27.1	17	51	32.0
UNIT 5C								
151	2.50	150	40.5	142		26	78	21.1
366	1.88	103	38.7	85	32.0	26	78	29.3
692	2.28	137	23.7	317	55.0	41	123	21.3
742	2.03	122	36.9	122		29	87	26.3
758A	0.99	59	27.2	95	43.8	21	63	29.0
758B	1.18	71	32.0	91		20	60	27.0
1080	1.40	84	42.2	82		11	33	16.6
1214	1.80	108	32.7	138		28	84	25.5
1241	0.70	42	15.4	173		19	57	21.0
1142	1.40	84	33.7	117		16	48	19.3
1192	1.10	66	62.3	37		1	3	2.8

PEARCE - CANN PLOT CALCULATIONS

SAMPLE #	TiO ₂ (%)	Ti/100 (ppm)	Δ %	Zr (ppm)	Δ %	Y (ppm)	Yx3	Δ %
UNIT 5C								
1329	1.08	65	42.5	46		14	42	27.4
1402	2.38	143	59.3	26		24	72	29.9
1459	3.30	198	36.6	247		32	96	27.7
1480	0.47	28	6.2	340		27	81	18.0
1487	1.84	110	17.3	430		32	96	15.1
1497	1.58	95	38.9	80		23	69	28.3
1559	3.66	220	39.8	237		32	96	17.4
1776	1.43	86	31.6	105		27	81	29.8
1778	1.12	67	46.2	60		6	18	12.4
1917	1.78	107	50.7	71		11	33	15.6
1922	1.62	97	47.3	78		10	30	14.6
MENZIE CREEK								
830	1.48	89	22.6	241		21	63	16.0
1129	2.33	140	40.6	160		15	45	13.0
1135	0.48	29	10.9	195		14	42	15.8
1138	1.08	65	11.1	442		26	78	13.3
1458	1.04	62	20.7	156		27	81	27.1
1481	1.35	81	14.6	365		36	108	19.5
1505	1.15	69	20.5	175		31	93	27.6
1617	2.58	155	36.6	188		27	81	19.1
1912	2.48	149	36.1	222		14	42	10.2

#	T.O ₂	T:/100	Δ% T:/100	Zr	Δ% Zr	Y	Y×3	Δ% Y×3
Unit ¹⁸⁶³ 1FO	1.00	60	27.6	109	50.2	16	48	22.1
788	1.31	79	37.8	82	39.2	16	48	23.0
1907	2.66	160	41.0	170	43.6	20	60	15.4
812	2.58	155	43.2	153	42.6	17	51	14.2
Av. 128								

Unit ^{5C} 3CO-192	1.62	97	47.3	78		10	30	14.6
3C-1025	1.81	109	44.3	95		14	42	17.1
5C-1917	1.78	107	50.7	71		11	33	15.6
5C-366	1.88	103	38.7	85		26	78	29.3
5C-1559	3.66	220	39.8	237		32	96	17.4
5C-151	2.50	150	40.5	142		26	78	21.1
3C-1552	1.09	65	40.9	43		17	51	32.0
Av. 107								

Unit 560								
* 758A	1.99	59	<u>27.2</u>	95		21	63	<u>29.0</u>
* 758B	1.18	71	<u>32.0</u>	91		20	60	<u>27.0</u>
1497	1.58	95	38.9	80		23	69	28.3
1402	2.58	143	59.3	26		24	72	29.9
X 1778	1.12	67	<u>46.2</u>	60		6	18	<u>12.4</u>
1142	1.40	84	33.7	117		16	48	19.3
* 1192	1.10	66	<u>62.3</u>	37		1	3	<u>2.8</u>
1329	1.05	65	42.5	46		14	42	27.4
1080	1.40	84	42.2	82		11	33	16.6
1241	.70	42	15.4	173		19	57	21.0
1776	1.43	86	31.6	105		27	81	29.8
1214	1.80	108	32.7	138		28	84	25.5
742	2.03	122	36.9	122		29	87	26.3
* 1459	3.30	198	<u>36.6</u>	247		32	96	<u>27.7</u>
* 1487	1.84	110	<u>17.3</u>	430		32	96	<u>15.1</u>
* 692	2.28	137	<u>23.7</u>	317		41	123	<u>21.3</u>
* 1480	.47	28	<u>6.2</u>	340		27	81	<u>18.0</u>
Av. 147								

TiO₂ Ti/100 %Ti/100 Zr Δ%Zr Y Yx3 Δ%Yx3

#

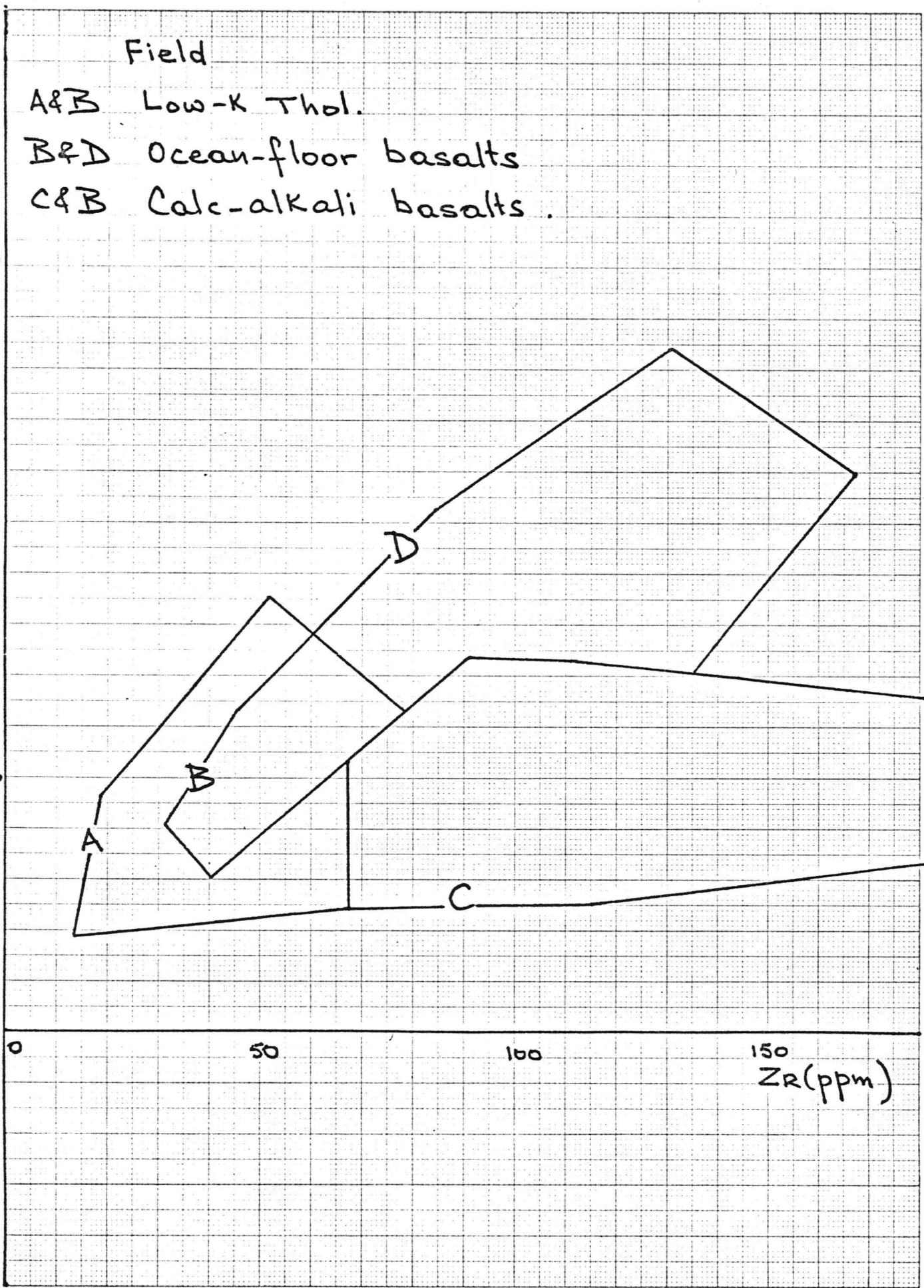
#	TiO ₂	Ti/100	%Ti/100	Zr	Δ%Zr	Y	Yx3	Δ%Yx3
7A0								
1129	2.33	140	40.6	160		15	45	13.0
1135	48	29	10.9	195		14	42	15.8
1912	2.48	149	36.1	222		14	42	10.2
1138	1.08	65	11.1	442		26	78	13.3
1461	1.35	81	14.6	365		36	108	19.5
1458 1458	1.04	62	20.7	156		27	81	27.1
1505	1.15	69	20.5	175		31	93	27.6
1617	2.58	155	36.6	188		27	81	19.1
830	1.48	89	22.6	241		21	63	16.0

Av. 238

Field

- A&B Low-K Thol.
- B&D Ocean-floor basalts
- C&B Calc-alkali basalts

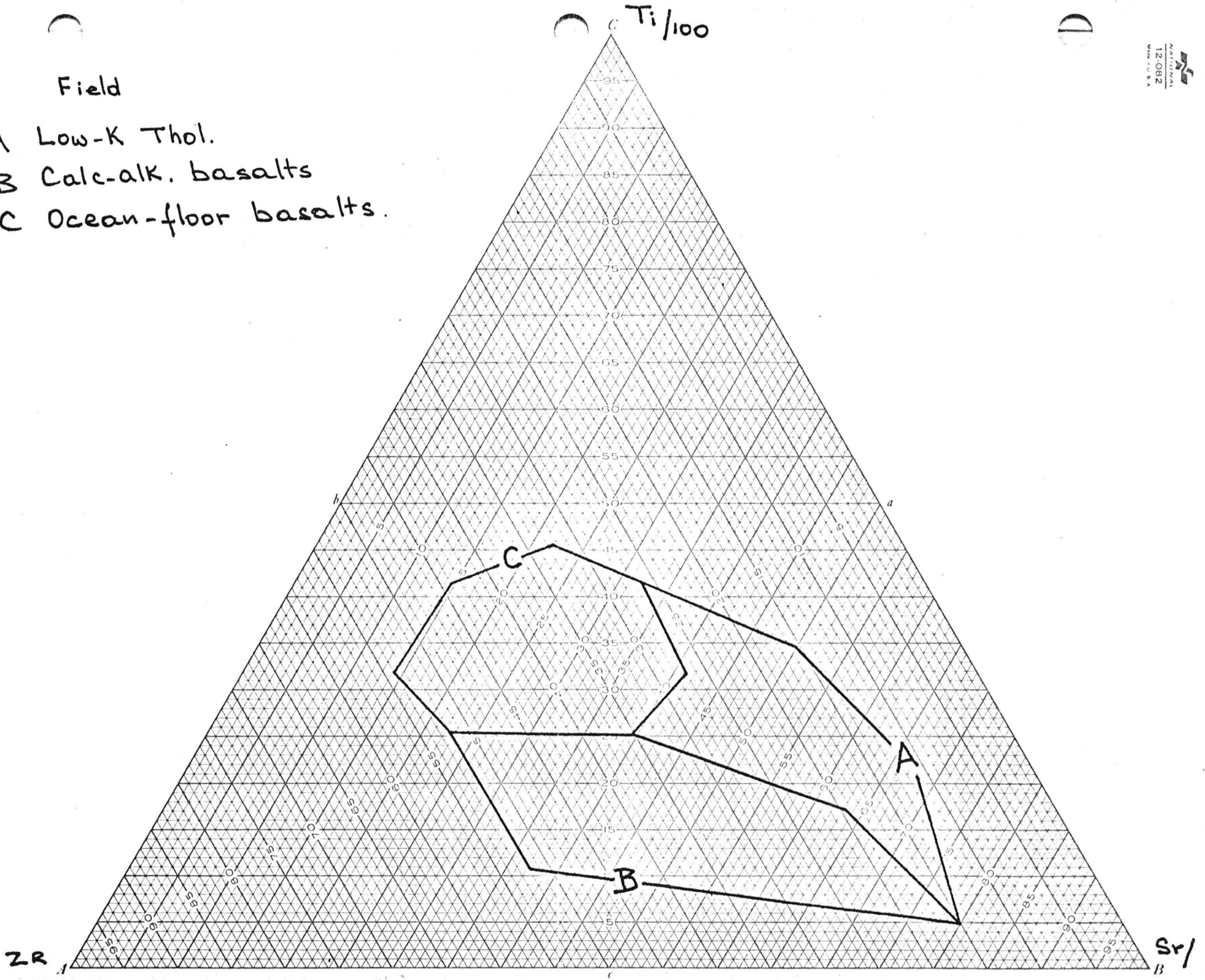
Ti(ppm)
15000
10000
5000



Triangular Co-ordinate

Field

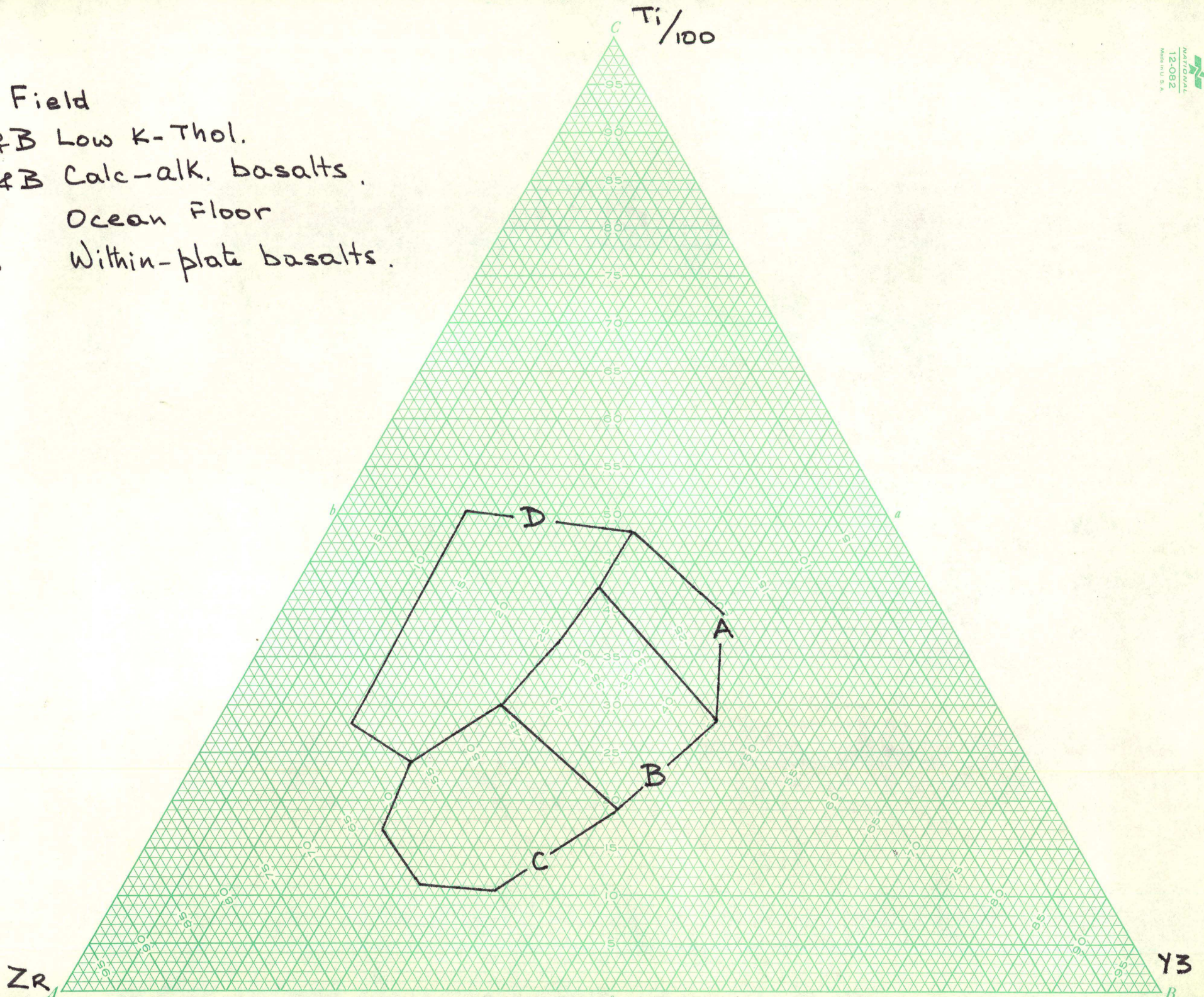
- A Low-K Thol.
- B Calc-alk. basalts
- C Ocean-floor basalts.



Triangular Co-ordinate

Field

- A&B Low K-Thol.
- C&B Calc-alk. basalts.
- B Ocean Floor
- D Within-plate basalts.



Field

- A&B Low-K Thol.
- B&D Ocean-floor basalts
- C&B Calc-alkali basalts.

Ti(ppm)
15000

10000

5000

Zr(ppm)
0 50 100 150

