

3-3-2 元素の相関関係

本地区の各元素の相関係数を Tab. 16 に示す。

相関係数が 0.8 以上で極めて相関が強い元素の組合せは (La, Ce), (La, Nd), (La, Sm), (Ce, Nd), (Ce, Sm), (Ce, Eu), (Nd, Sm), (Nd, Eu), (Sm, Eu) である。これらはいずれもレアース同志の組合せである。一方,本地区では,レアース鉱物としてモナズ石が確認されていることから, Nd, Sm, Eu のレアースはモナズ石中の La, Ce の一部を置換して存在するものと考えられている。

Tab. 16 Correlation coefficients of elements, Kangankunde

AREA: K		(N of cases: 102)								
Correlations:	logLa	logCe	logNd	logSm	logEu	logTb	logNb	logSr	logY	logP
logLa	1.00									
logCe	.99	1.00								
logNd	.96	.98	1.00							
logSm	.84	.88	.93	1.00						
logEu	.80	.85	.91	.93	1.00					
logTb	-.01	.02	.06	.09	.15	1.00				
logNb	.11	.14	.14	.14	.19	.04	1.00			
logSr	.42	.36	.30	.24	.18	.11	-.23	1.00		
logY	.43	.45	.46	.47	.54	.18	.09	.09	1.00	
logP	.11	.13	.15	.18	.20	.41	.24	.15	.44	1.00

3-3-3 異常値分布

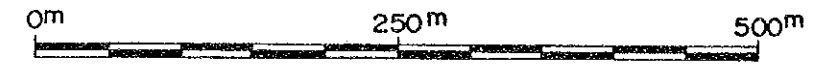
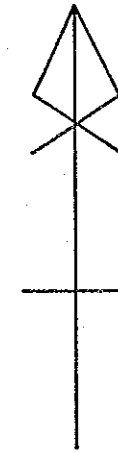
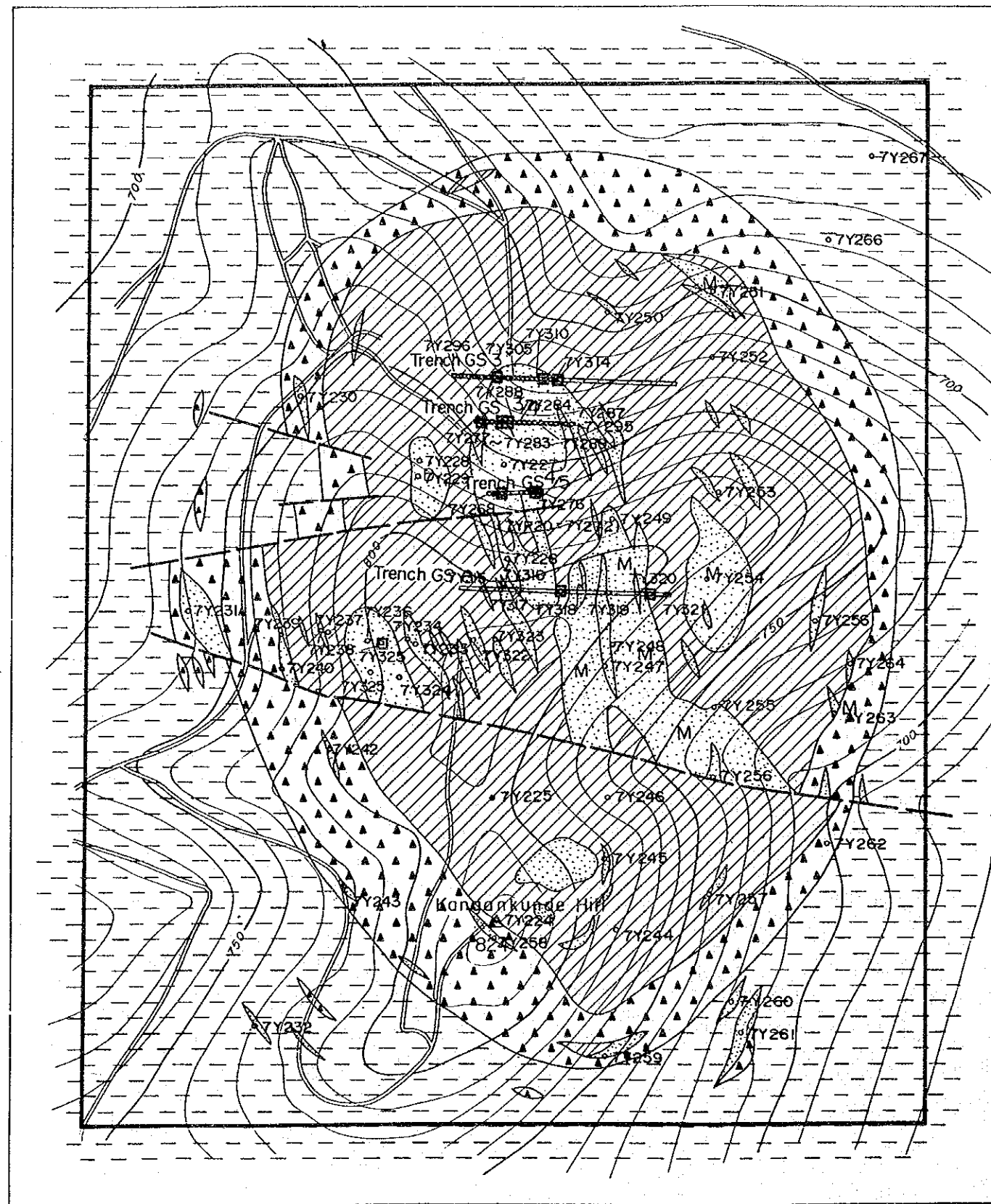
地化学探査異常値は Tundulu, Songwe 両地区と同じ手法により求めた。しきい値は Tab. 15 に示すとおりである。

本地区の異常値分布は, Fig. 17 に示すとおりである。本地区のレアース, Nb, Sr, P の異常値は Kangankunde 丘の北斜面に集中する。このことはレアース, Nb, Sr, P 資源としてのポテンシャルティーンは, Kangankunde 丘の北斜面分布するカーボナタイト岩体中が最も高いことを示すものである。

3-4 考 察

Kangankunde 地区の地質調査・地化学探査, ボーリング調査及び地質調査局資料を総合して考察すると以下のことが考えられる。

1. 本地区のカーボナタイト岩体は Kangankunde 丘を主要部とし, その南北に小露頭(本年度調査範囲外)が分布する。



Scale 1 : 5,000

LEGEND

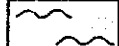
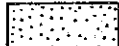
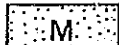
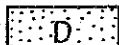
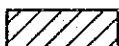
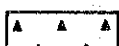
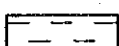







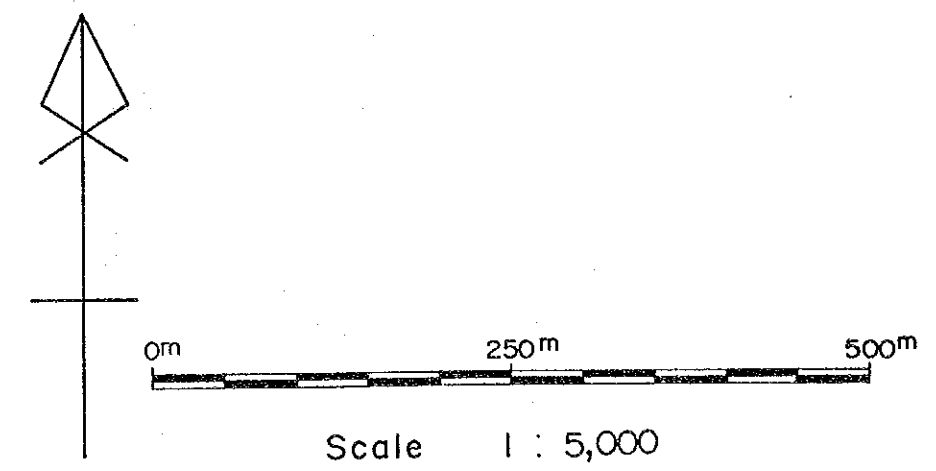
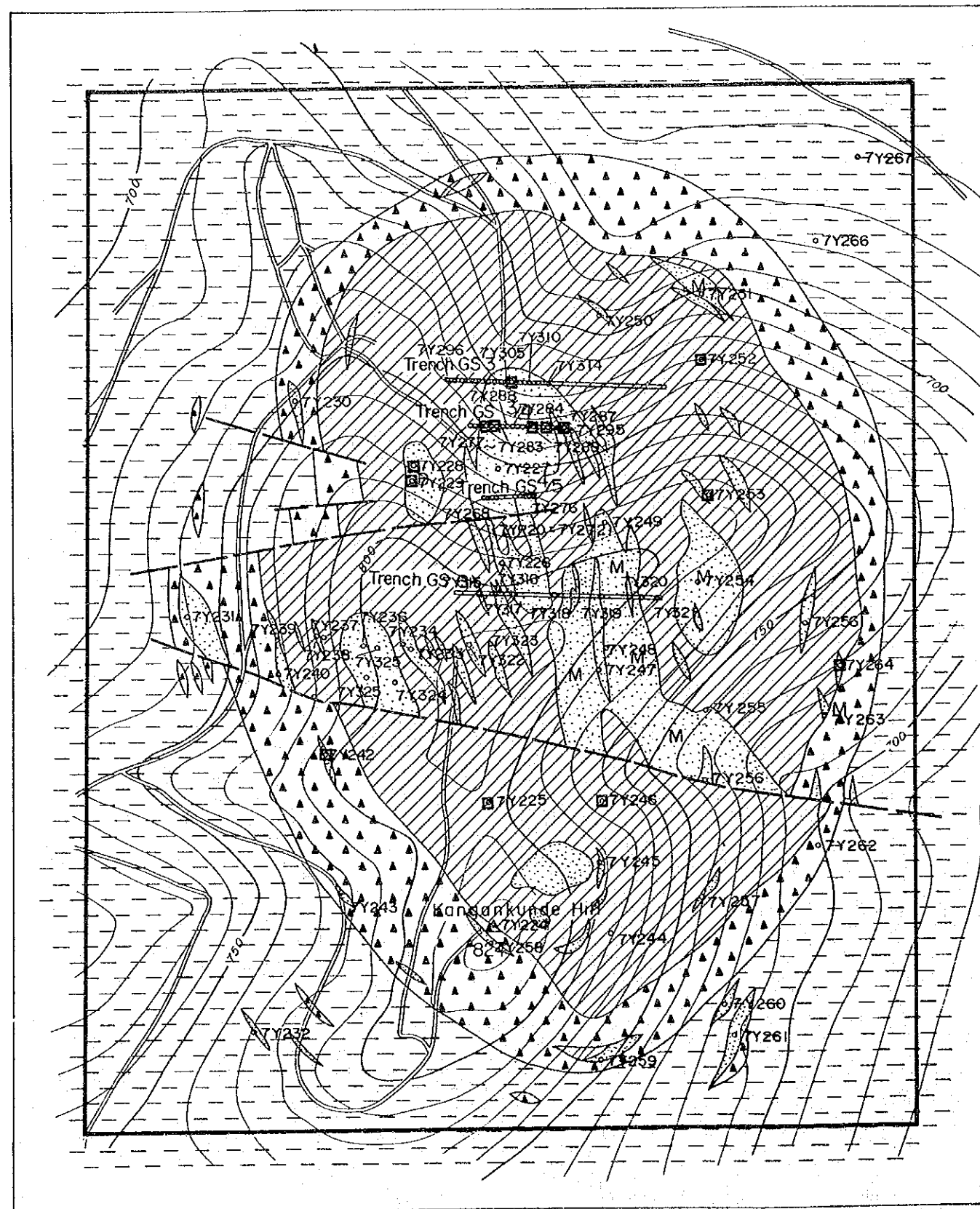
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-  Carbonatite
-  Manganiferous carbonatite
-  Dolomitic carbonatite
-  Carbonatized feldspathic rock / agglomerate
-  Agglomerate / feldspathic rock
-  Fenitized syenite / gneiss
-  Fault
-  Trench (1987)
-  Profile line
-  ○ 7Y001 Geochemical sample
-  ○ 7YR1 Rock sample
-  □ Geochemical anomaly
-  □ REO > 31958ppm

Fig.17-1 Distribution map of geochemical anomalies, Kangankunde (REO)



LEGEND

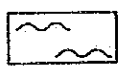


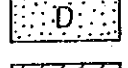
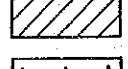
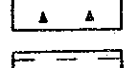
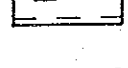

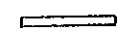
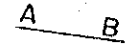



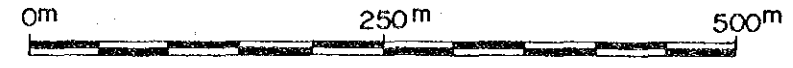
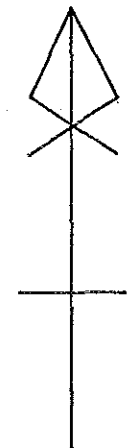
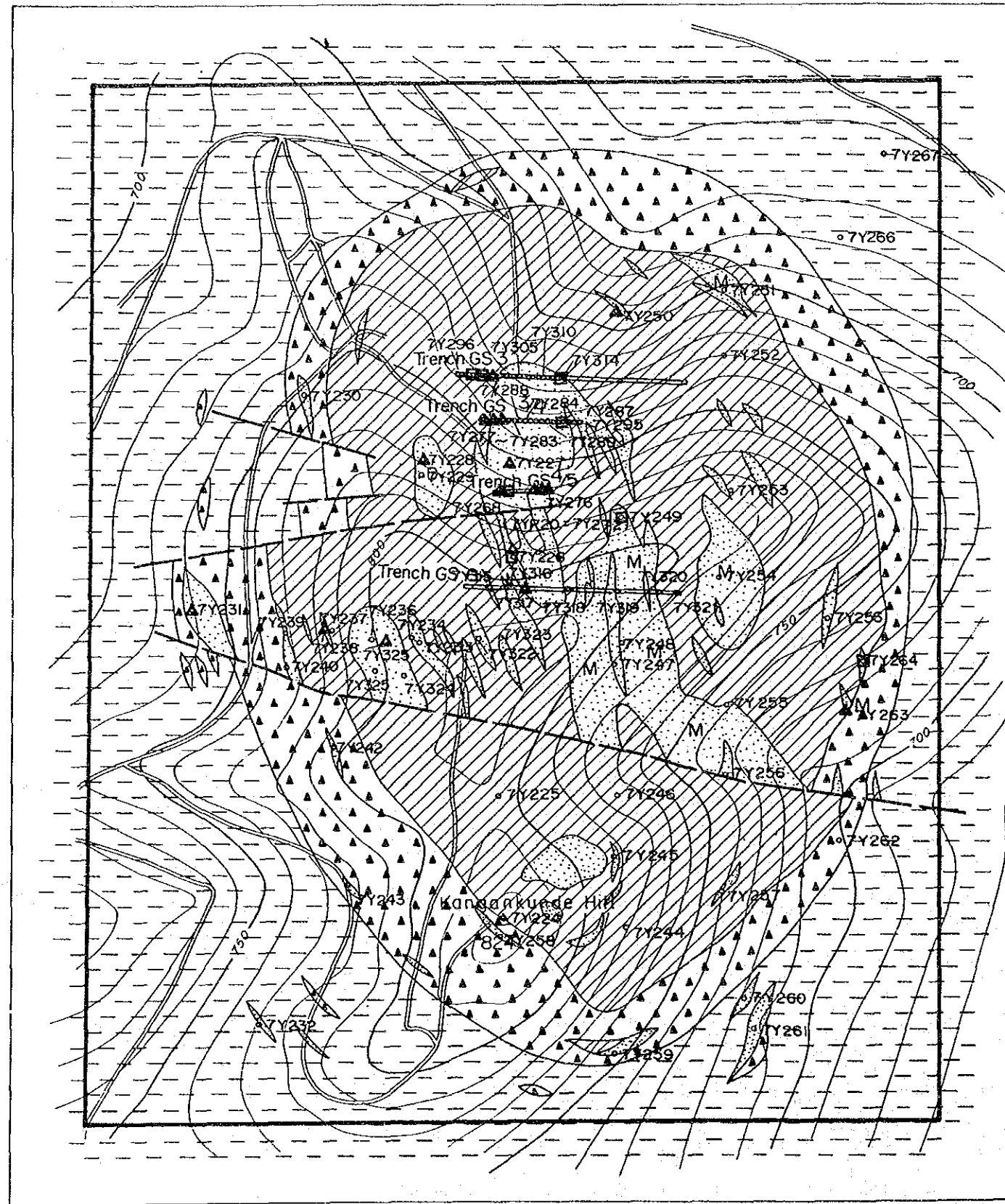
-  Drift
-  Carbonatite
-  Manganiferous carbonatite
-  Dolomitic carbonatite
-  Carbonatized feldspathic rock / agglomerate
-  Agglomerate / feldspathic rock
-  Fenitized syenite / gneiss
-  Fault
-  Trench (1987)
-  Profile line
-  7Y 001 Geochemical sample
-  7Y R1 Rock sample
-  Geochemical anomaly
P > 26058ppm

Fig.17-2 Distribution map of geochemical anomalies, Kangankunde (P)



Scale 1 : 5,000

LEGEND

- Drift
- Carbonatite
- Manganiferous carbonatite
- Dolomitic carbonatite
- Carbonatized feldspathic rock / agglomerate
- Agglomerate / feldspathic rock
- Fenitized syenite / gneiss
- Fault
- Trench (1987)
- Profile line
- 7Y001 Geochemical sample
- 7YR1 Rock sample
- Geochemical anomaly
 - Nb > 976 ppm
 - Sr > 97833 ppm

Fig.17-3 Distribution map of geochemical anomalies, Kangankunde (Nb, Sr)

2. 本地区を構成する岩石はTundulu地区、Songwe地区とほぼ類似するが、本調査地区内にはネフェリン閃長岩が認められない。このことはTundulu地区のカーボナタイト岩体に比べて、本地区のものが深部のものであるためと考えられている。
3. 地化学探査の結果は本地区のレアアース及び燐濃集部はKangankunde丘北斜面に分布することを示している。
4. 地化学探査試料から求められたレアアースパターン図から、本地区のカーボナタイト中のレアアース含有量を検討したところ、パターンはLaからTbに向い低下する傾向を示す(Fig.10)。
5. Kangankunde地区は、本年度の地化学探査異常値分布域を中心に既に地質調査局、民間企業等によりボーリング調査、トレンチ調査、さらには坑道調査が実施されている。Holt(1965)によると深度33 mまで鉍量324,500 t, モナズ石品位5.58%, ストロンチアナイト品位17.90%の鉍量、品位があるとされている。

Tab. 18 Mineral resources related carbonatite/alkaline complexes

Name of Complex	Lithology	Type of Carbonatite	Age(Ma)	Mineralization Reserve(mil. t.)		Ore Grade(%)
Araxa(Brazil)	glimmerite, phoscorite	beforsite sovite	91	niobium phosphate rare earth barium	462 460 463	2.48 Nb ₂ O ₅ 15.01 P ₂ O ₅ 20.67 BaSO ₄
Tapira(Brazil)	pyroxenite, peridotite, uncompagrite, syenite	sovite	70	phosphate titanium niobium	921 95 166	8.32 P ₂ O ₅ 17.68 TiO ₂ 1.18 Nb ₂ O ₅
Catalao(Brazil)	peridotite, pyroxenite, glimmerite, phoscorite	beforsite	83	phosphate niobium titanium rare earth	306 19 6 2	7.96 P ₂ O ₅ 1.08 Nb ₂ O ₅ 19.90 TiO ₂ 12.20 RE ₂ O ₃
Jacupiranga (Brazil)	peridotite, jacupiran- gite, ijolite, nephe- line syenite	sovite beforsite	130	phosphate nickel	89 3	6.15 P ₂ O ₅ 1.39 Ni
Ipanema(Brazil)	glimmerite, pyroxenite, pulaskite, nordmarkite	sovite	123	phosphate	117	6.73 P ₂ O ₅
Anitapolis (Brazil)	pyroxenite, urtite, ijolite, melteigite, glimmerite, syenite	sovite	129	phosphate; residual primary	53 206	8.20 P ₂ O ₅ 4.00 P ₂ O ₅
Oka(Canada)	melteijite, ijolite, urtite, okaite	sovite	122	niobium rare earth	122 122	0.45 Nb ₂ O ₅ 0.2 RE ₂ O ₃
Mountain Pass (USA)	shonkinite, syenite	calcitic, ankeritic & dolomitic carbonatite	1400	rare earth	5 mill t (RE ₂ O ₃)	
Amba Dongar (India)	nephelinite, phonolite	ankeritic carbonatite, sovite dyke	37.5-76	fluorine rare earth	116	30.0 CaF ₂ 3 RE ₂ O ₃
Bayan Obo (China)	alkali gabbro, trachyte	dolomitic carbonatite	1400	iron rare earth niobium	1150 35 0.78	iron ore RE ₂ O ₃ ore Nb ₂ O ₅
Palabora (Rep.S.Africa)	pyroxenite, phoscorite	sovite	2060	copper uranium zirconium	315	0.69 Cu 0.15 ZrO ₂
Sukulu(Uganda)	ijolite, nepheline syenite	carbonatite	24-26	phosphorus niobium	200 130	13.0 P ₂ O ₅ 0.25 Nb ₂ O ₅
Khibiny(USSR)	ijolite, melteigite, neph. syenite, urtite	-	up.Carb.- low.Perm.	phosphorus with REE	2700	18.0 P ₂ O ₅
Kovdor(USSR)	nepheline pyroxenite, ijolite, melteigite, olivinite, phoscorite	small carbonatite vein	370	iron, phospho- rus, zirconium	708	50 T.Fe 6.6 P ₂ O ₅
Synnyr(USSR)	-	-	-	phosphorus with REE	500	4.0-4.5 P ₂ O ₅
Sillinjärvi (Finland)	glimmerite, phoscolite	sovite	1785-2530	phosphorus	465	4.0 P ₂ O ₅

(after GSJ and DHPH, 1987)

第4章 総合検討

第2年次調査が実施された、Tundulu地区、Songwe地区及びKangankunde地区のカーボナタイトについて、地化学探査試料、ボーリング調査による主要レアアース鉱徴部の品位をTab.17に示す。

Tab. 17 Comparison of assay result

Sample Sector (mineral)	Mean of Geochemical samples						Core samples					
	REO	Light REO	Medium REO	P ₂ O ₅	Nb ₂ O ₅	SrCO ₃	REO	Light REO	Medium REO	P ₂ O ₅	Nb ₂ O ₅	SrCO ₃
Tundulu (Bastnaesite Synchysite Pyrochlore Apatite)	6,080	5,444	306	14,252	262	7,836	36,791	36,281	509	6,593	883	63,201
JNT-22(41.1m)												
Songwe (Bastnaesite Synchysite Pyrochlore Apatite)	8,679	7,815	573	7,661	850	7,045	21,004	19,548	1,456	18,030	2,141	17,307
JMS-4(15.2m+α)												
Kangankunde (Monazite Strontianite Apatite)	8,989	8,693	144	27,760	216	62,353	Light REE...La, Ce, Nd Medium REE...Sm, Eu, Tb, Y					

さらに、3地区の経済性を比較検討するため、世界の主要カーボナタイト鉱床の鉱量、品位についての一覧表をTab.18に示す。

3調査地区の地化学探査分析試料による酸化レアアース量(REO)は、Kangankunde地区が最も高い。これはLa, Ce, Ndの軽希土類含有量が高いことに起因しているものと考えられる。一方、Sm, Eu, Tb, Yの中希土類含有量はSongwe地区のものが、Tundulu地区に比べ約2倍、Kangankunde地区に比べ約4倍高いという特徴がある。

ボーリングコア分析試料による酸化レアアース量は、Tundulu地区のものがSongwe地区のものに比べて約1.5倍である。これは軽希土類の含有量が高いことに起因する。一方、中希土類はSongwe地区のものがTundulu地区のものに比べて約3倍の値を示す。

これら鉱徴部の品位を世界のカーボナタイト鉱床中の品位と比較すると、ボーリングコア分析値でバストネサイトを産するMountain Pass鉱山(USA)に比べ酸化レアアース量は、Tundulu地区で1.8倍、Songwe地区ではほぼ同値を示す。各レアアースの含有量比はレアアースパターン図(Fig.10)から考察すると、Songwe地区において、中希土類含有量が、Tundulu地区、Kangankunde地区及びMountain Pass鉱山に比べ高い値を示す。燐については、地化学探査分析試料から、Kangankunde地区、Tundulu地区、Songwe

地区の順に含有量が高い。Kangankunde 地区のものは Kangankunde 丘北斜面に分布するカーボナタイトが高く、モナズ石、アパタイトを主要燐鉱物とする。Tundulu 地区の燐含有量は、Nathace 丘東斜面に分布するアパタイトを主とするアパタイト岩及びその周辺のカーボナタイトがまとまって高い。ボーリング調査結果では、JMT-7において燐含有量7.3% (P_2O_5 換算16.7%)のものを深度3.4 m ~ 17.8 m (14.4 m)間で確認した。この品位はAraxa (Brazil)の15%、Sukulu (Uganda)の13.0%に匹敵する。

なお、最近のレアアースの需給関係は、1983年をピークに消費量が減少しつつあるが高純度レアアースの需要は増加傾向にある。酸化ランタン、酸化セリウム等の軽希土類は供給過剰気味であるが、酸化サマリウム、酸化ユーロピウム等の中希土類は供給量が逼迫した状態にある。

第Ⅲ部 結論及び提言

第 1 章 結 論

本年次に実施したチルワールカリ地域 Tundulu 地区、Songwe 地区における地質調査・地化学探査及びボーリング調査、Kangankunde 地区における地質調査・地化学探査によって得られた結論は以下のとおりである。

(1) Tundulu 地区

地質調査……カーボナタイト主要部は Tundulu 丘、Nathace 丘に分布する。Tundulu 丘のカーボナタイトは方解石質カーボナタイト、Nathace 丘はアンケライト質、菱鉄鉍質カーボナタイトが卓越する。Nathace 丘にはアパタイトを多量に含むアパタイト岩が認められる。主要鉍石鉍物はバストネサイト、シンチサイト、モナズ石、ストロンチアナイト、アパタイト、パイロクロアである。

地化学探査……地化学探査異常値（分析元素 La, Ce, Nd, Sm, Eu, Tb, Nb, Sr, Y, P）は Nathace 丘に集中する。Tundulu 丘にはほとんど異常値が認められない。

ボーリング調査……酸化レアアース量（REO）1.0%以上の鉍徴部は Tundulu 丘の JMT-5, 10, Nathace 丘の JMT-7, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24 において確認された。このうち最大規模のものは、JMT-22 の深度 8.7 m ~ 49.8 m (41.1 m), 含有量 3.68% である。磷に着目すると、磷含有量 2.2% 以上、厚さ 2.0 m 以上の鉍徴部は Tundulu 丘 JMT-12 において厚さ 2.08 m, 含有量 2.9% (P₂O₅ 換算 6.6%), Nathace 丘 JMT-7 において厚さ 14.4 m, 含有量 7.3% (P₂O₅ 換算 16.7%) が認められる。

上記 3 調査法の結果を総合するとレアアース、アパタイト資源としては、Nathace 丘に鉍徴部が認められる。このうち Nathace 丘東部が Tundulu 地区では最もポテンシャルが高いと考えられる。

(2) Songwe 地区

地質調査……カーボナタイト主要部は Songwe 丘に分布する。カーボナタイトは方解石質、アンケライト質のものが多い。鉍石鉍物はバストネサイト、シンチサイト、ストロンチアナイト、アパタイト等である。

地化学探査……地化学探査異常値は Songwe 丘北斜面海拔略 850 m 以下のカーボナタイト中に集中し認められる。

ボーリング調査……酸化レアアース量（REO）1.0%以上の鉍徴部は JMS-8 を除いて、全てのボーリングで認められる。このうち最も連続性があると考えら

れるものは、JMS-4の深度38.1m～53.3m(孔底)(15.2m)間で2.10%である。

本地区の特徴はSm含有量が0.03%～0.06%、Eu含有量が0.006%～0.020%と高い。

上記3調査法の結果を総合すると、Sm、Euの含有量が比較的多い鉱徴部がSongwe丘北斜面に認められる。レアアース資源としてはSongwe丘北斜面の海拔略850m以下に分布するカーボナタイト岩体がポテンシャルが高いと考えられる。

(3) Kangankunde 地区

地質調査……モナズ石、ストロンチアナイト、アパタイトに富むカーボナタイト岩体が分布する。カーボナタイトはアンケライト質、ドロマイト質であり、一部マンガンに富む。アンケライト質、ドロマイト質カーボナタイトはKangankunde丘北斜面に主要部が分布する。

地化学探査……上記アンケライト質、ドロマイト質カーボナタイト分布域にレアアース、Nb、Sr、P地化学的異常値が集中する。

上記2調査法の結果及び既存調査資料を総合すると、Kangankunde丘北斜面にモナズ石、ストロンチアナイト、アパタイトに富むカーボナタイト鉱徴部が分布する。このことはレアアース資源、アパタイト資源として、これらの分布範囲がKangankunde地区では最もポテンシャルが高いと考えられる。

以上3地区のカーボナタイト鉱床としてのポテンシャルティーはTundulu地区Nathace丘東斜面のレアアース、燐、Songwe地区Songwe丘海拔略850m以下の中希土類含有量の多いレアアースとKangankunde地区のレアアース、燐を含むカーボナタイト岩体が高いと考えられる。

第2章 第3年次調査への提言

本年次の調査結果及び第1年次調査結果を総合し、本地域のレアアース資源、燐資源のポテンシャルを把握するために、第3年次調査として以下のとおり取進めることを提言する。

第1年次調査において、カーボナタイト鉱床としてのポテンシャルが高いと考えられた地区(Tundulu, Songwe, Chilwa Island, Kangankunde)のうち、第2年次調査が実施できなかったChilwa Island地区において、第2年次にTundulu地区、Songwe地区で行った調査と同程度の地質調査・地化学探査及びボーリング調査を実施し、カーボナタイト鉱床としての規模、品位を確認すること。

さらに、本年次調査の結果、レアアース鉱徴地、燐鉱徴地が確認されたTundulu地区Nathace丘及びレアアース鉱徴地が確認されたSongwe地区において、それぞれの鉱徴地の鉱量、品位を確認するための地質精査、ボーリング調査を実施することが考えられる。

なお、Kangankunde地区については、現在、フランスBRGMが探鉱権(Exclusive Prospecting Licence)を与えられ探鉱中であるため、第3年次調査から除外した。

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Appendices

Appendix 1

Assay results (Geochemical samples)

Abbreviation

	OCC
Area	1 : massive 2 : sheet
S : Songwe	3 : dyke 4 : agglomerate
T : Tundulu	5 : breccia
K : Kangankunde	
	REO
Rock	$La_2O_3 + CeO_2 + Nd_2O_3 + Sm_2O_3$
10 : carbonatite	$+ Eu_2O_3 + Tb_2O_3 + Y_2O_3$
20 : others (Alkaline rock)	Units
30 : others	ppm

NO AREA ROCK ALT	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	RBO
7Y 1 S	4602.0	7470.0	1844.0	294.70	73.70	27.10	1643.0	3128.0	407.0	4922.0	17696.7
7Y 2 S	1809.0	4484.0	2091.0	350.20	92.00	28.80	150.0	2544.0	501.0	2305.0	11248.6
7Y 3 S	1327.0	3021.0	1361.0	265.30	64.20	.05	138.0	1144.0	185.0	1343.0	7470.4
7Y 4 S	10374.0	13973.0	2880.0	472.40	112.70	13.10	116.0	4640.0	459.0	9059.0	33962.1
7Y 5 S	2749.0	6068.0	2414.0	385.00	96.70	26.10	251.0	2461.0	401.0	3840.0	14588.7
7Y 6 S	2697.0	4856.0	1574.0	228.40	55.50	11.70	59.0	4194.0	261.0	3102.0	11636.2
7Y 7 S	2593.0	4519.0	1437.0	243.40	65.00	46.20	534.0	2770.0	360.0	8227.0	11134.5
7Y 8 S	166.0	209.0	2.5	9.80	.05	.05	642.0	1079.0	24.0	972.0	496.2
7Y 9 S	2316.0	5215.0	2179.0	389.10	101.10	29.70	520.0	2966.0	610.0	3777.0	13038.7
7Y 10 S	3052.0	6833.0	2938.0	476.20	111.40	9.50	700.0	11459.0	467.0	2806.0	16682.0
7Y 11 S	269.0	487.0	117.0	19.10	1.20	.05	241.0	3172.0	28.0	2528.0	1109.2
7Y 12 S	1462.0	3478.0	1464.0	291.50	104.20	26.40	603.0	9736.0	382.0	822.0	8667.3
7Y 13 S	2430.0	5409.0	2218.0	365.50	88.00	17.30	1533.0	13758.0	490.0	444.0	13246.9
7Y 14 S	204.0	386.0	107.0	25.10	9.30	28.20	111.0	2357.0	105.0	14269.0	1043.8
7Y 15 S	1805.0	4173.0	1724.0	298.90	83.00	23.20	723.0	12789.0	391.0	1447.0	10218.0
7Y 16 S	2098.0	4763.0	2138.0	397.40	99.80	15.30	197.0	9224.0	308.0	657.0	11788.1
7Y 17 S	1510.0	3102.0	1055.0	167.40	47.40	13.00	2331.0	1074.0	288.0	366.0	7440.4
7Y 18 S	2117.0	3245.0	826.0	155.60	46.70	14.80	78.0	8593.0	239.0	104.0	7986.4
7Y 19 S	417.0	767.0	307.0	91.10	24.80	11.50	539.0	505.0	177.0	3066.0	2161.4
7Y 20 S	1570.0	2722.0	913.0	185.90	43.70	17.40	276.0	467.0	204.0	489.0	6794.1
7Y 21 S	579.0	924.0	460.0	125.50	34.30	3.90	570.0	986.0	102.0	1439.0	2669.5
7Y 22 S	2594.0	6127.0	2346.0	424.10	94.20	29.50	458.0	1251.0	222.0	5724.0	14219.1
7Y 23 S	3274.0	6994.0	2749.0	487.80	100.10	22.60	1257.0	3723.0	305.0	6675.0	16729.5
7Y 24 S	2004.0	4200.0	1190.0	269.90	71.70	34.10	312.0	4047.0	629.0	13388.0	10130.0
7Y 25 S	150.0	249.0	50.0	9.10	3.00	.05	551.0	1032.0	118.0	4672.0	704.0
7Y 26 S	1357.0	2696.0	904.0	145.10	35.30	9.70	56.0	1422.0	129.0	594.0	6340.7
7Y 27 S	1985.0	3601.0	1157.0	188.90	37.20	8.80	261.0	4626.0	238.0	6889.0	8674.1
7Y 28 S	111.0	230.0	57.0	9.30	3.50	.05	287.0	584.0	87.0	1013.0	604.5
7Y 29 S	33.0	53.0	15.0	4.20	1.80	.05	136.0	1746.0	11.0	236.0	142.3
7Y 30 S	144.0	186.0	2.5	9.70	3.30	.05	340.0	513.0	33.0	1158.0	457.3
7Y 31 S	811.0	1713.0	652.0	68.80	21.00	14.20	726.0	1384.0	104.0	1206.0	4067.6
7Y 32 S	277.0	657.0	228.0	15.50	8.10	15.70	385.0	1167.0	20.0	1307.0	1468.4
7Y 33 S	1560.0	4143.0	1457.0	222.80	65.70	33.40	652.0	2098.0	384.0	13260.0	9477.0
7Y 34 S	312.0	664.0	287.0	22.30	10.30	32.80	780.0	1903.0	46.0	1753.0	1650.0
7Y 35 S	1780.0	4055.0	1348.0	179.00	56.50	25.40	254.0	2345.0	291.0	1678.0	9311.1
7Y 36 S	505.0	447.0	144.0	9.90	7.20	20.30	1041.0	1913.0	42.0	6501.0	1405.7
7Y 37 S	169.0	366.0	136.0	1.90	5.40	27.60	168.0	5025.0	19.0	1133.0	870.6
7Y 38 S	1816.0	4056.0	1503.0	225.00	57.20	28.10	1269.0	2449.0	263.0	642.0	9557.0
7Y 39 S	1735.0	3914.0	2265.0	273.20	83.60	29.80	486.0	2717.0	594.0	6917.0	10684.9
7Y 40 S	1270.0	2933.0	1543.0	174.00	47.20	13.00	2054.0	3205.0	186.0	859.0	7398.3
7Y 41 S	1523.0	2819.0	1406.0	174.90	45.80	14.10	436.0	402.0	105.0	314.0	7293.1
7Y 42 S	392.0	837.0	238.0	15.80	11.90	26.80	203.0	9907.0	177.0	1865.0	1925.9
7Y 43 S	232.0	526.0	205.0	15.20	13.20	36.60	49.0	2341.0	127.0	6683.0	1393.4
7Y 44 S	1284.0	2034.0	1028.0	172.10	42.00	18.00	448.0	1886.0	394.0	8667.0	5996.5
7Y 45 S	466.0	956.0	392.0	107.90	45.30	48.70	403.0	2493.0	490.0	19109.0	3033.6
7Y 46 S	1235.0	2615.0	820.0	155.30	36.40	18.10	740.0	864.0	141.0	2372.0	6061.7
7Y 47 S	4801.0	7078.0	2294.0	203.70	67.40	16.90	245.0	1555.0	49.0	181.0	17370.8
7Y 48 S	11.0	4450.0	7662.0	415.50	109.30	42.10	1124.0	9113.0	771.0	50399.0	20523.2
7Y 49 S	11.0	2245.0	2476.0	255.00	66.80	25.10	2076.0	1807.0	210.0	4131.0	11695.5
7Y 50 S	103.0	162.0	44.0	.05	3.70	20.10	2657.0	2622.0	10.0	13989.0	411.2

NO	AREA	ROCK	OCC	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
7Y	51 S	11	680.0	1435.0	698.0	61.70	21.70	48.80	2215.0	2246.0	135.0	12480.0	3698.0	
7Y	52 S	11	376.0	1084.0	455.0	33.10	16.30	420.0	5422.0	5422.0	191.0	3167.0	2461.8	
7Y	53 S	11	1323.0	2664.0	1629.0	162.10	47.30	49.40	723.0	7957.0	61.0	2629.0	7272.5	
7Y	54 S	11	1530.0	3000.0	1591.0	110.90	34.80	45.00	971.0	15255.0	176.0	1475.0	7778.1	
7Y	55 S	11	2201.0	4620.0	2465.0	233.50	70.50	30.20	1189.0	1980.0	225.0	199.0	11802.3	
7Y	56 S	11	221.0	459.0	223.0	1.20	5.30	6.20	1520.0	12547.0	26.0	895.0	1130.6	
7Y	57 S	11	688.0	1346.0	437.0	94.00	24.30	7.30	1792.0	623.0	148.0	1397.0	3303.0	
7Y	58 S	20	759.0	1501.0	449.0	97.40	33.00	52.70	892.0	712.0	202.0	4159.0	3725.5	
7Y	59 S	20	1493.0	1146.0	1019.0	157.40	46.00	33.50	1042.0	1101.0	332.0	4188.0	4937.2	
7Y	60 S	20	298.0	595.0	207.0	32.20	11.20	9.40	1713.0	775.0	88.0	11041.0	1494.5	
7Y	61 S	20	490.0	829.0	328.0	61.90	15.50	5.90	1285.0	319.0	90.0	2372.0	2186.1	
7Y	62 S	20	276.0	876.0	198.0	41.70	11.00	5.40	885.0	200.0	45.0	1080.0	1734.8	
7Y	63 S	20	1380.0	2980.0	1107.0	221.30	59.10	35.50	724.0	788.0	243.0	3785.0	7243.6	
7Y	64 S	20	1388.0	2710.0	1123.0	274.80	77.60	81.90	730.0	4098.0	648.0	15490.0	7531.3	
7Y	65 S	20	1192.0	2455.0	757.0	170.90	37.10	38.50	1033.0	634.0	69.0	1019.0	5668.8	
7Y	66 S	20	5088.0	10918.0	3023.0	455.50	97.20	110.70	51.0	4500.0	1316.0	22483.0	25340.0	
7Y	67 S	20	616.0	384.0	320.0	39.50	11.40	1.10	795.0	298.0	78.0	238.0	1726.6	
7Y	68 S	20	395.0	1664.0	231.0	47.00	9.50	28.10	697.0	400.0	36.0	904.0	2919.7	
7Y	69 S	20	1093.0	919.0	426.0	90.00	27.30	10.70	737.0	321.0	119.0	1258.0	3205.8	
7Y	70 S	20	574.0	630.0	281.0	56.90	19.80	8.40	892.0	816.0	129.0	4884.0	2087.0	
7Y	71 S	11	2755.0	4913.0	1883.0	308.90	65.90	45.40	349.0	7080.0	96.0	2898.0	12069.2	
7Y	72 S	11	3356.0	5369.0	1246.0	195.00	50.00	48.20	1045.0	11801.0	305.0	3088.0	12710.6	
7Y	73 S	11	1351.0	2304.0	573.0	97.70	30.80	25.60	681.0	3384.0	395.0	12966.0	5762.3	
7Y	74 S	11	3172.0	6468.0	2358.0	682.90	194.20	97.40	950.0	3428.0	825.0	18478.0	16589.8	
7Y	75 S	11	2985.0	7279.0	3042.0	601.60	194.40	71.30	271.0	4720.0	503.0	1026.0	17630.8	
7Y	76 S	13	3098.0	7801.0	3723.0	822.00	235.40	81.10	45.0	2895.0	631.0	3952.0	19675.4	
7Y	77 S	13	2644.0	5899.0	2174.0	344.00	90.60	52.10	1252.0	9442.0	536.0	6449.0	14124.9	
7Y	78 S	13	7738.0	10436.0	1851.0	248.10	54.00	28.90	1173.0	23146.0	172.0	80.0	24652.4	
7Y	79 S	14	937.0	2077.0	766.0	191.10	66.10	99.40	1500.0	2066.0	776.0	14423.0	5941.0	
7Y	80 S	20	496.0	1182.0	459.0	122.10	35.10	13.80	909.0	1067.0	339.0	8137.0	3197.2	
7Y	81 S	20	391.0	722.0	270.0	81.70	25.50	7.50	1029.0	460.0	221.0	5006.0	2073.7	
7Y	82 S	20	1938.0	3602.0	814.0	137.70	29.90	15.80	906.0	214.0	56.0	2124.0	7929.3	
7Y	83 S	20	288.0	808.0	245.0	47.60	13.30	.05	853.0	269.0	131.0	1030.0	1864.5	
7Y	84 S	20	1282.0	2737.0	899.0	111.10	26.80	2.90	501.0	1655.0	108.0	1196.0	6213.5	
7Y	85 S	20	227.0	446.0	135.0	15.50	6.90	.05	850.0	2277.0	64.0	10373.0	1078.7	
7Y	86 S	11	1794.0	4277.0	1590.0	269.30	83.30	27.00	317.0	37156.0	704.0	12503.0	10544.5	
7Y	87 S	20	90.0	250.0	31.0	1.40	3.30	.05	385.0	542.0	39.0	853.0	504.3	
7Y	88 S	12	2443.0	5301.0	2096.0	294.80	86.30	9.10	55.0	7035.0	370.0	1738.0	12741.5	
7Y	89 S	12	1656.0	3587.0	1481.0	219.40	66.00	21.40	133.0	12282.0	912.0	37649.0	9588.0	
7Y	90 S	20	198.0	357.0	125.0	46.30	17.90	.05	315.0	1200.0	195.0	39867.0	1138.5	
7Y	91 S	20	101.0	206.0	73.0	32.60	13.70	.05	247.0	284.0	93.0	1304.0	628.4	
7Y	92 S	20	1046.0	1676.0	480.0	101.90	24.80	27.60	1545.0	507.0	211.0	1561.0	4291.4	
7Y	93 S	30	7305.0	12723.0	6246.0	944.00	181.20	62.30	28.0	773.0	336.0	1433.0	33278.7	
7Y	94 S	20	550.0	1690.0	384.0	106.70	26.90	.20	667.0	507.0	137.0	1852.0	3497.4	
7Y	95 S	20	1225.0	2002.0	837.0	246.80	67.70	4.70	1383.0	603.0	236.0	3076.0	5541.1	
7Y	96 S	20	548.0	1069.0	433.0	137.10	44.20	6.40	412.0	683.0	274.0	2490.0	3026.0	
7Y	97 S	20	681.0	1419.0	571.0	192.70	53.30	12.00	533.0	1507.0	258.0	3575.0	3833.9	
7Y	98 S	20	996.0	1383.0	607.0	216.80	62.30	15.60	853.0	1507.0	442.0	5256.0	4477.3	
7Y	99 S	20	1063.0	1735.0	1005.0	268.10	69.10	20.70	292.0	251.0	220.0	2199.0	5243.5	
7Y	100 S	20	567.0	592.0	404.0	82.70	21.60	.05	984.0	289.0	82.0	1443.0	2076.5	

NO AREA ROCK OCC.	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	F	REO		
7Y 101 S	20	5	1897.0	2710.0	1803.0	430.20	120.80	17.00	830.0	776.0	700.0	5697.0	9202.8
7Y 102 S	20	5	540.0	1464.0	594.0	176.00	40.30	7.00	1752.0	400.0	150.0	610.0	3573.2
7Y 103 S	20	5	2445.0	1925.0	2226.0	432.50	123.80	44.30	534.0	744.0	991.0	5694.0	9782.0
7Y 104 S	20	5	2700.0	10788.0	4079.0	681.60	118.80	27.60	457.0	827.0	154.0	2628.0	22326.5
7Y 105 S	20	5	806.0	1446.0	673.0	131.90	29.80	2.40	2454.0	466.0	147.0	841.0	3882.8
7Y 106 S	30	3	1582.0	2518.0	1503.0	269.90	60.20	63.60	5	894.0	203.0	2012.0	7414.1
7Y 107 S	30	3	4232.0	7967.0	2473.0	378.60	72.60	29.60	58.0	1193.0	185.0	2.5	18423.4
7Y 108 S	20	5	2781.0	4173.0	1913.0	369.80	94.10	46.80	415.0	5493.0	1200.0	17713.0	12732.9
7Y 109 S	20	5	1701.0	1668.0	1206.0	228.40	52.20	31.10	625.0	956.0	178.0	2157.0	6037.0
7Y 110 S	20	5	381.0	752.0	224.0	64.30	17.60	1.05	1391.0	283.0	139.0	491.0	1903.1
7Y 111 S	20	5	1497.0	2389.0	999.0	164.80	42.20	47.90	1184.0	1297.0	388.0	5289.0	6642.4
7Y 112 S	11	1	6084.0	8975.0	2219.0	286.90	66.40	17.60	21375.0	463.0	463.0	11378.0	21763.1
7Y 113 S	11	1	3408.0	7403.0	2949.0	607.80	160.80	50.50	168.0	2219.0	565.0	689.0	18193.9
7Y 114 S	30	1	374.0	599.0	592.0	160.70	47.40	36.00	76.0	2249.0	232.0	350.0	2441.9
7Y 115 S	20	5	3870.0	1151.0	2860.0	431.50	86.40	54.10	99.0	2928.0	297.0	3158.0	17695.7
7Y 116 S	20	5	1024.0	1741.0	677.0	152.80	51.20	30.20	971.0	2143.0	608.0	10882.0	5171.9
7Y 117 S	20	5	379.0	798.0	267.0	64.80	17.50	1.70	505.0	492.0	88.0	1281.0	1945.0
7Y 118 S	20	5	1387.0	2717.0	1117.0	205.10	63.10	45.80	689.0	2766.0	761.0	16703.0	7596.0
7Y 119 S	13	1	580.0	1327.0	576.0	119.60	33.20	37.90	1207.0	2156.0	239.0	3928.0	3505.8
7Y 120 S	13	5	2376.0	6295.0	2852.0	389.20	107.70	26.10	238.0	14518.0	467.0	2498.0	13231.1
7Y 121 S	13	1	2031.0	4814.0	1737.0	228.20	81.50	30.80	168.0	12003.0	715.0	11356.0	11621.9
7Y 122 S	13	1	1713.0	3686.0	1323.0	229.90	68.00	23.10	310.0	16457.0	540.0	16746.0	9136.2
7Y 123 S	13	1	3465.0	7695.0	3042.0	661.00	213.40	111.20	216.0	6123.0	2587.0	105248.0	21488.2
7Y 124 S	13	1	2360.0	5955.0	2543.0	569.80	170.20	137.70	579.0	8117.0	2457.0	107982.0	17183.1
7Y 125 S	20	5	665.0	1894.0	904.0	185.40	43.30	14.30	680.0	4035.0	184.0	4213.0	4675.3
7Y 126 S	20	5	1487.0	3145.0	1257.0	287.20	86.90	153.90	3851.0	2414.0	124.0	19256.0	9237.4
7Y 127 S	11	1	2981.0	5170.0	1464.0	244.70	60.90	101.20	902.0	2136.0	392.0	7654.0	12521.2
7Y 128 S	20	5	311.0	559.0	174.0	36.10	10.60	1.05	522.0	702.0	103.0	4412.0	1439.2
7Y 129 S	20	5	1517.0	4053.0	1766.0	317.50	74.60	81.20	192.0	1263.0	296.0	9776.0	9739.7
7Y 130 S	11	1	3438.0	3466.0	1893.0	234.90	58.30	21.00	2225.0	1611.0	169.0	382.0	13531.1
7Y 131 S	11	1	4534.0	5945.0	1374.0	181.30	33.20	11.50	1057.0	17216.0	53.0	212.0	14550.2
7Y 132 S	20	5	3292.0	4763.0	1338.0	192.20	41.70	74.60	1349.0	12513.0	151.0	1275.0	11819.5
7Y 133 S	20	5	586.0	883.0	444.0	105.70	1037.0	29.20	1037.0	1800.0	5.0	13312.0	2452.8
7Y 134 S	11	5	14949.0	16970.0	5034.0	602.90	137.10	52.70	1100.0	43085.0	575.0	9572.0	45893.0
7Y 135 S	11	5	14414.0	18252.0	3781.0	340.80	64.90	25.30	4263.0	2090.0	310.0	4270.0	44623.0
7Y 136 S	11	5	7331.0	10353.0	2698.0	418.10	102.70	35.50	1836.0	9352.0	524.0	6257.0	25768.9
7Y 137 S	20	4	701.0	1386.0	502.0	112.00	34.20	38.20	689.0	2394.0	479.0	13214.0	3931.4
7Y 138 S	11	5	6087.0	11061.0	3987.0	438.80	87.70	107.80	206.0	1513.0	181.0	754.0	25287.0
7Y 139 S	11	5	5881.0	10035.0	2841.0	354.90	84.70	30.80	804.0	1227.0	316.0	2090.0	23247.3
7Y 140 S	11	5	1447.0	3115.0	1131.0	231.80	51.10	22.60	1375.0	2461.0	108.0	4430.0	7332.5
7Y 141 S	11	5	5872.0	10061.0	2961.0	505.60	106.50	45.20	850.0	2831.0	203.0	3211.0	23714.9
7Y 142 S	11	4	4083.0	7084.0	1899.0	354.90	70.70	34.70	823.0	2008.0	239.0	2272.0	16539.8
7Y 143 S	11	4	1536.0	2907.0	861.0	184.70	43.50	62.00	1553.0	4261.0	98.0	9357.0	6835.9
7Y 144 S	11	4	3209.0	6217.0	2076.0	327.50	79.70	82.40	7001.0	3535.0	161.0	5082.0	14602.4
7Y 145 S	11	4	1082.0	2375.0	873.0	177.60	48.20	43.70	1358.0	1854.0	129.0	3440.0	5679.6
7Y 146 S	20	4	1054.0	2173.0	682.0	133.10	32.50	10.60	1564.0	1116.0	174.0	2238.0	5125.2
7Y 147 S	20	1	1314.0	2716.0	769.0	152.10	30.20	13.60	1933.0	128.0	54.0	368.0	6068.9
7Y 148 S	11	1	2863.0	5142.0	1590.0	278.40	74.60	31.80	3633.0	2585.0	486.0	10106.0	12589.8
7Y 149 S	20	4	1419.0	3034.0	1193.0	265.50	82.00	173.40	1461.0	5096.0	746.0	96785.0	8331.2
7Y 150 S	11	4	1970.0	4250.0	1598.0	434.30	142.70	67.70	3968.0	5906.0	1376.0	52089.0	11887.6
7Y 151 S	20	4	465.0	1102.0	262.0	71.50	17.10	17.60	668.0	1622.0	148.0	13469.0	2515.2

NO AREA ROCK OCC	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
7Y 152 T	620.0	1439.0	413.0	57.90	17.30	28.10	533.0	22718.0	93.0	21908.0	3213.6
7Y 153 T	730.0	1301.0	388.0	45.20	15.60	.05	.5	5470.0	99.0	842.0	3102.6
7Y 154 T	566.0	1182.0	328.0	28.60	13.50	.05	66.0	22578.0	86.0	4350.0	2655.9
7Y 155 T	508.0	1083.0	288.0	28.60	12.40	5.10	88.0	8821.0	81.0	4374.0	2417.9
7Y 156 T	825.0	1785.0	566.0	74.30	21.90	20.00	1337.0	6138.0	104.0	31760.0	4086.3
7Y 157 T	846.0	1734.0	462.0	53.60	18.20	.05	96.0	907.0	98.0	1945.0	3868.2
7Y 158 T	734.0	1848.0	457.0	45.90	17.50	29.70	194.0	3579.0	87.0	12826.0	3513.0
7Y 159 T	557.0	1164.0	284.0	42.40	8.60	5.90	255.0	421.0	59.0	5736.0	2531.4
7Y 160 T	1.5	1.0	2.5	.05	.05	.05	.5	1509.0	5.0	34.0	11.3
7Y 161 T	1505.0	2822.0	767.0	94.20	21.80	8.90	26.0	2032.0	277.0	11117.0	6621.7
7Y 162 T	2176.0	3960.0	1110.0	146.40	27.60	4.70	39.0	1122.0	71.0	382.0	9007.0
7Y 163 T	2555.0	5725.0	2024.0	362.80	79.70	13.80	261.0	370.0	137.0	327.0	13090.0
7Y 164 T	1730.0	3993.0	1676.0	391.00	97.10	29.00	132.0	1310.0	135.0	268.0	9857.7
7Y 165 T	563.0	1404.0	565.0	81.50	27.00	43.90	287.0	3587.0	166.0	25762.0	3430.5
7Y 166 T	376.0	884.0	321.0	29.60	14.70	4.10	53.0	1533.0	56.0	1490.0	2028.1
7Y 167 T	107.0	214.0	2.5	6.70	3.20	.05	123.0	503.0	26.0	4176.0	435.8
7Y 168 T	1100.0	2057.0	688.0	81.50	23.50	15.80	145.0	794.0	42.0	1998.0	4812.9
7Y 169 T	472.0	993.0	297.0	30.80	11.50	46.60	1029.0	12778.0	67.0	7863.0	2233.5
7Y 170 T	296.0	570.0	122.0	38.10	4.40	5.10	184.0	955.0	15.0	5128.0	1263.6
7Y 171 T	405.0	890.0	273.0	26.50	12.30	7.30	34.0	17168.0	71.0	10592.0	1980.7
7Y 172 T	673.0	1363.0	427.0	49.50	15.50	39.00	97.0	17912.0	84.0	22505.0	3188.0
7Y 173 T	1246.0	2731.0	1075.0	109.60	26.00	12.50	367.0	1103.0	31.0	414.0	6280.8
7Y 174 T	133.0	237.0	52.0	19.90	3.90	.05	763.0	4183.0	21.0	5883.0	562.0
7Y 175 T	1326.0	2338.0	742.0	148.50	54.40	77.90	485.0	4610.0	843.0	95748.0	6780.8
7Y 176 T	4761.0	6779.0	1349.0	166.90	28.60	7.05	1355.0	31417.0	39.0	372.0	15756.2
7Y 177 T	2716.0	4424.0	1034.0	130.10	24.30	7.40	17531.0	17531.0	24.0	352.0	10042.2
7Y 178 T	79.0	148.0	49.0	18.70	5.00	.05	90.0	1024.0	49.0	7221.0	421.3
7Y 179 T	3830.0	7855.0	2802.0	402.50	87.10	41.70	2267.0	7299.0	439.0	42094.0	18591.2
7Y 180 T	4382.0	5565.0	1158.0	127.60	24.10	7.00	490.0	23746.0	74.0	339.0	13602.1
7Y 181 T	1904.0	2649.0	617.0	144.30	47.50	16.20	586.0	10493.0	463.0	46674.0	7034.8
7Y 182 T	1834.0	2604.0	1386.0	187.70	52.70	7.60	19.0	48842.0	175.0	8524.0	7474.8
7Y 183 T	1124.0	1973.0	725.0	161.10	51.80	25.30	316.0	2570.0	541.0	34822.0	5549.7
7Y 184 T	15464.0	15265.0	2233.0	282.60	50.50	20.70	443.0	10696.0	141.0	7539.0	4007.6
7Y 185 T	3319.0	4362.0	1074.0	218.20	54.20	17.80	481.0	14923.0	371.0	15367.0	11309.5
7Y 186 T	23.0	58.0	14.0	3.30	1.70	.05	.5	240.0	5.0	399.0	126.7
7Y 187 T	819.0	1478.0	574.0	151.70	66.50	62.90	21.0	4638.0	1962.0	124135.0	6262.1
7Y 188 T	738.0	1233.0	429.0	49.30	14.40	2.80	23.0	3887.0	85.0	2031.0	3063.0
7Y 189 T	687.0	1199.0	419.0	46.30	13.30	3.70	13.0	3845.0	78.0	2069.0	2939.2
7Y 190 T	989.0	1702.0	589.0	74.90	18.90	1.90	28.0	3579.0	69.0	2528.0	4135.5
7Y 191 T	376.0	709.0	154.0	32.80	5.80	.05	400.0	856.0	42.0	4487.0	1589.4
7Y 192 T	578.0	1058.0	409.0	43.10	13.00	11.70	46.0	22267.0	79.0	8531.0	2633.0
7Y 193 T	3972.0	7384.0	2587.0	373.00	81.80	6.20	432.0	12533.0	129.0	36.0	17441.5
7Y 194 T	3365.0	7535.0	3088.0	487.00	106.70	29.90	205.0	910.0	177.0	2218.0	17713.6
7Y 195 T	1726.0	3421.0	1146.0	135.40	21.70	.05	646.0	831.0	67.0	171.0	7839.2
7Y 196 T	17569.0	25316.0	6304.0	822.70	134.90	27.10	1536.0	2554.0	432.0	24516.0	60737.3
7Y 197 T	823.0	1290.0	519.0	56.70	15.90	.05	9.0	26286.0	80.0	1175.0	3340.3
7Y 198 T	3473.0	7209.0	2518.0	297.40	49.30	13.50	63.0	535.0	114.0	1727.0	16424.9
7Y 199 T	843.0	1547.0	628.0	97.40	17.80	9.60	263.0	518.0	64.0	1270.0	3846.7
7Y 200 T	512.0	939.0	466.0	64.20	18.00	7.00	687.0	1307.0	78.0	3529.0	2499.5

NO AREA ROCK OCC.	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO	
7Y 201 T	11	447.0	970.0	322.0	36.00	11.90	.05	283.0	10885.0	94.0	12507.0	2265.9
7Y 202 T	20	70.0	118.0	39.0	8.00	1.70	.05	474.0	753.0	12.0	1148.0	299.0
7Y 203 T	12	409.0	762.0	241.0	20.30	9.60	6.60	23.0	18511.0	72.0	4307.0	1830.2
7Y 204 T	12	1279.0	2228.0	951.0	140.50	32.70	9.20	21.0	30071.0	129.0	6098.0	5720.4
7Y 205 T	12	317.0	582.0	183.0	11.30	7.60	.05	.5	22377.0	78.0	272.0	1420.9
7Y 206 T	20	15.0	25.0	2.5	5.80	.05	.05	250.0	820.0	5.0	1091.0	64.4
7Y 207 T	30	39.0	64.0	5.0	6.30	.80	1.10	196.0	1910.0	10.0	992.0	152.4
7Y 208 T	11	790.0	1301.0	644.0	84.40	21.60	12.20	635.0	1201.0	105.0	5633.0	3545.5
7Y 209 T	30	72.0	187.0	29.0	11.00	.50	.05	399.0	240.0	5.0	827.0	367.7
7Y 210 T	30	332.0	579.0	157.0	47.10	15.10	3.70	262.0	678.0	268.0	7340.0	1700.3
7Y 211 T	14	5691.0	6680.0	1209.0	149.00	17.20	1.50	1304.0	35733.0	16.0	2.5	16503.1
7Y 212 T	30	26.0	48.0	19.0	6.40	.05	.05	19.0	406.0	20.0	1123.0	144.5
7Y 213 T	30	720.0	1235.0	389.0	96.30	19.40	70.60	72.0	998.0	51.0	3215.0	3094.9
7Y 214 T	20	34.0	92.0	11.0	1.50	.05	.05	334.0	594.0	5.0	592.0	173.9
7Y 215 T	15	9862.0	18293.0	4116.0	437.20	93.90	49.30	48.0	33876.0	681.0	9185.0	40368.7
7Y 216 T	15	899.0	1580.0	583.0	94.10	30.00	27.30	568.0	11063.0	355.0	14667.0	4417.3
7Y 217 T	20	424.0	781.0	210.0	48.60	9.00	1.70	106.0	2548.0	99.0	5620.0	1895.8
7Y 218 T	20	11.0	24.0	2.5	11.60	1.00	.05	44.0	2271.0	5.0	2450.0	66.3
7Y 219 T	11	312.0	429.0	99.0	11.40	2.20	22.50	551.0	497.0	5.0	1031.0	1056.2
7Y 220 T	30	17.0	19.0	2.5	1.80	.05	.05	35.0	120.0	5.0	372.0	54.7
7Y 221 T	14	166.0	346.0	163.0	22.30	7.50	47.80	262.0	2876.0	113.0	27169.0	1042.7
7Y 222 T	11	18.0	21.0	2.5	.05	.05	7.00	130.0	8186.0	5.0	4100.0	64.3
7Y 223 T	30	197.0	440.0	222.0	53.40	19.00	112.20	15.0	2207.0	362.0	80624.0	1703.1

NO	AREA	ROCK	OCC.	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
7Y 326 T	20	1	1	514.0	939.0	342.0	51.00	12.50	.05	197.0	1752.0	88.0	11693.0	2340.2
7Y 327 T	11	1	1	2016.0	4354.0	1571.0	348.20	95.00	26.30	1870.0	4700.0	1210.0	127714.0	11624.2
7Y 328 T	30	3	1	817.0	1983.0	826.0	131.20	24.70	.05	17.0	463.0	146.0	9288.0	4839.5
7Y 329 T	11	1	1	998.0	1678.0	627.0	135.60	36.80	.05	60.0	2683.0	343.0	37374.0	4597.6
7Y 330 T	11	1	1	1134.0	2150.0	1146.0	354.00	130.80	65.30	13.0	55758.0	1399.0	92582.0	7720.6
7Y 331 T	11	1	1	15054.0	19555.0	4204.0	865.70	186.70	47.00	1192.0	43325.0	1202.0	65520.0	49374.8
7Y 332 T	11	1	1	1896.0	3239.0	939.0	196.10	45.50	20.50	7854.0	5957.0	355.0	20040.0	8051.0
7Y 333 T	14	1	1	14149.0	18154.0	2318.0	361.40	32.70	.05	1063.0	71308.0	34.0	998.0	39637.0
7Y 334 T	11	1	1	14152.0	1796.0	3200.0	745.00	170.10	58.60	835.0	5962.0	1493.0	101093.0	45209.7
7Y 335 T	14	1	1	14164.0	16064.0	2353.0	373.50	30.20	.05	25.0	45887.0	33.0	2423.0	39478.2
7Y 336 T	30	3	1	166.0	377.0	70.0	24.30	.05	.05	5.0	357.0	5.0	606.0	773.9
7Y 337 T	14	1	1	2963.0	5522.0	1774.0	514.00	142.90	36.70	348.0	4123.0	1383.0	91284.0	14885.5
7Y 338 T	11	1	1	1562.0	3073.0	1102.0	296.50	85.50	16.20	104.0	5279.0	152.0	68031.0	8688.4
7Y 339 T	11	1	1	2758.0	5977.0	2086.0	518.50	135.10	35.10	9467.0	4749.0	1528.0	120719.0	15746.0
7Y 340 T	11	1	1	2027.0	4133.0	1397.0	371.50	105.10	48.30	4931.0	4710.0	1298.0	118088.0	11455.2
7Y 341 T	11	1	1	2412.0	5145.0	1786.0	399.80	100.20	91.60	1061.0	5172.0	1178.0	120817.0	13411.1
7Y 342 T	11	1	1	1923.0	4059.0	1499.0	350.60	92.50	12.00	336.0	4351.0	836.0	84726.0	10577.3
7Y 343 T	11	1	1	1824.0	3749.0	1324.0	303.40	80.20	37.50	43.0	4306.0	787.0	106309.0	9749.2
7Y 344 T	11	1	1	4054.0	7862.0	2400.0	555.70	139.00	52.80	956.0	3427.0	1119.0	104669.0	19495.8
7Y 345 T	11	1	1	292.0	549.0	188.0	41.60	7.80	.05	359.0	1866.0	114.0	20817.0	1414.7
7Y 346 T	11	4	1	1325.0	1944.0	435.0	93.90	23.90	.05	381.0	1964.0	329.0	35299.0	5026.5
7Y 347 T	11	4	1	77.0	186.0	26.0	2.30	.05	.05	733.0	203.0	5.0	1219.0	358.2
7Y 348 T	11	4	1	2119.0	3317.0	886.0	179.10	31.50	8.70	352.0	1430.0	286.0	18665.0	8174.4
7Y 349 T	11	4	1	1376.0	2207.0	564.0	123.30	29.30	.05	490.0	1251.0	309.0	20603.0	3551.3
7Y 350 T	11	1	1	1272.0	1907.0	564.0	111.10	29.80	15.00	276.0	1399.0	371.0	31816.0	5143.3
7Y 351 T	11	1	1	1866.0	2816.0	786.0	190.50	40.80	4.40	309.0	2026.0	574.0	57755.0	7565.6
7Y 352 T	11	1	1	470.0	746.0	187.0	153.30	7.00	.05	237.0	898.0	104.0	9547.0	2003.5
7Y 353 T	14	1	1	11843.0	16369.0	3509.0	449.50	69.70	31.00	3097.0	2372.0	130.0	3197.0	38887.4
7Y 354 T	14	4	1	14951.0	23225.0	5142.0	645.70	88.60	27.20	46.0	139015.0	59.0	85.0	53134.0
7Y 355 T	14	4	1	294.0	632.0	123.0	20.70	.05	.05	275.0	1007.0	30.0	1071.0	1326.6
7Y 356 T	14	4	1	4812.0	8134.0	1812.0	251.50	38.90	.05	11.0	2656.0	58.0	62.0	18156.3
7Y 357 T	11	1	1	1643.0	2877.0	764.0	132.10	32.10	1.70	29.0	3020.0	335.0	39022.0	6723.2
7Y 358 T	11	1	1	3785.0	7234.0	2104.0	404.50	104.70	3.80	464.0	4348.0	888.0	123901.0	17499.1
7Y 359 T	11	1	1	218.0	360.0	90.0	19.00	2.50	.20	192.0	2165.0	45.0	6188.0	885.0
7Y 360 T	11	1	1	150.0	239.0	42.0	5.30	.80	.05	195.0	1035.0	5.0	2169.0	531.9
7Y 361 T	30	4	1	18698.0	24731.0	4973.0	657.90	71.70	.05	1175.0	48320.0	62.0	466.0	59025.9
7Y 362 T	11	1	1	353.0	523.0	109.0	19.90	2.40	.05	227.0	2106.0	36.0	11179.0	1255.0
7Y 363 T	11	1	1	770.0	1096.0	175.0	28.70	1.70	.05	253.0	1742.0	5.0	332.0	2494.8
7Y 364 T	14	1	1	6733.0	8365.0	1134.0	160.50	14.90	9.20	80.0	33758.0	13.0	288.0	19600.0
7Y 365 T	14	1	1	6613.0	7555.0	1068.0	147.00	11.80	.05	30.0	35698.0	13.0	592.0	13480.6
7Y 366 T	11	1	1	12298.0	14386.0	2781.0	481.80	95.60	9.60	782.0	3704.0	569.0	41979.0	36737.5
7Y 367 T	11	1	1	6836.0	11549.0	2960.0	631.10	162.80	40.10	4445.0	4044.0	1031.0	96673.0	27953.7
7Y 368 T	11	1	1	2856.0	5793.0	1808.0	395.40	112.10	50.90	1076.0	4306.0	1407.0	145772.0	15123.3
7Y 369 T	30	4	1	5833.0	8383.0	1590.0	203.60	25.90	.05	282.0	1520.0	90.0	1585.0	19370.9
7Y 370 T	30	4	1	261.0	528.0	77.0	15.50	1.20	.05	429.0	437.0	22.0	1262.0	1091.7
7Y 371 T	30	4	1	555.0	858.0	220.0	45.40	13.30	12.80	547.0	2224.0	155.0	68938.0	2240.8
7Y 372 T	11	1	1	760.0	1308.0	549.0	168.20	56.60	38.80	337.0	1732.0	812.0	63480.0	4474.4
7Y 373 T	11	1	1	765.0	1212.0	440.0	98.80	30.80	5.30	153.0	1749.0	326.0	23745.0	3469.1
7Y 374 T	11	1	1	48.0	74.0	2.5	5.90	.05	.05	109.0	1149.0	5.0	426.0	163.4
7Y 375 T	11	1	1	214.0	258.0	64.0	5.70	1.40	.05	198.0	1231.0	36.0	2332.0	696.5

NO	AREA	ROCK	OCC	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
7Y 376 T	11	1	702.0	1172.0	343.0	66.90	18.00	.05	313.0	2440.0	201.0	14126.0	3016.4	
7Y 377 T	30	4	336.0	528.0	151.0	33.90	8.70	.05	244.0	1090.0	145.0	12246.0	1452.2	
7Y 378 T	11	1	652.0	927.0	287.0	73.50	22.10	.05	300.0	2388.0	302.0	20877.0	2732.2	
7Y 379 T	11	1	10817.0	12712.0	2085.0	406.70	82.80	26.10	355.0	6398.0	672.0	47399.0	32181.0	
7Y 380 T	14	1	5449.0	9461.0	1847.0	280.90	43.50	.05	331.0	2580.0	66.0	784.0	20623.5	
7Y 381 T	14	1	1775.0	3183.0	716.0	80.40	4.10	.05	10.0	1583.0	5.0	232.0	6900.6	
7Y 382 T	14	1	1973.0	4117.0	1055.0	130.50	16.80	.05	79.0	2384.0	24.0	2851.0	8801.5	
7Y 383 T	11	1	2006.0	4345.0	1344.0	341.80	101.20	26.70	1292.0	6260.0	1141.0	109790.0	11245.3	
7Y 384 T	11	1	3400.0	5646.0	1500.0	306.70	99.40	14.30	665.0	7133.0	1152.0	111477.0	14620.9	
7Y 385 T	11	1	2345.0	4934.0	1636.0	378.30	118.20	70.20	6278.0	4551.0	1566.0	136541.0	13362.5	
7Y 386 T	14	1	22610.0	26527.0	3412.0	468.40	41.60	317.60	553.0	90645.0	32.0	822.0	64072.8	
7Y 387 T	12	1	508.0	748.0	230.0	.05	6.40	.05	5	16585.0	97.0	5701.0	1913.3	
7Y 388 T	11	1	1684.0	3706.0	1269.0	278.30	88.00	48.90	404.0	4071.0	1204.0	103707.0	10016.0	
7Y 389 T	14	1	8440.0	11560.0	1704.0	203.70	21.50	3.10	218.0	41626.0	17.0	334.0	26369.0	
7Y 390 T	12	1	436.0	681.0	211.0	.05	4.20	.05	10.0	15506.0	70.0	8341.0	1687.6	
7Y 391 T	30	1	15.0	43.0	2.5	.05	.05	.05	30.0	82.0	5.0	72.0	79.8	
7Y 392 T	30	1	128.0	161.0	92.0	2.50	2.80	1.90	35.0	314.0	42.0	319.0	516.8	
7Y 393 T	30	4	33.0	93.0	6.0	9.90	.05	34.50	80.0	132.0	5.0	574.0	217.5	
7Y 394 T	30	5	67.0	133.0	17.0	12.50	.05	.05	88.0	120.0	5.0	898.0	282.7	
7Y 395 T	30	5	24.0	29.0	2.5	11.80	.05	.05	96.0	147.0	5.0	962.0	86.8	
7Y 396 T	30	5	49.0	116.0	27.0	7.50	.05	.05	19.0	121.0	5.0	217.0	245.3	
7Y 397 T	30	5	71.0	185.0	31.0	23.60	.40	5.00	103.0	170.0	5.0	232.0	386.6	
7Y 398 T	30	5	247.0	441.0	154.0	27.60	3.30	.05	163.0	118.0	15.0	390.0	1065.8	
7Y 399 T	30	5	636.0	761.0	354.0	75.70	16.50	.05	84.0	445.0	485.0	6642.0	2803.9	
7Y 400 T	30	5	139.0	193.0	116.0	32.40	2.90	25.00	67.0	129.0	16.0	556.0	648.8	
7Y 401 T	30	5	98.0	225.0	31.0	32.30	.05	.05	97.0	79.0	10.0	466.0	477.7	
7Y 402 T	30	5	36.0	19.0	2.5	17.60	.05	.05	20.0	271.0	5.0	626.0	95.4	
7Y 403 T	30	5	81.0	89.0	53.0	9.70	1.20	17.90	20.0	263.0	14.0	523.0	317.1	
7Y 404 T	30	5	281.0	327.0	186.0	50.10	5.80	4.30	88.0	191.0	58.0	687.0	1091.5	
7Y 405 T	30	5	63.0	401.0	47.0	24.20	1.60	.05	52.0	64.0	5.0	279.0	657.3	

NO	AREA	ROCK	OCC.	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
7Y	224	K	11	4	156.0	246.0	1.40	1.60	6.40	6.0	12103.0	5.0	2132.0	530.9
7Y	225	K	30	4	293.0	587.0	24.10	6.70	42.40	54.0	15814.0	5.0	25688.0	1469.0
7Y	226	K	11	1	353.0	510.0	100.00	2.90	18.00	1027.0	130698.0	14.0	18534.0	1237.0
7Y	227	K	11	1	556.0	853.0	16.70	4.10	29.50	110.0	124636.0	5.0	15563.0	2046.3
7Y	228	K	30	1	497.0	736.0	25.10	6.10	6.40	110.0	254639.0	5.0	31862.0	1841.0
7Y	229	K	30	1	153.0	333.0	17.60	5.60	39.70	412.0	5252.0	21.0	36460.0	845.0
7Y	230	K	11	3	114.0	133.0	.05	.05	1.20	387.0	64990.0	5.0	9211.0	325.9
7Y	231	K	11	3	710.0	1258.0	24.70	1.80	6.60	12.0	104755.0	5.0	17096.0	2839.8
7Y	232	K	11	3	124.0	163.0	.05	.05	4.90	62.0	3140.0	5.0	6214.0	379.9
7Y	233	K	11	3	484.0	832.0	18.50	.80	1.30	470.0	30161.0	5.0	8618.0	1865.7
7Y	234	K	11	3	267.0	514.0	18.90	4.50	2.90	38.0	23028.0	5.0	24875.0	1212.1
7Y	235	K	11	3	428.0	584.0	8.90	.05	.20	7.0	7895.0	5.0	10427.0	1391.2
7Y	236	K	11	3	250.0	369.0	.05	.05	2.40	141.0	10786.0	5.0	14102.0	839.6
7Y	237	K	11	3	728.0	1205.0	23.00	2.00	.05	728.0	12856.0	5.0	7361.0	2678.1
7Y	238	K	11	3	247.0	324.0	1.00	.05	6.10	4.0	120020.0	5.0	13624.0	792.0
7Y	239	K	11	3	711.0	1323.0	36.40	3.70	15.00	124.0	38805.0	5.0	15885.0	2933.4
7Y	240	K	11	3	1031.0	1476.0	26.40	2.80	11.40	401.0	55833.0	5.0	11053.0	3511.7
7Y	241	K	11	3	382.0	557.0	7.10	.05	5.80	26.0	70412.0	5.0	8834.0	1303.8
7Y	242	K	11	3	973.0	1380.0	45.60	7.80	12.10	133.0	79714.0	21.0	31107.0	3367.6
7Y	243	K	11	3	344.0	707.0	35.80	4.60	23.20	3.0	61442.0	5.0	12911.0	1707.2
7Y	244	K	11	1	367.0	679.0	21.00	3.60	5.90	587.0	29923.0	5.0	7183.0	1616.1
7Y	245	K	11	1	618.0	1419.0	48.30	5.90	12.30	338.0	31018.0	5.0	14586.0	3166.9
7Y	246	K	11	1	180.0	419.0	32.80	6.80	20.60	809.0	5969.0	12.0	27319.0	1054.2
7Y	247	K	11	1	393.0	738.0	26.90	5.10	11.80	334.0	19223.0	5.0	12351.0	1757.8
7Y	248	K	11	1	1314.0	2731.0	98.30	12.70	91.70	178.0	24321.0	5.0	7067.0	6218.8
7Y	249	K	11	1	448.0	8120.0	204.90	25.80	6.70	1382.0	33474.0	5.0	17325.0	17917.7
7Y	250	K	11	3	1281.0	2745.0	144.70	22.50	11.50	7.0	143257.0	13.0	6564.0	6354.1
7Y	251	K	11	1	2857.0	6491.0	348.40	59.20	12.70	11.0	31742.0	24.0	9065.0	15199.3
7Y	252	K	11	1	4536.0	9105.0	321.00	43.60	9.80	110.0	46907.0	13.0	28328.0	20809.4
7Y	253	K	11	1	516.0	1468.0	69.80	12.30	30.10	552.0	7141.0	15.0	40097.0	3124.7
7Y	254	K	11	1	4779.0	10045.0	360.00	55.80	10.40	236.0	37150.0	22.0	21215.0	23015.2
7Y	255	K	20	3	984.0	2058.0	87.90	15.20	20.30	894.0	5966.0	25.0	20366.0	4721.2
7Y	256	K	11	3	2049.0	4679.0	237.00	44.90	6.60	177.0	31917.0	31.0	12280.0	10931.0
7Y	257	K	11	3	5260.0	8886.0	220.90	29.20	12.70	40.0	15435.0	21.0	15509.0	20366.8
7Y	258	K	11	3	650.0	1248.0	46.80	6.40	3.30	36.0	45562.0	5.0	1748.0	2918.4
7Y	259	K	30	3	300.0	1146.0	72.70	11.80	5.20	326.0	1706.0	5.0	5148.0	2393.1
7Y	260	K	11	3	2477.0	4279.0	141.30	24.30	14.00	7.0	44514.0	13.0	23502.0	10033.5
7Y	261	K	12	3	1080.0	1830.0	63.80	9.80	20.60	1.0	132229.0	5.0	3136.0	4337.3
7Y	262	K	11	3	3139.0	6418.0	260.60	44.80	19.30	18.0	56295.0	27.0	10428.0	14856.4
7Y	263	K	11	3	1024.0	1756.0	45.80	6.80	2.90	6322.0	26252.0	5.0	5100.0	4019.4
7Y	264	K	11	3	2043.0	4323.0	1709.00	31.90	20.70	83.0	4371.0	10.0	30709.0	9998.6
7Y	265	K	11	3	4174.0	9161.0	385.00	66.80	14.40	574.0	14865.0	43.0	9891.0	20954.9
7Y	266	K	11	3	1484.0	2821.0	141.00	30.90	11.70	574.0	14865.0	71.0	5956.0	6712.4
7Y	267	K	30	3	4069.0	8679.0	357.20	59.10	.60	18.0	1369.0	50.0	4938.0	19840.7
7Y	268	K	11	1	3320.0	6305.0	155.70	21.50	.05	164.0	28459.0	18.0	6135.0	14120.4
7Y	269	K	11	1	3280.0	6319.0	145.80	19.20	1.60	679.0	21028.0	11.0	7486.0	13984.3
7Y	270	K	11	1	13142.0	21134.0	442.80	58.50	17.10	321.0	106675.0	26.0	12513.0	47903.3
7Y	271	K	11	3	1306.0	2353.0	613.0	7.00	.05	1247.0	33561.0	13.0	4207.0	5217.2
7Y	272	K	11	1	6552.0	10866.0	271.0	30.50	.05	281.0	67282.0	18.0	6691.0	24527.7
7Y	273	K	11	1	7644.0	14468.0	349.70	47.10	11.50	342.0	109222.0	24.0	16255.0	31585.0

NO AREA ROCK OCC		La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
11	1	15906.0	30407.0	8503.0	781.70	108.20	12.70	92.0	136351.0	45.0	20727.0	67018.2
11	1	25312.0	34763.0	6955.0	706.20	93.40	.60	155.0	272311.0	58.0	24908.0	81491.2
11	1	2824.0	5105.0	1397.0	113.80	14.70	16.60	73.0	86085.0	15.0	5032.0	11397.6
11	1	2486.0	4889.0	1684.0	139.20	18.10	4.40	957.0	16031.0	5.0	5573.0	11077.2
11	1	9745.0	19458.0	5151.0	480.00	70.30	9.60	97.0	99476.0	27.0	17212.0	42014.9
11	1	4588.0	8150.0	2545.0	219.90	33.90	4.10	86.0	57337.0	13.0	15448.0	18673.0
11	1	16816.0	33549.0	9478.0	910.50	128.60	12.90	968.0	163288.0	23.0	19459.0	73226.4
11	1	18890.0	31495.0	7947.0	659.70	94.10	2.10	37.0	285777.0	32.0	26635.0	71017.3
11	1	2204.0	3655.0	923.0	92.70	18.30	1.20	10.0	63104.0	54.0	42179.0	8354.4
11	1	8755.0	17883.0	4511.0	420.40	94.50	12.30	181.0	15662.0	26.0	15662.0	38134.0
11	1	4369.0	9043.0	2963.0	274.50	48.00	27.50	441.0	8991.0	13.0	16036.0	20107.9
11	1	3470.0	6858.0	2177.0	180.30	26.20	66.10	307.0	33382.0	5.0	13858.0	15352.2
11	1	6214.0	12674.0	3434.0	282.10	41.20	8.70	308.0	58334.0	21.0	13358.0	27268.4
11	1	3178.0	4399.0	1426.0	113.90	18.00	4.20	570.0	43638.0	12.0	24683.0	9780.2
11	1	3261.0	6541.0	2169.0	182.10	27.70	17.40	851.0	20121.0	5.0	9627.0	14656.2
11	1	3513.0	6993.0	2405.0	229.10	36.80	4.10	625.0	33616.0	15.0	15591.0	15444.5
11	1	4281.0	13209.0	5549.0	653.40	124.90	127.80	119.0	17440.0	70.0	53559.0	28851.0
11	1	304.0	1936.0	877.0	32.20	15.60	.05	4.0	4566.0	5.0	1468.0	4462.9
11	4	1195.0	2641.0	1014.0	128.90	27.20	85.50	730.0	11578.0	117.0	50291.0	6255.2
11	1	295.0	689.0	257.0	46.80	15.10	32.40	1049.0	10937.0	273.0	90003.0	1959.8
11	1	1388.0	2331.0	769.0	86.60	19.90	.05	432.0	22126.0	35.0	7402.0	5616.7
11	1	1252.0	2682.0	1025.0	148.80	37.40	19.40	871.0	21226.0	189.0	83656.0	6435.5
11	1	2941.0	5987.0	1896.0	155.40	21.00	49.40	493.0	16546.0	5.0	25605.0	13255.8
11	1	3578.0	7354.0	2400.0	185.10	26.50	16.30	777.0	30332.0	5.0	16313.0	16296.8
11	1	3319.0	6687.0	2010.0	146.60	20.60	9.30	2575.0	44732.0	5.0	5311.0	14659.4
11	1	3521.0	6899.0	2106.0	195.40	28.40	1.05	1284.0	18070.0	5.0	11292.0	15323.7
11	1	732.0	1440.0	597.0	45.50	8.70	1.50	1893.0	14161.0	5.0	2551.0	3394.0
11	1	2662.0	5200.0	1604.0	123.30	17.00	.05	993.0	29012.0	5.0	17911.0	11547.5
11	1	16125.0	23876.0	4697.0	397.30	50.20	8.60	110.0	104928.0	31.0	11836.0	54279.3
11	1	506.0	1049.0	280.0	15.70	3.10	.05	3.0	12688.0	5.0	3023.0	2353.7
11	1	3091.0	6285.0	1947.0	153.30	22.30	17.10	508.0	12861.0	5.0	9639.0	13843.6
11	1	3115.0	6072.0	1838.0	144.80	20.50	6.60	37.0	26855.0	5.0	17205.0	13459.1
11	1	4553.0	7274.0	2164.0	155.40	23.60	5.90	57.0	79198.0	5.0	14327.0	17017.1
11	1	1876.0	3753.0	1324.0	90.30	14.30	.05	450.0	21261.0	5.0	18146.0	8480.7
11	1	5764.0	11477.0	3694.0	312.60	42.40	5.80	838.0	52643.0	13.0	6630.0	25597.0
11	1	3506.0	6779.0	2017.0	171.70	22.00	.05	186.0	29207.0	5.0	7199.0	15020.0
11	1	5927.0	8979.0	2768.0	218.60	27.70	8.40	230.0	56548.0	12.0	14482.0	21164.7
11	1	7352.0	13990.0	4998.0	482.10	62.00	52.20	136.0	81044.0	20.0	27378.0	32313.0
11	1	4059.0	7380.0	2339.0	212.90	28.50	.05	832.0	26321.0	17.0	13295.0	16852.7
11	1	2772.0	4543.0	1283.0	121.10	18.20	7.60	1025.0	5395.0	14.0	3133.0	10614.4
11	1	14219.0	26309.0	8805.0	888.60	107.90	8.70	549.0	65133.0	34.0	17009.0	60392.3
11	3	1945.0	3813.0	1159.0	112.50	13.40	23.40	583.0	15983.0	5.0	13268.0	8494.5
11	3	5489.0	10756.0	2963.0	310.30	43.90	21.70	173.0	44306.0	23.0	12286.0	23566.8
11	3	6198.0	10448.0	2948.0	284.20	37.80	9.40	23.0	344408.0	37.0	7230.0	23969.0
11	1	8139.0	14580.0	4231.0	396.60	52.70	7.10	26.0	65840.0	25.0	16458.0	32945.6
11	1	5361.0	10548.0	3434.0	333.80	49.80	3.90	22.0	36331.0	20.0	10708.0	23720.2
11	1	15138.0	27653.0	8175.0	757.90	106.00	18.70	89.0	150472.0	28.0	24027.0	62305.8
11	1	1768.0	3681.0	1240.0	114.10	17.10	28.60	753.0	19518.0	20.0	17857.0	8250.4
11	1	3324.0	5519.0	1367.0	78.20	16.70	4.30	1504.0	40061.0	6.0	5725.0	12392.9
11	1	5210.0	9228.0	2670.0	428.90	35.10	.05	51.0	32967.0	18.0	6787.0	2117.6
11	1	6390.0	7971.0	1630.0	160.90	19.30	1.50	188.0	47731.0	10.0	4288.0	19407.9
11	1	19198.0	26794.0	6354.0	582.60	75.10	6.10	53.0	115800.0	31.0	19818.0	63640.2

Appendix 2

Assay results (Drilling core samples)

Abbreviation

NO.	REO
S01~S11 :JMS-1~JMS-11	$\text{La}_2\text{O}_3 + \text{CeO}_2 + \text{Nd}_2\text{O}_3 + \text{Sm}_2\text{O}_3$
T01~T24 :JMT-1~JMT-24	$+ \text{Eu}_2\text{O}_3 + \text{Tb}_2\text{O}_3 + \text{Y}_2\text{O}_3$

Location

Depth 1 : shallow part (m)

Depth 2 : deep part (m)

NO	DEPTH	DEPTH	THICK	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
S 101	10.0	13.9	3.9	1316.0	2761.0	942.0	156.00	41.00	18.00	637.0	1556.0	202.0	3154.0	6534.8
S 102	13.9	17.1	3.2	1395.0	2934.0	1176.0	182.10	52.40	16.00	1612.0	4550.0	295.0	4185.0	7275.5
S 103	17.1	19.9	2.8	810.0	1628.0	656.0	151.10	38.60	12.80	890.0	1653.0	168.0	2153.0	4162.3
S 104	19.9	21.9	2.0	2743.0	5345.0	2038.0	306.80	78.90	17.50	1111.0	2054.0	395.0	2298.0	13125.6
S 105	21.9	24.0	2.1	2366.0	4601.0	1718.0	262.10	62.40	06	1757.0	1639.0	238.0	1191.0	11107.1
S 106	24.0	24.9	0.9	2402.0	4667.0	1603.0	263.80	64.70	14.30	449.0	1528.0	32.0	246.0	11227.9
S 107	24.9	26.7	1.8	6365.0	11908.0	4139.0	686.70	157.80	22.90	130.0	3062.0	475.0	1914.0	28524.2
S 108	26.7	27.8	1.1	1177.0	2595.0	1036.0	143.60	40.00	25.80	2471.0	3368.0	331.0	8729.0	6439.4
S 109	27.8	29.0	1.2	1370.0	2819.0	1063.0	199.40	51.10	5.00	2893.0	1823.0	251.0	2594.0	6923.2
S 110	29.0	31.9	3.1	2256.0	4324.0	1442.0	228.10	57.60	13.90	914.0	2009.0	274.0	3014.0	10332.8
S 111	31.9	33.6	1.7	1190.0	2617.0	1227.0	232.20	58.40	05	690.0	2268.0	370.0	6085.0	6847.2
S 112	33.6	36.6	3.0	1084.0	2132.0	840.0	172.50	46.00	14.40	857.0	1853.0	442.0	7804.0	9774.0
S 113	36.6	38.1	1.5	1761.0	3724.0	1459.0	238.40	63.60	29.90	821.0	2328.0	362.0	417.0	9195.9
S 114	38.1	40.9	2.8	1814.0	3800.0	1855.0	357.90	90.40	36.30	396.0	1855.0	673.0	8571.0	10373.5
S 115	44.0	47.8	3.8	19.0	39.0	7.0	06	2.90	05	7.0	475.0	5.0	43.0	88.2
S 201	17.0	19.9	2.9	2694.0	5081.0	1655.0	278.20	70.70	23.70	401.0	3707.0	318.0	6473.0	12140.4
S 202	19.9	22.3	2.4	3783.0	7716.0	2564.0	353.10	73.30	14.30	290.0	2393.0	270.0	2086.0	17872.8
S 203	22.3	24.4	2.1	3093.0	6016.0	2215.0	451.60	123.80	40.10	2038.0	3288.0	536.0	5475.0	15109.1
S 204	24.4	26.1	1.7	3666.0	6560.0	2265.0	469.40	141.90	31.00	1750.0	3515.0	659.0	5905.0	16578.3
S 205	26.1	29.0	2.9	2310.0	4322.0	1520.0	288.40	82.20	24.50	1219.0	2902.0	528.0	10070.0	10917.9
S 206	27.6	40.6	3.0	5042.0	9243.0	3159.0	514.00	130.00	63.30	853.0	3347.0	556.0	11545.0	22473.8
S 207	40.6	44.4	3.8	2477.0	4344.0	1476.0	256.90	60.90	17.60	580.0	2060.0	162.0	297.0	10554.8
S 208	43.4	50.1	6.7	1056.0	1846.0	541.0	93.40	22.20	15.50	146.0	2344.0	134.0	337.0	4458.5
S 301	3.1	3.7	0.6	2298.0	4366.0	1502.0	395.60	110.10	36.90	1496.0	1337.0	298.0	6702.0	10932.3
S 302	5.4	5.9	0.5	6300.0	10302.0	3225.0	689.30	101.80	32.80	138.0	9376.0	203.0	1594.0	24992.1
S 303	14.0	14.0	0.0	3822.0	6420.0	1894.0	284.90	61.10	22.80	283.0	4835.0	348.0	854.0	15421.6
S 304	13.0	16.4	3.4	3509.0	5838.0	1734.0	233.70	65.10	21.40	1307.0	11312.0	367.0	12018.0	14144.2
S 305	16.4	16.6	0.2	1980.0	3724.0	1150.0	184.60	53.70	36.00	703.0	7814.0	567.0	5170.0	9274.4
S 306	16.6	20.8	4.2	9108.0	13307.0	3289.0	501.80	113.70	25.70	1687.0	20889.0	405.0	12466.0	32117.3
S 307	29.0	31.4	2.4	1315.0	2620.0	867.0	165.00	39.20	7.10	824.0	391.0	96.0	2093.0	6137.7
S 308	39.0	40.5	1.5	1997.0	3502.0	996.0	170.90	44.60	10.60	726.0	2182.0	247.0	4488.0	8880.1
S 309	49.1	51.2	2.1	1375.0	2694.0	920.0	157.40	48.40	14.00	537.0	7332.0	377.0	8990.0	6727.4
S 310	51.2	53.1	1.9	1061.0	2046.0	646.0	105.90	33.10	2.50	741.0	6844.0	238.0	6063.0	4976.6
S 311	54.3	54.8	0.5	1206.0	2659.0	885.0	194.40	46.50	14.60	690.0	8147.0	207.0	1208.0	6224.4
S 312	54.8	56.0	1.2	764.0	1764.0	573.0	105.30	30.30	8.70	555.0	5916.0	192.0	2721.0	4142.3
S 401	5.1	6.4	1.3	1922.0	4264.0	1448.0	373.70	110.40	46.60	691.0	4563.0	431.0	1938.0	10691.2
S 402	9.0	10.8	1.8	1983.0	4510.0	2655.0	551.50	158.50	89.80	55.0	10311.0	603.0	423.0	12805.6
S 403	27.8	30.4	2.6	2020.0	4884.0	2416.0	493.80	132.30	79.50	25.0	4055.0	477.0	1484.0	12607.4
S 404	30.4	33.0	2.6	2688.0	6097.0	3046.0	738.40	205.60	80.60	26.0	9445.0	695.0	3075.0	16261.8
S 405	33.0	35.0	2.0	4519.0	8327.0	3279.0	519.90	107.90	33.90	28.0	2034.0	333.0	1566.0	20539.6
S 406	38.1	41.2	3.1	3650.0	7266.0	2763.0	449.60	108.40	79.50	1574.0	2471.0	769.0	10265.0	18141.0
S 407	41.2	44.2	3.0	3434.0	6681.0	2408.0	366.70	96.80	75.80	1488.0	2511.0	648.0	7484.0	16487.8
S 408	44.2	47.2	3.0	3033.0	6841.0	2778.0	430.90	116.00	70.10	1897.0	2851.0	859.0	653.0	17003.4
S 409	47.2	50.4	3.2	10017.0	13245.0	2969.0	436.00	90.00	49.80	1957.0	24393.0	412.0	3233.0	32667.2
S 410	50.4	53.3	2.9	3350.0	8081.0	2202.0	311.00	74.40	33.00	1957.0	19154.0	510.0	12283.0	20005.5
S 501	13.2	13.8	0.6	2111.0	4523.0	1855.0	311.20	98.30	84.80	2418.0	3756.0	670.0	15040.0	11671.2
S 502	16.1	17.8	1.7	3197.0	6539.0	2414.0	335.50	86.10	54.00	1070.0	4701.0	276.0	4701.0	15348.0
S 503	18.6	21.0	2.4	2527.0	4967.0	1934.0	314.30	78.00	38.10	1065.0	3120.0	395.0	10053.0	12336.4
S 504	21.6	25.9	4.3	2078.0	3954.0	1506.0	263.80	70.40	43.80	1375.0	7566.0	264.0	6115.0	9822.2
S 505	29.1	33.5	4.4	2310.0	4653.0	1863.0	299.60	77.40	70.80	1272.0	7834.0	408.0	15398.0	11632.6
S 506	35.0	40.0	5.0	2352.0	4541.0	1839.0	287.00	81.70	84.40	1887.0	4678.0	438.0	10620.0	11560.5
S 507	40.0	43.7	3.7	2234.0	4308.0	1809.0	220.00	73.30	52.60	1214.0	2674.0	351.0	7601.0	10947.5
S 508	43.7	46.2	2.5	1575.0	3256.0	1318.0	246.00	65.60	57.10	1943.0	2594.0	239.0	5760.0	8346.6
S 509	46.2	50.7	4.5	3365.0	6156.0	2396.0	331.50	102.40	69.30	1463.0	5836.0	403.0	13653.0	15433.1
S 510	50.7	52.0	1.3	1447.0	2953.0	1325.0	211.20	69.70	67.10	274.0	11071.0	809.0	96676.0	8238.9
S 601	6.3	7.4	1.1	2081.0	4416.0	2083.0	316.70	90.70	55.80	3359.0	2178.0	317.0	37.0	11231.9

	NO DEPTH1		DEPTH2 THICK		La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
S 602	7.4	9.3	1.9	1500.0	3046.0	1426.0	220.70	68.10	50.60	887.0	3849.0	330.0	3539.0	3539.0	7974.9
S 603	9.3	10.2	.9	864.0	1874.0	750.0	141.50	42.40	31.90	473.0	1840.0	262.0	6901.0	6901.0	4528.3
S 604	10.2	13.5	3.3	1402.0	2867.0	1184.0	246.10	73.40	62.70	465.0	2670.0	631.0	9631.0	9631.0	7798.8
S 605	13.5	14.6	1.1	1305.0	3670.0	2146.0	477.80	106.30	111.40	515.0	1320.0	121.0	86.0	86.0	9499.0
S 606	14.6	16.6	2.0	973.0	2243.0	1248.0	289.30	87.40	54.40	684.0	2393.0	517.0	6998.0	6998.0	6517.3
S 607	19.2	19.9	.7	771.0	1700.0	865.0	205.60	74.30	71.20	884.0	2350.0	555.0	11534.0	11534.0	5111.9
S 608	23.9	25.2	1.3	1432.0	3121.0	1470.0	324.10	93.90	35.70	426.0	1711.0	312.0	1112.0	1112.0	8121.7
S 609	32.5	33.0	1.5	1031.0	2343.0	1300.0	389.10	92.40	28.40	597.0	1331.0	312.0	710.0	710.0	6436.9
S 610	38.1	39.9	1.8	1798.0	3891.0	1833.0	418.80	118.80	61.60	520.0	2107.0	468.0	3881.0	3881.0	10339.6
S 701	3.9	4.2	.3	1763.0	3551.0	1381.0	232.60	64.70	23.20	3270.0	2303.0	285.0	1389.0	1389.0	8772.1
S 702	6.0	8.0	2.0	2265.0	4776.0	2045.0	319.20	88.20	41.90	800.0	12637.0	476.0	6120.0	6120.0	12031.4
S 703	8.0	9.8	1.8	1570.0	3376.0	1436.0	286.00	65.20	53.60	8058.0	6814.0	468.0	19790.0	19790.0	8587.0
S 704	31.7	33.8	2.1	455.0	773.0	237.0	64.10	20.20	11.60	723.0	73.0	161.0	7578.0	7578.0	2077.3
S 705	33.8	35.8	2.0	285.0	701.0	335.0	96.00	27.80	9.40	596.0	674.0	221.0	5349.0	5349.0	2020.8
S 801	1.7	2.6	.9	1783.0	3591.0	1495.0	212.50	58.50	36.90	730.0	10947.0	566.0	8612.0	8612.0	9319.9
S 802	2.6	4.3	1.7	1679.0	3360.0	1456.0	208.50	60.10	46.20	690.0	9918.0	670.0	8805.0	8805.0	9008.8
S 803	6.0	8.2	2.2	1625.0	3297.0	1580.0	289.90	85.90	42.10	1562.0	2675.0	765.0	5365.0	5365.0	9217.9
S 804	8.2	10.8	2.6	820.0	1675.0	630.0	166.40	47.00	6.20	733.0	1488.0	301.0	1901.0	1901.0	4378.6
S 805	10.8	12.7	1.9	798.0	1864.0	682.0	130.70	37.60	14.90	1225.0	1951.0	314.0	2619.0	2619.0	4608.0
S 806	12.7	14.3	1.6	625.0	1507.0	538.0	98.10	32.40	12.50	1504.0	1662.0	440.0	6119.0	6119.0	3935.5
S 807	14.3	16.3	2.0	1263.0	1748.0	386.0	92.50	29.80	5.60	295.0	786.0	277.0	2329.0	2329.0	4554.8
S 808	19.7	21.7	2.0	574.0	775.0	150.0	50.80	17.00	39.50	445.0	608.0	73.0	1081.0	1081.0	2016.7
S 901	4.0	5.3	1.3	1662.0	3699.0	1735.0	338.70	91.60	35.20	793.0	1736.0	347.0	1156.0	1156.0	9479.9
S 902	9.8	11.0	1.2	2197.0	4012.0	1555.0	280.10	79.60	51.70	426.0	1937.0	453.0	3391.0	3391.0	10415.5
S 903	34.6	37.1	2.5	2087.0	4148.0	1686.0	303.40	76.00	32.70	1296.0	1784.0	434.0	5866.0	5866.0	10536.4
S 904	41.1	41.6	1.5	2387.0	4746.0	1935.0	347.00	87.30	62.80	689.0	2858.0	689.0	7609.0	7609.0	12338.2
S 905	44.8	45.8	1.0	2148.0	4204.0	1946.0	396.00	126.10	145.90	514.0	3827.0	1867.0	28993.0	28993.0	13095.6
S 906	47.2	49.6	2.4	2564.0	5207.0	2133.0	332.10	81.30	26.60	683.0	2105.0	352.0	1033.0	1033.0	12834.2
S1001	6.7	8.9	2.2	2765.0	5313.0	2334.0	298.90	84.70	63.10	2338.0	2482.0	510.0	1940.0	1940.0	13690.2
S1002	11.8	13.0	1.2	4705.0	8044.0	2512.0	327.40	81.70	67.10	661.0	3371.0	509.0	15339.0	15339.0	19524.0
S1003	13.0	14.3	1.3	3080.0	5161.0	2539.0	390.30	97.30	52.30	235.0	1802.0	763.0	18593.0	18593.0	15792.0
S1004	14.3	17.9	3.6	2704.0	5709.0	2298.0	403.80	105.20	192.00	966.0	15019.0	1082.0	33256.0	33256.0	15047.3
S1005	18.9	23.5	4.6	2773.0	5977.0	2370.0	345.00	89.30	145.90	2328.0	11252.0	674.0	11558.0	11558.0	14883.4
S1006	23.5	25.4	1.9	1816.0	3556.0	1584.0	232.10	66.70	81.80	544.0	12903.0	580.0	7693.0	7693.0	9521.1
S1007	25.7	29.4	3.7	1759.0	3630.0	1440.0	205.70	59.30	66.90	663.0	13864.0	522.0	7988.0	7988.0	9247.2
S1008	29.4	32.8	3.4	2954.0	4710.0	1490.0	229.60	60.80	66.50	1854.0	8376.0	559.0	9532.0	9532.0	12109.5
S1009	32.8	35.8	3.0	3175.0	4424.0	1217.0	171.40	46.70	39.40	603.0	14527.0	484.0	7255.0	7255.0	11463.5
S1010	35.8	38.8	3.0	2883.0	3704.0	1532.0	224.50	67.20	93.90	1573.0	7796.0	535.0	10425.0	10425.0	10850.5
S1011	38.8	42.9	4.1	7712.0	9454.0	2266.0	305.70	71.10	110.80	1032.0	4513.0	533.0	12215.0	12215.0	24602.7
S1012	42.9	45.3	2.4	1629.0	2777.0	908.0	142.60	43.70	72.50	256.0	9460.0	495.0	12678.0	12678.0	7305.5
S1013	45.3	46.6	1.3	1725.0	2847.0	896.0	182.10	49.70	35.80	795.0	10527.0	384.0	7358.0	7358.0	7336.6
S1014	46.6	48.5	1.9	1131.0	2323.0	843.0	122.60	36.80	33.20	1239.0	12401.0	332.0	8143.0	8143.0	5806.9
S1015	48.5	51.0	2.5	1533.0	3157.0	1134.0	175.50	52.80	44.00	859.0	12917.0	417.0	10915.0	10915.0	7830.5
S1101	7.7	4.3	3.6	1388.0	2848.0	1131.0	139.80	32.50	23.20	2789.0	1509.0	139.0	7336.0	7336.0	6562.6
S1102	4.3	7.0	2.7	2506.0	5888.0	2371.0	221.00	73.80	32.30	455.0	2698.0	451.0	32845.0	32845.0	13886.4
S1103	7.0	11.0	4.0	1793.0	4579.0	2041.0	300.50	67.30	16.70	295.0	1212.0	209.0	1413.0	1413.0	10817.2
S1104	11.0	14.0	3.0	224.0	4662.0	1894.0	244.10	56.80	32.20	2703.0	1401.0	373.0	10356.0	10356.0	11401.8
S1105	14.0	17.0	3.0	665.0	1465.0	553.0	84.10	23.70	25.30	422.0	1309.0	220.0	15188.0	15188.0	3663.2
S1106	17.0	20.0	3.0	2289.0	5162.0	2248.0	292.60	71.20	22.70	558.0	1036.0	325.0	3246.0	3246.0	12505.8
S1107	20.0	23.0	3.0	2205.0	4504.0	1782.0	236.30	56.90	24.00	2400.0	1365.0	306.0	6860.0	6860.0	10950.3
S1108	23.0	26.0	3.0	2522.0	5104.0	1964.0	236.00	55.90	22.10	793.0	2212.0	234.0	6310.0	6310.0	12237.7
S1109	26.0	29.0	3.0	2344.0	5205.0	2068.0	281.10	75.20	33.10	660.0	3827.0	425.0	5018.0	5018.0	12444.7
S1110	29.0	33.4	4.4	2351.0	5156.0	2118.0	276.20	71.60	37.90	2677.0	2346.0	348.0	6310.0	6310.0	12447.8
S1111	44.3	47.3	3.0	1247.0	2829.0	1193.0	183.00	48.30	28.40	1711.0	1724.0	286.0	13211.0	13211.0	7004.6
T 101	3.9	6.9	3.0	431.0	770.0	202.0	32.50	5.00	05	353.0	13229.0	85.0	1795.4	1795.4	1795.4
T 102	6.9	9.9	3.0	519.0	1043.0	336.0	12.70	9.20	12.20	1037.0	13717.0	70.0	7295.0	7295.0	2409.7

NO	DEPTH1	DEPTH2	TRICK	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REC
T 103	9.9	12.9	3.0	472.0	873.0	254.0	32.10	6.60	17.10	342.0	7351.0	53.0	4656.0	2053.7
T 104	12.9	17.9	5.0	408.0	736.0	188.0	29.70	6.60	6.60	442.0	2968.0	55.0	5233.0	1720.6
T 105	17.9	21.1	3.2	470.0	877.0	252.0	35.90	6.90	8.70	762.0	9966.0	61.0	6224.0	2060.4
T 106	21.1	22.6	1.5	577.0	1137.0	335.0	45.30	10.40	.05	304.0	10907.0	71.0	7383.0	2618.5
T 107	22.6	25.6	3.0	547.0	1012.0	290.0	39.20	7.80	1.40	250.0	7810.0	60.0	8332.0	2354.8
T 108	25.6	28.6	3.0	465.0	880.0	238.0	34.10	7.40	4.10	240.0	6550.0	52.0	5370.0	2022.5
T 109	28.6	31.6	3.0	1305.0	2450.0	755.0	104.10	22.80	.05	186.0	4342.0	77.0	2514.0	5655.9
T 110	31.6	34.6	3.0	477.0	860.0	221.0	35.10	6.80	.05	166.0	7348.0	57.0	6090.0	1994.1
T 111	34.6	37.6	3.0	594.0	1134.0	311.0	40.40	8.40	.05	208.0	6833.0	62.0	7423.0	2587.3
T 112	37.6	40.6	3.0	444.0	868.0	264.0	36.20	7.30	.05	176.0	11961.0	63.0	5651.0	2035.1
T 113	40.6	44.3	3.7	547.0	986.0	304.0	35.10	8.40	33.10	101.0	12382.0	67.0	7683.0	2380.5
T 114	44.3	48.6	4.3	478.0	859.0	228.0	34.70	7.10	25.90	304.0	9913.0	55.0	4926.0	2039.5
T 115	48.6	50.3	1.7	425.0	795.0	240.0	33.40	7.50	28.00	414.0	11315.0	59.0	5748.0	1909.2
T 201	1.1	4.1	3.0	414.0	720.0	249.0	19.50	4.40	7.90	374.0	3459.0	24.0	15265.0	1727.4
T 202	4.1	7.1	3.0	698.0	1444.0	493.0	60.60	15.40	3.40	722.0	4550.0	36.0	16361.0	3368.1
T 203	7.1	10.1	3.0	762.0	1590.0	537.0	68.70	17.10	5.40	217.0	7193.0	37.0	19325.0	3701.4
T 204	10.1	13.1	3.0	710.0	1538.0	532.0	65.40	16.40	22.80	245.0	4412.0	99.0	16203.0	3588.6
T 205	13.1	16.1	3.0	894.0	1966.0	652.0	87.20	19.90	3.70	623.0	2989.0	90.0	18715.0	4583.2
T 206	16.1	19.1	3.0	813.0	1640.0	565.0	72.90	16.70	36.40	567.0	4447.0	97.0	26319.0	3898.5
T 207	19.1	22.1	3.0	893.0	1823.0	647.0	84.40	19.60	10.30	459.0	7451.0	116.0	31727.0	4320.3
T 208	22.1	25.1	3.3	561.0	1064.0	338.0	42.40	9.70	11.80	76.0	19203.0	37.0	2455.0	2479.7
T 209	25.1	28.1	3.0	973.0	1819.0	652.0	79.00	20.20	5.10	420.0	8431.0	101.0	32087.0	4388.5
T 210	28.1	31.1	3.0	745.0	1347.0	464.0	59.90	14.60	21.90	261.0	4347.0	85.0	14542.0	3288.6
T 301	0.0	3.0	3.0	677.0	1064.0	386.0	42.50	12.60	5.80	399.0	15321.0	79.0	18020.0	2651.3
T 302	3.0	6.0	1.9	532.0	1412.0	301.0	67.80	16.80	63.40	3814.0	14581.0	74.0	41502.0	3448.9
T 303	6.0	9.0	2.0	592.0	1080.0	387.0	53.10	12.40	55.70	1280.0	12010.0	86.0	19794.0	2721.2
T 304	9.0	12.0	4.1	541.0	1060.0	258.0	42.10	10.00	.05	889.0	8828.0	78.0	13563.0	2393.1
T 305	12.0	15.0	2.1	511.0	1007.0	295.0	47.30	10.10	38.00	998.0	7509.0	69.0	16802.0	2379.1
T 306	15.0	18.0	2.1	550.0	1173.0	322.0	60.50	11.50	66.20	753.0	5209.0	64.0	30437.0	2772.0
T 307	18.0	21.0	4.2	400.0	687.0	188.0	31.90	5.00	2.00	533.0	4564.0	35.0	4398.0	1636.7
T 401	1.5	4.5	3.5	459.0	814.0	282.0	34.10	6.90	.05	190.0	2170.0	42.0	4604.0	1967.8
T 402	4.5	7.5	2.1	179.0	379.0	104.0	21.70	2.80	.05	505.0	937.0	18.0	3086.0	848.0
T 403	7.5	10.5	2.2	509.0	923.0	311.0	52.60	9.40	18.90	256.0	3403.0	64.0	8328.0	2314.7
T 404	10.5	13.5	2.0	511.0	864.0	312.0	42.50	7.80	3.90	89.0	9785.0	42.0	4317.0	2140.3
T 405	13.5	16.5	3.8	443.0	982.0	373.0	55.00	9.50	19.00	459.0	3225.0	64.0	7371.0	2338.4
T 406	16.5	19.5	2.7	627.0	1244.0	474.0	56.20	10.90	37.10	489.0	5392.0	71.0	8123.0	2956.5
T 407	19.5	22.5	3.2	867.0	1614.0	633.0	82.60	17.00	10.20	263.0	7750.0	92.0	9942.0	3946.2
T 408	22.5	25.5	3.0	636.0	1294.0	422.0	51.80	11.60	6.80	122.0	5965.0	66.0	7088.0	2995.8
T 409	25.5	28.5	1.7	598.0	1277.0	423.0	51.30	11.90	8.40	333.0	4440.0	77.0	8892.0	2948.2
T 501	1.3	4.3	3.8	1307.0	2595.0	823.0	133.90	21.20	43.90	351.0	1632.0	189.0	16372.0	6131.0
T 502	4.3	7.3	3.3	1752.0	3196.0	823.0	123.50	17.50	.05	160.0	1159.0	128.0	9641.0	7393.9
T 503	7.3	10.3	1.0	1326.0	2524.0	693.0	93.90	12.40	.30	143.0	1742.0	44.0	3057.0	5607.4
T 504	10.3	13.3	2.4	295.0	499.0	97.0	5.20	.80	.05	20.0	1177.0	17.0	756.0	1100.5
T 505	13.3	16.3	2.4	56.0	57.0	8.0	.05	.05	.05	3.0	1250.0	5.0	119.0	151.5
T 506	16.3	19.3	1.9	2406.0	4508.0	1436.0	208.50	35.30	103.30	459.0	735.0	99.0	5285.0	10556.8
T 507	19.3	22.3	1.7	4355.0	7988.0	2250.0	333.90	57.40	9.20	470.0	912.0	251.0	9744.0	18489.6
T 601	1.2	4.2	3.0	396.0	1245.0	440.0	60.30	13.10	.05	515.0	11252.0	63.0	14122.0	2925.5
T 602	4.2	7.2	3.0	742.0	1563.0	523.0	75.50	17.20	.80	1155.0	19003.0	87.0	17355.0	3688.4
T 603	7.2	10.2	3.2	620.0	1286.0	432.0	61.60	12.40	.05	739.0	14721.0	66.0	12016.0	2979.9
T 604	10.2	13.2	3.9	489.0	974.0	333.0	47.10	9.60	10.40	591.0	7757.0	57.0	8818.0	2308.1
T 605	13.2	16.2	3.0	432.0	831.0	266.0	48.10	7.10	.05	609.0	7820.0	46.0	7642.0	1959.9
T 606	16.2	19.2	3.1	445.0	842.0	289.0	48.40	7.40	6.30	422.0	8355.0	40.0	5264.0	1992.4
T 607	19.2	22.2	2.3	397.0	715.0	227.0	49.30	6.90	11.80	645.0	4554.0	42.0	6140.0	1740.5
T 608	22.2	25.2	2.0	423.0	782.0	236.0	38.60	7.20	.05	582.0	6289.0	49.0	6330.0	1847.9
T 609	25.2	28.2	3.5	441.0	818.0	240.0	39.10	7.20	.05	486.0	6327.0	43.0	5939.0	1910.0
T 701	2.0	5.0	1.0	2663.0	5802.0	1307.0	348.20	111.10	60.40	2048.0	4541.0	1478.0	131976.0	14249.3

NO	DEPTH1	DEPTH2	THICK	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
T 702	3.4	7.2	3.8	2837.0	6322.0	1300.0	327.70	100.00	55.30	2859.0	8482.0	1304.0	140881.0	14712.2
T 703	7.2	9.0	1.8	3131.0	6648.0	1368.0	348.00	102.80	63.60	3257.0	4630.0	1349.0	110890.0	13740.7
T 704	9.0	11.6	2.6	1794.0	3220.0	690.0	123.30	35.00	.05	566.0	9675.0	726.0	66347.0	7968.7
T 705	11.6	14.2	2.6	212.0	397.0	123.0	22.10	2.90	.05	287.0	3129.0	48.0	7281.0	969.6
T 706	14.2	17.8	3.6	5108.0	7303.0	922.0	214.80	55.60	28.60	746.0	23229.0	495.0	34290.0	17011.1
T 707	17.8	22.4	4.6	7471.0	10122.0	1079.0	189.30	24.20	.05	390.0	38635.0	104.0	5157.0	22831.2
T 708	24.5	26.2	1.7	125.0	237.0	66.0	15.50	1.80	.05	211.0	2411.0	28.0	4999.0	570.3
T 709	40.0	43.2	3.2	409.0	658.0	225.0	52.10	11.00	10.80	265.0	2325.0	135.0	1244.0	1807.2
T 801	6.6	9.6	3.0	702.0	1130.0	278.0	42.00	8.60	.05	210.0	855.0	66.0	2368.0	2675.3
T 802	9.6	12.8	3.2	665.0	989.0	207.0	12.50	5.70	.05	229.0	507.0	54.0	1377.0	2325.6
T 803	12.8	17.0	4.2	724.0	1124.0	232.0	39.60	6.60	.05	244.0	448.0	64.0	1669.0	2635.0
T 804	17.0	22.0	5.0	557.0	854.0	175.0	25.70	4.00	.05	274.0	473.0	56.0	1694.0	2011.7
T 805	22.0	26.3	4.3	617.0	966.0	191.0	30.90	5.80	.05	213.0	1128.0	74.0	3119.0	2269.3
T 806	26.3	31.2	4.4	587.0	843.0	175.0	26.60	3.20	.05	147.0	5716.0	38.0	527.0	2010.7
T 807	31.2	34.8	3.6	410.0	652.0	111.0	10.00	3.20	.05	182.0	869.0	50.0	1538.0	1489.9
T 808	35.7	40.6	4.9	481.0	672.0	184.0	26.60	3.90	.05	181.0	8677.0	43.0	309.0	1694.0
T 809	40.6	44.9	4.3	706.0	1023.0	264.0	40.60	7.40	.05	251.0	4045.0	65.0	671.0	2530.3
T 810	44.9	50.2	5.3	711.0	1041.0	227.0	28.50	6.10	.05	191.0	1094.0	52.0	1263.0	2483.4
T 901	1.3	4.3	3.0	362.0	734.0	263.0	45.40	13.10	.05	465.0	1005.0	66.0	5193.0	1785.5
T 902	4.3	7.3	3.0	388.0	774.0	324.0	42.80	12.50	30.60	440.0	938.0	79.0	5434.0	1982.7
T 903	7.3	10.3	3.0	399.0	791.0	317.0	48.40	9.00	.05	447.0	1239.0	67.0	5355.0	1960.7
T 904	10.3	13.3	3.0	288.0	591.0	203.0	44.80	7.90	.05	444.0	933.0	42.0	4399.0	1414.8
T 905	13.3	15.1	1.8	254.0	488.0	181.0	29.80	6.40	.05	667.0	995.0	57.0	6133.0	1222.7
T 906	35.0	38.9	3.9	367.0	807.0	318.0	48.10	9.50	.05	471.0	1351.0	74.0	6734.0	1953.2
T 907	38.9	41.9	3.0	382.0	809.0	306.0	53.60	11.70	.05	379.0	1733.0	80.0	5242.0	1975.7
T 908	41.9	43.9	2.0	369.0	753.0	242.0	48.50	8.50	.05	473.0	2003.0	53.0	4115.0	1773.2
T1001	14.3	16.8	2.5	499.0	1122.0	507.0	92.10	21.10	9.00	290.0	311.0	101.0	5350.0	2824.2
T1002	16.8	19.5	2.7	2623.0	6616.0	2856.0	384.80	68.10	139.10	98.0	664.0	124.0	3770.0	15152.5
T1003	19.5	23.8	4.3	2519.0	6188.0	2750.0	421.30	67.30	42.60	220.0	564.0	107.0	4089.0	14511.7
T1004	23.8	27.9	4.1	1004.0	2200.0	754.0	114.00	20.40	205.90	61.0	768.0	62.0	556.0	5230.1
T1005	27.9	29.8	1.9	2539.0	6260.0	2684.0	273.40	45.60	2.90	83.0	635.0	61.0	170.0	13222.9
T1006	29.8	32.2	2.4	701.0	1318.0	332.0	60.50	10.60	362.00	31.0	848.0	43.0	74.0	3381.5
T1007	32.2	36.2	4.0	1582.0	3866.0	1406.0	185.50	31.20	.05	365.0	636.0	59.0	98.0	8568.8
T1008	36.2	40.2	4.0	1121.0	2662.0	1020.0	128.80	22.40	.05	446.0	518.0	37.0	53.0	5995.6
T1009	40.2	43.0	2.8	1022.0	2284.0	815.0	110.00	19.40	.05	511.0	456.0	38.0	155.0	5152.2
T1010	43.0	45.5	2.5	1117.0	2787.0	1062.0	150.20	25.90	.05	491.0	512.0	44.0	579.0	6206.6
T1011	45.5	50.1	4.6	1314.0	3445.0	1179.0	156.00	28.70	.05	214.0	577.0	51.0	475.0	7426.7
T1101	0.0	3.0	3.0	566.0	1213.0	408.0	73.80	12.00	5.70	420.0	773.0	41.0	453.0	287.3
T1102	4.5	7.5	3.0	790.0	1782.0	555.0	95.70	17.40	3.10	1045.0	1194.0	63.0	10057.0	3976.8
T1103	11.2	16.1	3.9	1577.0	3878.0	1758.0	266.40	60.30	14.80	1023.0	1022.0	133.0	4079.0	9226.6
T1104	15.1	18.9	3.8	1291.0	3161.0	1460.0	248.50	61.70	6.10	981.0	1071.0	152.0	4236.0	7958.2
T1105	20.2	24.8	4.6	1510.0	3717.0	1861.0	258.90	62.50	6.50	942.0	931.0	77.0	655.0	8750.4
T1106	26.8	29.2	2.4	822.0	2073.0	734.0	144.30	34.00	7.90	888.0	888.0	53.0	428.0	4848.9
T1107	29.2	33.5	4.3	1320.0	3419.0	1405.0	243.40	54.20	18.60	863.0	641.0	123.0	3150.0	7907.8
T1108	33.5	36.7	3.2	813.0	2263.0	846.0	141.90	28.60	18.50	656.0	893.0	120.0	6368.0	5208.8
T1201	3.2	6.0	2.8	849.0	1741.0	603.0	83.50	18.90	11.40	1561.0	15094.0	59.0	30673.0	4081.8
T1202	6.0	9.0	3.0	682.0	1314.0	489.0	64.00	14.80	6.80	877.0	18814.0	78.0	21738.0	3182.0
T1203	9.0	12.0	3.0	734.0	1381.0	516.0	67.00	16.30	8.40	1052.0	19337.0	88.0	22843.0	3376.5
T1204	12.0	15.0	3.0	856.0	1583.0	617.0	83.90	19.20	36.60	482.0	19099.0	94.0	22109.0	3947.3
T1205	15.0	18.0	3.0	782.0	1460.0	550.0	79.40	17.30	12.40	1801.0	18993.0	88.0	26341.0	3529.6
T1206	18.0	21.0	3.0	870.0	1705.0	649.0	90.90	20.20	19.40	1851.0	18412.0	95.0	37038.0	4144.0
T1207	21.0	24.0	3.0	830.0	1553.0	633.0	82.40	19.20	11.30	633.0	19354.0	98.0	33883.0	3877.7
T1208	24.0	27.0	3.0	647.0	1173.0	437.0	52.20	13.00	7.90	736.0	20429.0	82.0	15760.0	2896.5
T1209	27.0	30.0	3.0	651.0	1319.0	438.0	59.10	12.20	4.30	223.0	17627.0	78.0	18268.0	3080.8
T1210	30.0	33.0	3.0	651.0	1168.0	416.0	52.40	12.50	1.60	160.0	20394.0	83.0	8821.0	2865.5
T1211	33.0	36.0	3.0	590.0	1009.0	361.0	43.90	11.10	3.20	520.0	17566.0	75.0	8208.0	2514.8

NO	DEPTH1	DEPTH2	THICK	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
T1212	36.0	39.0	3.0	665.0	1257.0	449.0	51.80	13.30	7.70	674.0	21074.0	84.0	18460.0	3038.2
T1213	39.0	42.0	3.0	647.0	1201.0	487.0	55.00	14.10	9.10	1022.0	19599.0	81.0	18157.0	2960.1
T1214	42.0	45.0	3.0	710.0	1378.0	486.0	68.10	17.20	18.70	1925.0	18502.0	88.0	30168.0	3335.5
T1215	45.0	46.5	1.5	864.0	1767.0	749.0	90.80	21.00	9.40	1775.0	18438.0	120.0	45383.0	4349.5
T1216	45.3	50.2	3.7	859.0	1172.0	431.0	72.90	14.30	7.10	2482.0	10484.0	79.0	31585.0	2912.7
T1301	1.3	4.2	2.9	319.0	550.0	149.0	31.20	5.80	10.80	961.0	1781.0	40.0	10331.0	1351.7
T1302	4.2	7.2	3.0	271.0	475.0	115.0	20.00	3.70	7.60	2258.0	2258.0	35.0	3469.0	1116.0
T1303	7.2	10.0	2.8	275.0	483.0	137.0	20.60	3.90	9.90	498.0	1519.0	29.0	2793.0	1139.7
T1304	10.0	12.1	2.1	274.0	516.0	187.0	17.30	3.30	5.00	656.0	4117.0	38.0	4006.0	1193.4
T1305	14.4	17.2	2.8	308.0	545.0	137.0	21.10	4.70	1.60	1016.0	13244.0	50.0	3273.0	1285.5
T1306	19.2	20.2	1.0	399.0	580.0	141.0	33.10	4.60	27.70	148.0	8693.0	41.0	7410.0	1449.0
T1307	28.5	33.0	3.5	211.0	382.0	109.0	18.30	2.90	8.10	274.0	11894.0	35.0	2846.0	919.7
T1308	33.0	36.0	3.0	233.0	434.0	125.0	22.60	.70	3.90	337.0	8508.0	32.0	4910.0	1024.2
T1309	47.3	50.3	3.0	176.0	290.0	59.0	15.20	.05	20.60	240.0	7019.0	21.0	2882.0	659.4
T1401	0.0	2.4	2.4	8292.0	1476.0	2312.0	334.10	83.90	.05	524.0	42235.0	297.0	14123.0	27423.5
T1402	2.4	6.2	3.8	2749.0	5049.0	1577.0	251.60	69.80	17.90	959.0	25020.0	373.0	18569.0	12130.5
T1403	6.2	10.4	4.2	2195.0	4224.0	1407.0	237.20	66.60	40.40	2922.0	13091.0	397.0	21489.0	10305.3
T1404	10.4	14.0	3.6	1474.0	2877.0	1061.0	226.90	72.50	35.40	5354.0	5938.0	663.0	41912.0	7729.0
T1405	14.0	17.3	3.3	4439.0	6633.0	1986.0	304.80	67.00	10.00	809.0	22086.0	305.0	14401.0	16463.0
T1406	21.3	25.3	4.0	2065.0	4297.0	1390.0	273.10	86.10	40.00	4603.0	20012.0	592.0	36120.0	10534.1
T1407	25.3	29.3	4.0	2665.0	5061.0	1641.0	256.00	59.10	8.60	1329.0	7839.0	284.0	11969.0	11873.0
T1408	29.3	32.0	2.7	2109.0	4209.0	1396.0	223.40	55.90	3.60	2591.0	1866.0	334.0	16516.0	10021.3
T1409	32.0	35.3	3.3	2985.0	4817.0	1262.0	133.60	37.30	17.10	832.0	3581.0	205.0	8445.0	11424.4
T1410	35.3	38.7	3.4	2938.0	3658.0	894.0	123.40	24.70	3.10	1449.0	2445.0	109.0	4842.0	8870.1
T1411	38.7	43.6	3.8	20623.0	22292.0	3442.0	461.00	50.10	.05	4360.0	55515.0	80.0	2462.0	57501.2
T1501	0.0	3.1	3.1	3656.0	5385.0	1152.0	132.30	20.70	7.80	297.0	30730.0	47.0	146.0	12535.5
T1502	3.1	6.3	3.2	833.0	1330.0	392.0	74.30	16.70	4.00	439.0	10494.0	114.0	7338.0	3252.4
T1503	6.3	9.8	3.5	426.0	636.0	195.0	20.40	3.50	.05	279.0	1993.0	45.0	3749.0	1523.0
T1504	9.8	12.9	3.1	2205.0	3044.0	542.0	85.50	16.00	.65	997.0	6061.0	88.0	7333.0	7196.0
T1505	12.9	19.5	6.6	1328.0	2228.0	460.0	75.50	14.00	25.30	251.0	11940.0	69.0	4279.0	5050.6
T1506	19.5	24.1	4.6	1251.0	1956.0	420.0	70.20	12.70	.05	362.0	13993.0	79.0	3729.0	4535.6
T1507	24.1	28.3	4.2	955.0	1469.0	362.0	58.30	7.60	.05	538.0	5233.0	21.0	3521.0	3450.5
T1508	28.3	30.6	2.3	2535.0	4098.0	1003.0	131.30	22.50	.05	312.0	2097.0	62.0	3256.0	9441.4
T1509	30.6	34.0	3.4	5711.0	8922.0	1972.0	290.90	43.30	.05	182.0	8955.0	72.0	465.0	20432.7
T1510	34.0	37.3	3.3	876.0	1208.0	345.0	47.20	10.20	.00	249.0	6396.0	89.0	4543.0	3093.9
T1511	37.3	44.4	4.1	3053.0	4508.0	965.0	138.50	21.20	1.50	244.0	8834.0	90.0	2836.0	10543.4
T1512	41.4	45.4	4.0	2554.0	4256.0	1087.0	171.80	25.20	.05	436.0	10863.0	90.0	3476.0	9832.5
T1513	45.4	49.4	4.0	2253.0	3173.0	741.0	138.90	23.90	.05	578.0	5274.0	122.0	6606.0	7735.4
T1601	1.0	3.0	2.0	1417.0	2092.0	506.0	88.90	21.00	.05	550.0	13982.0	157.0	6345.0	5159.6
T1602	3.0	6.5	3.3	1828.0	2578.0	751.0	120.70	20.70	.05	571.0	5547.0	101.0	2190.0	6478.0
T1603	6.5	9.5	3.0	2410.0	3135.0	742.0	135.90	22.50	.05	503.0	1831.0	118.0	2665.0	7875.5
T1604	9.5	18.8	4.3	2086.0	2815.0	702.0	101.00	20.50	.05	492.0	2427.0	108.0	2211.0	7023.5
T1605	14.7	18.4	3.7	1693.0	2303.0	579.0	109.60	24.00	.05	380.0	3126.0	175.0	6899.0	5866.7
T1606	18.4	21.2	2.8	1812.0	2673.0	606.0	94.20	13.60	.05	445.0	2834.0	60.0	2173.0	6314.6
T1607	21.2	24.5	3.3	3980.0	5856.0	1027.0	181.10	26.40	.05	241.0	41610.0	75.0	3058.0	13369.5
T1608	24.5	27.9	3.3	4000.0	6062.0	1034.0	209.10	28.40	.05	318.0	22272.0	40.0	126.0	14238.4
T1609	39.5	44.2	4.7	3190.0	4345.0	940.0	133.00	20.30	15.20	478.0	18057.0	79.0	1858.0	10470.4
T1610	44.2	48.1	3.9	4232.0	5424.0	1053.0	163.30	26.30	7.80	463.0	8411.0	83.0	1257.0	13136.9
T1611	48.1	50.1	2.0	882.0	1244.0	341.0	63.50	12.50	.05	268.0	12392.0	106.0	6613.0	3132.4
T1701	2.9	5.2	2.3	1667.0	2258.0	665.0	170.10	50.30	35.50	447.0	2323.0	537.0	2890.0	6482.6
T1702	5.2	17.7	2.7	2154.0	3451.0	631.0	102.40	14.20	.05	716.0	1287.0	34.0	1049.0	7678.7
T1703	17.7	20.7	3.0	4824.0	6110.0	1352.0	173.60	26.20	.05	1332.0	20774.0	36.0	654.0	14732.4
T1704	20.7	23.7	3.0	6424.0	8240.0	1420.0	219.80	30.90	7.20	717.0	35046.0	54.0	1636.0	19677.4
T1705	23.7	26.7	3.0	7514.0	9432.0	1291.0	335.50	54.60	14.30	1347.0	39107.0	56.0	338.0	23451.1
T1706	26.7	29.0	2.3	10469.0	14439.0	2759.0	385.20	58.10	.05	2939.0	45170.0	50.0	1129.0	33793.6
T1707	29.6	33.2	3.6	3040.0	5072.0	1098.0	184.70	28.90	1.90	1899.0	15696.0	46.0	769.0	11382.9

NO	DEPTH1	DEPTH2	THICK	La	Ce	Nd	Sm	Eu	Tb	No	St	Y	P	REO
T1708	33.2	35.2	2.0	9936.0	13812.0	2946.0	399.50	62.80	30.30	3164.0	42502.0	38.0	159.0	32670.4
T1709	36.2	39.4	3.2	3720.0	5094.0	1061.0	180.70	27.90	.05	1940.0	15164.0	30.0	230.0	12136.2
T1710	39.4	42.9	3.5	1513.0	21716.0	3333.0	502.30	69.10	4.20	2760.0	65149.0	54.0	149.0	51855.7
T1711	42.9	46.3	3.4	1713.0	19349.0	3214.0	470.30	55.10	3.90	1828.0	58355.0	35.0	135.0	45436.3
T1712	46.3	50.1	3.8	17476.0	21737.0	3338.0	497.60	58.00	.30	1064.0	60932.0	35.0	200.0	51835.2
T1801	2	3.3	3.1	1174.0	1814.0	437.0	103.00	23.20	18.80	210.0	16705.0	209.0	12096.0	4837.4
T1802	3.3	7.9	4.6	1074.0	1951.0	523.0	100.00	24.90	.05	229.0	10872.0	256.0	15024.0	4618.9
T1803	7.9	12.0	4.1	1618.0	2820.0	606.0	114.10	23.50	.05	304.0	12170.0	202.0	11990.0	6483.6
T1804	12.0	15.1	3.1	1045.0	1561.0	487.0	106.40	27.20	.05	258.0	6285.0	279.0	15631.0	4184.9
T1805	15.1	17.4	2.3	569.0	936.0	287.0	63.30	17.70	31.00	126.0	24135.0	202.0	12475.0	2540.0
T1806	17.4	20.4	3.0	643.0	1076.0	315.0	87.40	23.70	.05	163.0	15993.0	271.0	16180.0	2915.9
T1807	20.4	24.8	4.4	873.0	1422.0	372.0	75.70	13.10	.05	213.0	22404.0	84.0	4787.0	3414.9
T1808	24.8	30.1	5.3	7900.0	9198.0	2838.0	436.30	96.70	90.30	848.0	11623.0	810.0	46709.0	25621.7
T1901	1.3	4.8	3.5	878.0	1630.0	591.0	140.90	47.10	49.50	82.0	4460.0	1510.0	122165.0	5902.8
T1902	4.8	14.6	2.2	708.0	1445.0	591.0	196.00	80.40	51.20	121.0	4457.0	1473.0	105549.0	5544.2
T1903	17.7	20.9	3.2	429.0	812.0	284.0	62.30	18.00	31.50	110.0	2663.0	258.0	38815.0	2265.2
T1904	20.9	24.7	3.8	544.0	890.0	287.0	56.50	14.60	20.70	135.0	2195.0	242.0	35955.0	2456.0
T1905	33.6	34.3	.7	363.0	672.0	243.0	60.20	21.30	31.10	236.0	2257.0	386.0	37938.0	2145.5
T1906	46.3	47.1	.8	148.0	270.0	76.0	21.90	5.10	32.90	154.0	1453.0	100.0	11734.0	790.0
T1907	47.1	50.1	3.0	109.0	191.0	35.0	17.60	1.70	.05	158.0	2094.0	46.0	5841.0	484.1
T2001	1.6	4.6	3.0	180.0	2602.0	802.0	198.50	75.30	20.20	390.0	3250.0	743.0	61020.0	7268.0
T2002	4.6	7.6	3.0	2131.0	3446.0	868.0	166.70	40.90	.05	386.0	11727.0	752.0	16918.0	8939.3
T2003	7.6	10.6	3.0	1544.0	2410.0	567.0	83.60	17.70	10.40	308.0	8847.0	133.0	7763.0	5730.1
T2004	10.6	13.3	2.7	1957.0	2834.0	711.0	99.70	16.70	.05	281.0	7746.0	91.0	4516.0	6738.1
T2005	16.8	19.6	2.8	851.0	1353.0	354.0	37.80	10.10	6.20	140.0	12944.0	69.0	4371.0	3222.8
T2006	26.2	28.4	2.2	2832.0	4821.0	1388.0	235.50	43.30	5.30	194.0	45964.0	141.0	6907.0	11369.0
T2007	29.4	33.5	4.1	1936.0	3313.0	997.0	163.80	29.80	1.10	265.0	26008.0	135.0	7560.0	7899.0
T2008	33.8	36.4	2.6	1555.0	2822.0	798.0	121.70	23.90	.05	235.0	37058.0	111.0	10265.0	6567.9
T2009	36.4	39.9	3.5	869.0	1660.0	411.0	76.70	15.60	.05	274.0	4908.0	119.0	9087.0	3795.3
T2010	39.9	43.1	3.2	1267.0	2206.0	631.0	105.30	21.60	11.80	291.0	16079.0	141.0	16005.0	5270.7
T2011	43.1	46.6	3.5	718.0	1287.0	320.0	64.30	12.00	.05	297.0	9981.0	87.0	8321.0	2994.5
T2012	46.6	50.2	3.6	925.0	1675.0	463.0	91.40	21.10	.05	247.0	4050.0	209.0	19332.0	4077.7
T2101	0.0	4.1	4.1	1836.0	3197.0	973.0	192.60	54.20	9.80	461.0	7282.0	582.0	48035.0	8233.0
T2102	4.1	8.6	4.5	371.0	694.0	200.0	38.60	6.00	12.40	283.0	1330.0	65.0	8232.0	1669.2
T2103	8.6	12.1	3.5	170.0	301.0	71.0	23.60	2.90	13.30	239.0	2675.0	44.0	8925.0	753.7
T2104	14.7	16.3	1.6	274.0	445.0	8.0	30.20	6.10	13.10	263.0	1599.0	107.0	17847.0	1070.3
T2105	16.3	20.0	3.7	650.0	1067.0	246.0	55.40	10.80	4.50	343.0	1615.0	88.0	9859.0	2565.0
T2106	21.7	24.8	3.1	1270.0	1858.0	409.0	70.50	12.90	1.40	286.0	6452.0	100.0	7489.0	4473.6
T2107	24.8	29.2	4.4	232.0	452.0	145.0	28.40	4.50	.05	237.0	7755.0	50.0	3983.0	1121.4
T2108	33.7	38.0	4.3	1456.0	2410.0	510.0	134.00	39.60	.90	850.0	9956.0	430.0	24813.0	6127.1
T2109	38.0	42.2	4.2	2131.0	3532.0	1196.0	342.50	135.30	89.80	1930.0	4202.0	1147.0	61002.0	19332.6
T2110	47.5	50.1	2.6	863.0	1504.0	420.0	94.70	26.50	10.00	366.0	20197.0	239.0	17153.0	3869.0
T2201	8.7	13.5	4.8	10602.0	11920.0	1741.0	222.60	19.90	.05	198.0	26895.0	23.0	323.0	29414.4
T2202	13.5	16.5	3.0	5388.0	6114.0	873.0	124.70	10.00	.20	108.0	39862.0	14.0	65.0	15020.3
T2203	16.5	19.5	3.0	15984.0	17886.0	2442.0	333.00	31.40	.05	154.0	34195.0	40.0	146.0	44034.1
T2204	19.5	22.0	2.5	18051.0	19865.0	2784.0	374.10	35.50	.05	191.0	20621.0	38.0	273.0	49337.6
T2205	22.0	27.1	5.1	27002.0	32048.0	5395.0	712.90	83.60	2.10	1311.0	12659.0	136.0	4109.0	78403.8
T2206	27.1	30.1	3.0	14033.0	15673.0	2252.0	332.60	37.30	.05	338.0	92802.0	64.0	2002.0	38866.8
T2207	30.1	33.4	3.3	12866.0	13486.0	1820.0	241.40	21.80	17.40	178.0	48473.0	22.0	21.0	33154.4
T2208	33.4	36.9	3.5	11295.0	12676.0	1807.0	226.70	19.20	.05	78.0	4792.0	17.0	22.0	31229.0
T2209	36.9	40.4	3.5	3474.0	4930.0	1207.0	187.50	36.80	23.90	218.0	11720.0	245.0	13713.0	12135.2
T2210	40.4	44.8	4.4	15205.0	17226.0	2547.0	324.00	30.30	7.90	204.0	56227.0	34.0	5717.0	42667.6
T2211	44.8	49.8	5.0	7045.0	8777.0	1217.0	257.30	38.40	4.10	826.0	32668.0	153.0	7315.0	21005.5
T2301	4.3	8.3	4.0	979.0	1482.0	370.0	74.50	14.70	.05	292.0	1971.0	149.0	13406.0	3687.8
T2302	8.3	11.3	3.0	87.0	1349.0	318.0	70.20	8.90	9.50	315.0	1197.0	62.0	3357.0	3206.9
T2303	11.3	14.3	3.0	67.0	981.0	218.0	19.60	5.40	.05	173.0	5821.0	38.0	1437.0	2306.8

NO	DEPTH1	DEPTH2	THICK	La	Ce	Nd	Sm	Eu	Tb	Nb	Sr	Y	P	REO
T2304	14.3	18.6	4.3	1945.0	2876.0	600.0	81.80	13.50	.05	318.0	4195.0	67.0	1424.0	6708.5
T2305	18.6	22.9	4.3	505.0	805.0	180.0	35.30	6.90	.05	297.0	1729.0	66.0	7094.0	1923.6
T2306	23.9	26.2	2.3	455.0	738.0	131.0	33.90	7.90	.05	306.0	2184.0	64.0	6213.0	1792.5
T2307	28.6	33.0	4.4	813.0	1248.0	255.0	55.70	9.80	10.90	319.0	1860.0	120.0	9426.0	3036.1
T2308	33.0	37.4	4.4	2108.0	3097.0	648.0	108.80	18.00	.05	345.0	5046.0	58.0	1893.0	7239.8
T2309	39.7	44.7	5.0	592.0	8524.0	1750.0	254.60	34.70	1.00	410.0	22377.0	103.0	2630.0	20004.1
T2310	44.7	50.2	5.5	814.0	1247.0	287.0	45.00	7.10	.05	385.0	31941.0	72.0	3048.0	2949.4
T2401	1.0	2.9	1.9	3834.0	5318.0	1261.0	274.70	71.90	13.70	935.0	4189.0	977.0	8547.0	14273.2
T2402	2.9	4.9	2.0	3833.0	5139.0	1294.0	204.20	48.30	31.70	567.0	7584.0	608.0	45655.0	13322.3
T2403	6.3	8.2	1.9	196.0	325.0	54.0	23.20	2.70	168.10	272.0	1941.0	38.0	6436.0	963.8
T2404	8.2	12.9	4.7	4860.0	6891.0	1384.0	263.40	63.00	.05	1834.0	2372.0	640.0	43271.0	16951.8
T2405	12.9	15.9	3.0	264.0	426.0	104.0	13.30	3.80	.05	261.0	5364.0	53.0	4478.0	1041.3
T2406	15.9	18.9	3.0	297.0	491.0	117.0	25.90	4.00	.05	222.0	7331.0	42.0	3708.0	1177.0
T2407	18.9	21.9	3.0	784.0	1157.0	295.0	47.70	8.00	.05	301.0	5086.0	39.0	2775.0	2799.6
T2408	21.9	24.9	3.0	276.0	458.0	127.0	23.50	3.80	28.90	254.0	3301.0	26.0	1626.0	1132.2
T2409	27.6	32.4	4.8	578.0	949.0	234.0	51.10	13.10	.05	307.0	2387.0	135.0	12720.0	2432.1
T2410	32.4	37.2	4.8	914.0	1355.0	408.0	81.10	15.40	95.70	357.0	8635.0	156.0	14473.0	3632.0

