Search Minerals Announces Successful Metallurgical Testing of Foxtrot Project Sample to Recover a 55.48% TREO + Y2O3 Product (46.99% TREE+Y) with Overall Average Recovery of 78.8%

VANCOUVER, May 9, 2012 /CNW/ - **Search Minerals Inc. ("Search" or the "Company") (TSXV: SMY)** and its wholly-owned subsidiary, Alterra Resources Inc., are pleased to announce the completion of metallurgical tests on a bulk sample from the Foxtrot Project to produce a high grade REE product for refining.

Highlights:

- **Mineralogy studies (QEMSCAN) have shown that the REE minerals in Foxtrot are Allanite, Fergusonite, Chevkinite, with minor Bastnasite/Synchysite and Monazite**
- **A 91.4 kg sample of Foxtrot was treated by gravity separation, flotation and magnetic separation to recover 35.2 kg of concentrate with REE recoveries of 81.4 to 83% and Y recovery of 83%.**
- **The combined concentrate was subjected to single stage acid baking and water leaching with up to 93-96% extraction of REE's (La to Ho) to solution except for Er (91%), Tm (87%), Yb (80%) and Lu (68%). Dysprosium extraction was up to 94% and neodymium extraction was 96%.**
- **A combined water leach solution from a number of tests was treated by simple pH adjustment to precipitate iron, aluminum, silica and thorium with only ~1% loss of REE's**
- **The purified solution was treated by standard oxalate precipitation to recover a mixed REE oxalate product analyzing 55.48% TREO + Y_2O_3 Product (46.99% TREE+Y). The recovery of REE's to the product was approaching 100%.**
- **The mixed oxalate product was very low in impurities with only 6 ppm U and 282 ppm Th. This product is expected to be refined to separate REE oxides using conventional solvent extraction and precipitation technologies. The levels of U and Th are so low that there are believed to be no special restrictions on shipment of the mixed REE product.**
- **The overall average recovery (weighted) of REE's from the original Foxtrot project sample to final product for refining was 78.8%.**
- **SGS Minerals Services have recommended that further optimization work be started as soon as possible to confirm and improve the excellent results obtained to date as well as to start pilot plant design testwork. Following optimization work, SGS Minerals Services have further recommended continuous metallurgical pilot plant studies. The continuous pilot plant results would be used to support pre-feasibility and feasibility study of the Foxtrot Project.**

A 1250 kg sample of Foxtrot mineralization was prepared from surface channel samples taken at the Foxtrot site. The channel samples were obtained from surface mineralization. The head analysis of the sample sent to SGS Minerals Services is compared to the recently announced indicated and inferred resource numbers for the Foxtrot Project in Table 1 below. The values for the REE's and Y are very close to the reported resource values.

Jim Clucas, President of Search Minerals, stated "The Foxtrot success story continues from outstanding drill results to excellent metallurgical test results. The SGS recommendation to proceed quickly to continuous metallurgical pilot plant in keeping with the remarkable pace of development of this project."

The sample is deemed representative of the Foxtrot Project mineralization for the purposes of metallurgical testing.

Table 1. Indicated and Inferred Resource Values Compared to Channel Sample Analysis

		Indicated	**Inferred**	**Channel Sample**
Tonnes	t	3,410,000	5,850,000	1.25
Oxide	**Units**	**Indicated**	**Inferred**	**Metallurgical**
Y_2O_3	ppm	1,345	1,290	1,404
La_2O_3	ppm	1,946	1,716	1,771
CeO_2	ppm	4,138	3,657	4,372
Pr_6O_{11}	ppm	466	414	516
Nd_2O_3	ppm	1,687	1,494	1,750
Sm_2O_3	ppm	298	268	338
Eu_2O_3	ppm	15	13	16
Gd_2O_3	ppm	234	216	260
Tb_4O_7	ppm	39	36	43
Dy_2O_3	ppm	218	208	257
Ho_2O_3	ppm	42	40	50
Er_2O_3	ppm	116	114	140
Tm_2O_3	ppm	17	17	20
Yb_2O_3	ppm	103	106	117
Lu_2O_3	ppm	15	16	17
ZrO_2	ppm	13,014	13,746	21,687
Nb_2O_5	ppm	879	796	1,015
LREO	%	0.85	0.75	0.87
HREO	%	0.21	0.21	0.23
TREO	%	1.07	0.96	1.11

Notes:

1. CIM definitions were followed for Mineral Resources
2. Mineral Resources are estimated at a cut-off grade of 130 ppm Dy.
3. Numbers may not add due to rounding
4. LREO = oxide sums of La+Ce+Pr+Nd+Sm
5. HREO = oxide sums of Eu+Gd+Tb+Dy+Ho+Er+Tm+Yb+Lu+Y
6. TREO = LREO + HREO
7. The head analysis for the Channel Sample is a calculated head analysis from the beneficiation studies

MINERALOGY STUDIES

A bulk sample obtained from a Fox Harbour channel sample was submitted to the Advanced Mineralogy Facility (AMF) at SGS Minerals Services (Lakefield Site). The sample was stage crushed to K_{80} of 150 µm and then screened into two size fractions: +38µm and -38µm for the mineralogical study. A micro-riffled sub-sample of each size fraction was submitted for whole rock analyses. Two graphite impregnated polished epoxy grain mounts were prepared from the coarse fraction and one from the fine fraction, and submitted for QEMSCAN™ analysis. The mode of QEMSCAN™ analyses used for this project were the Particle Mineral Analysis (PMA) and Specific Mineral Search (SMS). The minerals identified in the sample are listed in Table 2.

Table 2 - Mineral List and Formulas

Mineral	Mineral Formula	Mineral	Mineral Formula
Columbite(Fe)	$(Fe,Mn)Nb,Ta_2O_6$	Plagioclase	$(NaSi,CaAl)AlSi_2O_8$
Bastnasite	$(Ce, La)CO_3F$	K-Feldspar	$KAlSi_3O_8$
Synchysite	$Ca(Ce,La)(CO_3)_2F$	Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$
Monazite	$(Ce,La,Pr,Nd,Th,Y)PO_4$	Quartz	SiO_2
Chevkinite	$(Ce,La,Ca,Th)_4(Fe^{2+},Mg)(Fe^{2+},Ti,Fe^{3+})$-$(Ti,Fe^{3+})_2(Si_2O_7)_2O_8$	Muscovites/Clays	$KAl_2(AlSi_3O_{10})(OH)_2$
Fergusonite	$(Y,Er,Ce,Fe)NbO_4$	Amphibole/ Pyroxene	$(Ca,Na)(Mg,Fe,Al,Ti)(Si,Al)_2O_6$
Allanite	$(Ca,Ce)_2(Fe^2,Fe^{3+})Al_2O$-$(SiO_4)(Si_2O_7)(OH)$	Carbonates	$CaCO_3$
Zircon	$ZrSiO_4$	Fluorite	CaF_2
Apatite	$(Ca,Ce,Y)_5(PO_4,SiO_4)_3(F,Cl,OH)$	Hematite Ilmenite Magnetite	Fe_2O_3 $FeTiO_3$ Fe_3O_4

Mineral Abundance by QEMSCAN™

Data for the modal abundance of the minerals and elemental distribution are based on the PMA. Figure 1 illustrates the normalized mass % of the REE minerals (excluding zircon). It is apparent that allanite is the primary REE phase. The sample is dominated by quartz (35.8%) and K-feldspar (21.0%), moderate amounts of amphibole/pyroxene (13.7%), plagioclase (12.3%), minor Fe-oxides (4.4%), biotite (3.9%) and muscovite/clays (1.6%), and trace amounts of other silicates, carbonates, fluorite, other oxides and sulphides. REE-Zr minerals include mainly allanite (2.6%), zircon (2.5%), chevkinite (0.3%), fergusonite (0.2%), bastnasite/synchysite (0.1%), monazite (0.1%) and rare columbite. Most of the allanite (2.2%) occurs in the +38 µm, but most of zircon (1.5%) in the -38 µm fraction. Note that amphibole and pyroxene are grouped together due to their similar chemistries.

Figure 1 - Normalized Mineral Abundance of REE Minerals

Grain Size Distribution

The D_{50} or 50% passing value from the cumulative grain size distribution of the fergusonite, bastnasite/synchysite, allanite, monazite, chevkinite, zircon, quartz/feldspars, muscovite, other silicate and oxide minerals are as follows;

- fergusonite is ca. 22 µm;
- bastnasite/synchysite is ca. 51 µm;
- allanite is ca. 65 µm;
- monazite is ca. 24 µm;
- chevkinite is ca. 53 µm;
- zircon is ca. 24 µm
- quartz/feldspars is ca. 98 µm;
- muscovite is ca. 24 µm;
- other silicates is ca. 83 µm;
- oxides is ca. 141 µm;
- overall particle is ca. 98 µm.

The grain size data indicates that it should be possible to liberate the REE minerals from the barren gangue minerals using a moderate grind size. This information bodes well for beneficiation of the Foxtrot mineralization.

Mineral Chemistry

Electron microprobe analyses (EMPA) were conducted on chevkinite, allanite, fergusonite, bastnasite and synchysite, zircon and an undefined Si/Y/Ca REE phase.

- Allanite averages Ce 11.07 wt%, La 5.18 wt% and Nd 3.66 wt%, and minor Dy 0.40 wt%, Pr 0.92 wt%, Sm 0.24 wt%, Th 0.18% and Y 0.30 wt%.
- Fergusonite carries both, but mainly HREE (heavy rare earth elements) and less LREE (light rare earth elements). It averages Y 17.76%, Nb 29.20%, and minor Dy 3.63%, Gd 3.42%, Er 2.17%, Nd 1.76%, Ce 1.47%, Yb 1.27%, Sm 1.16%, La 0.44%, Ho 0.85%, Pr 0.25%, Tb 0.68%, Tm 0.38%, U 0.37 % and Th 0.61%.
- A Si-Y-Ca phase consists of Y 14.45%, Nd 8.07%, Ce 7.70%, Gd 3.99%, Dy 3.22%, Sm 2.94%, La 2.01%, Pr 1.42%, Yb 1.01% and Tb 0.58%, Tm 0.54% and Th 0.27%. This phase is tentatively identified as a Y-britholite.
- Bastnasite/Synchysite consists of, in average, Ce 27.42%, La 15.27%, Nd 10.92%, Pr 3.06%, Sm 1.44%, Gd 0.90%, Tm 0.33%, Dy 0.28%, Tb 0.24%, Yb 0.18%, Th 0.17%, and Y 0.68%.
- Chevkinite consists of Ce 16.74%, La 6.84%, Nd 6.69%, Pr 1.87%, Nb 1.28%, Gd 0.73%, Dy 0.68%, Sm 0.98%, Yb 0.15%, Th 0.56% and Y 1.72%.
- Although based on a limited number of analyses, there are two populations of zircon grains, with Y-bearing and Y-barren. Y ranges from nil to 0.66% and averages 0.15%.

Elemental Deportment

Elemental deportment was estimated for a number of key elements. The plots for two of the economic elements in the Foxtrot deposit are shown in Figures 2 and 3 (Nd, Dy).

<u>Neodymium Elemental Deportment</u>

The elemental distribution of neodymium is graphically presented in Figure 2. Allanite carries most of the Nd (66.4%), followed by chevkinite (12.7%), monazite (10.1%), bastnasite/synchysite (7.9%) and fergusonite (2.9%).

Figure 2 - Elemental Deportment of Neodymium

<u>Dysprosium Elemental Deportment</u>

The elemental distribution of dysprosium is graphically presented in Figure 5. Allanite and fergusonite carry most of the Dy at 49.3% and 40.5%, respectively, followed by chevkinite (8.8%) and bastnasite (1.4%).

Figure 3 - Elemental Deportment of Dysprosium

Liberation and Association

The liberation and association characteristics of allanite, fergusonite, bastnasite/synchysite, monazite, chevkinite and zircon were examined.

- Free and liberated allanite account for 66.8%. The main association of allanite is as complex particles (25.8%), and minor middlings with zircon (3.8%) and quartz/feldspars (1.6%), and trace associations (1%) with other minerals. Free and liberated allanite increases from 59.1% to 86.0% with decreasing size, while complex particles decrease from 33.4% in the +38 µm to 6.7% in the -38 µm fraction.
- Free and liberated fergusonite accounts for 31.4%. The main association of fergusonite is as complex particles (30.8%), followed by middlings with zircon (21.4%), quartz/feldspars (11.4%), and less with allanite (1.6%) and other silicates (1.5%), while other associations are insignificant (1%). Liberation increases from 12.5% in the +38 µm fraction to 42.6% in the -38 µm fraction. Complex particles decrease from 48.5% to 20.3%, with quartz/feldspars from 26.2% to 2.6%, but those with zircon increase from 8.9% to 28.8%.

The mineralogical work on the Foxtrot sample set the groundwork for beneficiation studies.

BENEFICIATION OF FOXTROT SAMPLE

Three beneficiation techniques were studied in order to concentrate the REE in the Foxtrot sample. These include Wilfley tabling, magnetic separation and flotation. The Wilfley tabling was used to test amenability to gravity concentration. Magnetic separation (LIMS) was used to reject magnetite from the Wilfley concentrates. Flotation was tested both as a primary method of concentration for the Foxtrot sample and as a scavenging method to recover additional REE from the Wilfley tails. The work presented below is preliminary in nature but shows the promise of these techniques.

Gravity Concentration with the Wilfley Table and Magnetic Separation

A ~100 kg charge was stage ground with the closing screen size of 105 µm. The -105 µm fraction was screened on 75 µm, and 38 µm screens to make 3 fractions. The +75 µm fraction was tabled and the tails re-passed. The test generated 3 fractions: Concentrate, Scavenger Middlings, and Scavenger Tail. The +38 µm fraction was tabled and the tails repassed. The test generated 3 fractions: Concentrate, Scavenger Middlings and Scavenger Tail. The -38 µm fraction was passed through the cyclone to eliminate unnecessary slimes on the table. The cyclone overflow was filtered. The cyclone underflow was passed over the Wilfley Table and the tail was re-passed. The Concentrate, Scavenger Middlings and Scavenger Tailings were submitted for assay. All the table concentrates were passed through Low Intensity Magnetic Separator (LIMS) to separate mainly magnetite. This flowsheet is depicted in Figure 4.

Figure 4 - Gravity (Wilfley Table) and Magnetic Separation Flowsheet for Foxtrot Testing

Table 3 summarizes the results of the gravity and magnetic separation. Using just these two methods, it is possible to recover 71.4% of the Ce, 70.7% of the Nd and 70.7% of the Y into a concentrate containing 22.3% of the original mass. While this is a good first result, flotation was also examined to enhance the overall recoveries.

Table 3 - Summary of the Beneficiation of the Sample of Foxtrot Material using Gravity and Magnetic Separation

Prod.	Weight		Assays, %, g/t								% Distribution							
No.	g	%	CeO_2	Nd_2O_3	Y_2O_3	ZrO_2	Nb_2O_5	SiO_2	Al_2O_3	Fe_2O_3	CeO_2	Nd_2O_3	Y_2O_3	ZrO_2	Nb_2O_5	SiO_2	Al_2O_3	Fe_2O_3
1	8,713	9.53	1.50	0.58	0.39	2.15	0.24	57.8	3.70	17.3	33.8	32.2	28.5	12.0	23.5	8.12	4.88	14.6
2	1,484	1.62	0.09	0.12	0.10	0.76	0.10	4.43	0.30	97.4	0.35	1.10	1.25	0.72	1.65	0.11	0.07	14.0
3	167	0.18	0.25	0.12	0.10	0.76	0.10	69.9	7.67	11.4	0.11	0.12	0.14	0.08	0.19	0.19	0.19	0.18
4	28,797	31.5	0.05	0.01	0.01	0.57	0.01	76.8	8.50	4.10	3.66	2.13	2.39	10.5	4.58	35.6	37.1	11.5
5	5,082	5.56	1.56	0.57	0.39	3.09	0.31	58.0	4.20	15.4	20.5	18.4	16.6	10.1	17.8	4.75	3.23	7.61
6	917	1.00	0.07	0.03	0.08	0.55	0.03	4.23	0.35	95.7	0.17	0.20	0.58	0.33	0.29	0.06	0.05	8.52
7	329	0.36	0.10	0.03	0.08	0.55	0.03	77.4	8.06	3.78	0.08	0.07	0.21	0.12	0.10	0.41	0.40	0.12
8	17,382	19.0	0.11	0.05	0.05	0.62	0.04	75.3	8.53	5.68	4.97	5.14	7.34	6.93	8.29	21.1	22.5	9.60
9	6,576	7.20	1.00	0.48	0.40	8.37	0.33	61.5	5.44	9.52	17.0	20.0	21.9	35.3	24.1	6.52	5.42	6.08
10	976	1.07	0.12	0.05	0.10	1.10	0.05	5.64	0.48	92.7	0.30	0.31	0.81	0.69	0.54	0.09	0.07	8.79
11	34.3	0.04	0.31	0.13	0.11	3.54	0.09	70.8	8.02	6.14	0.03	0.03	0.03	0.08	0.03	0.04	0.04	0.02
12	12,914	14.1	0.31	0.12	0.09	2.20	0.06	70.8	8.04	7.43	10.3	9.55	9.55	18.2	8.21	14.7	15.7	9.33
13	8,019	8.77	0.42	0.21	0.16	0.97	0.12	63.9	8.54	12.3	8.71	10.7	10.7	4.99	10.7	8.26	10.4	9.59
Calc Head	91,388	100	0.42	0.17	0.13	1.71	0.10	67.9	7.22	11.3	100	100	100	100	100	100	100	100
Concentrate 1+5+9	**20,370**	**22.3**	**1.35**	**0.55**	**0.40**	**4.39**	**0.29**	**59.0**	**4.39**	**14.31**	**71.4**	**70.7**	**67.0**	**57.4**	**65.4**	**19.4**	**13.5**	**28.3**

Table 4 - Flotation Test Result for Scoping Rougher Test

Prod.	Weight		Assays, %, g/t								% Distribution							
No.	g	%	CeO_2	Nd_2O_3	Y_2O_3	ZrO_2	Nb_2O_5	SiO_2	Al_2O_3	Fe_2O_3	CeO_2	Nd_2O_3	Y_2O_3	ZrO_2	Nb_2O_5	SiO_2	Al_2O_3	Fe_2O_3
Rougher Conc.	536	27.4	1.14	0.52	0.35	4.71	0.27	46.1	4.66	27.4	70.5	73.6	81.7	73.3	62.7	19.0	18.0	65.8
Float Tails	1,419	72.6	0.18	0.07	0.03	0.65	0.06	74.2	8.04	5.39	29.5	26.4	18.3	26.7	37.3	81.0	82.0	34.2

Flotation Separation

Flotation testing was conducted on a head sample. The flotation was performed as a rougher test with five stages of rougher flotation. Appropriate flotation reagents and test conditions were supplied by SGS for recovery of allanite and fergusonite. The feed particle size was 80% passing 150 µm. The flotation test results are shown in Table 4. Flotation by itself produced a concentrate containing 70.5% of the Ce, 73.6% of the Nd and 81.7% of the Y in a mass pull of 27.4%. These results are slightly better than the results of the gravity and magnetic separation.

As a last step in the beneficiation testing, the Wilfley table tails (3 size fractions) were subjected to flotation to increase the overall recovery of REE's. Note that the cyclone overflow was not floated. The additional rougher flotation concentrate recovered in this manner was added to the gravity and magnetic separation products (Table 3) to generate an overall concentrate. The analysis of this concentrate is shown in Table 5, along with the associated total recoveries. These results should be viewed as indicative of the promise of conventional beneficiation methods to recover the REE minerals from the Foxtrot prospect. There is ample scope to improve the overall recovery (by consideration of the losses to the cyclone overflow - about 10% REE) and the grade (by more selective beneficiation or the incorporation of cleaning steps in the circuit).

Table 5 - Combined Gravity, Magnetic Separation and Flotation Concentrate Product

		Concentrate Assay	Recovery (%)
Ce_2O_3	%	0.94	83.0
Nd_2O_3	%	0.38	83.0
Y_2O_3	%	0.31	83.7
ZrO_2	%	3.71	65.9
Nb_2O_5	%	0.22	81.8
La_2O_3	g/t	3968	86.2
Pr_6O_{11}	g/t	1160	86.6
Sm_2O_3	g/t	741	84.3
Eu_2O_3	g/t	34	83.7
Gd_2O_3	g/t	559	82.7
Tb_2O_3	g/t	93	82.4
Dy_2O_3	g/t	543	81.4
Ho_2O_3	g/t	105	81.6
Er_2O_3	g/t	297	81.7
Tm_2O_3	g/t	42	81.9
Yb_2O_3	g/t	249	81.7
Lu_2O_3	g/t	37	81.8
U_3O_8	g/t	54	83.8
ThO_2	g/t	274	86.6

Hydrometallurgical Extraction of REE's from Foxtrot Concentrate

The gravity concentrate (Table 3) and the combined gravity/flotation concentrate (Table 5) were subjected to acid leaching or acid baking at 200-250 °C followed by water leaching. The results of the testing are summarized in Table 6.

Table 6 - Hydrometallurgical Leaching Studies on Foxtrot Concentrates

Test ID		AL2	AB4	WL-AB4	AB7	WL-AB7	AB8	WL-AB8	AB9	WL-AB9
Feed		grav con	grav / flot con	AB4 calcine	grav / flot con	AB7 calcine	grav / flot con	AB8 calcine	grav / flot con	AB9 calcine
Time, hr	hr	6	2		1		1		2	
Temp	°C	95	200		250		250		250	
H_2SO_4	Add kg/t	1000	1000		1000		750		500	
	Free g/L	91		107		60		90		33
Extraction, %										
Si		4		1		1		1		1
Al		29		17		16		15		14
Fe		35		37		34		34		33
Mg		28		42		41		38		49
Ca		54		45		36		39		33
Na		2		2		3		3		2
K		36		12		22		11		22
Ti		69		74		59		68		53
P		88		88		54		74		52
Mn		46		43		40		35		39
Zr		1		0		1		1		1
Nb		18		23		16		16		15
La		97		95		92		93		91
Ce		97		96		93		94		92
Pr		96		96		93		94		92
Nd		94		96		93		94		92
Sm		86		95		93		93		92
Eu		79		94		92		93		92
Gd		74		95		94		94		93
Tb		66		95		93		93		92
Dy		61		94		93		93		92
Ho		58		93		92		92		91
Er		54		91		89		89		89
Tm		54		87		85		85		84
Yb		51		80		77		77		77
Lu		45		68		65		65		64
Y		64		92		90		91		90
Sc		7		3		2		2		2

U		22		62		62		60		61
Th		80		97		96		97		94

AL = Atmospheric Leach, AB = Acid Bake, WL = Water Leach, Add = acid added, Cons = acid consumed, Free = free acid in ~10% solids water leach

The metallurgical extractions are excellent. The direct acid leach extractions were somewhat lower and produced slower solid/liquid separations. However, the acid bake and water leach results produced very high extractions (viz. Nd is 91-96%, Tm is 84-87% and Dy is 92-94 %) with modest acid consumptions. Zr and Nb extractions are low. If these elements are to be recovered from Foxtrot mineralization, it may be necessary to re-leach the acid leach residue (possibly with alkali). Table 7 summarizes the leach solution compositions from the screening tests. The solutions are reasonably consistent in the REE values and low in impurity content. These solutions must then be treated for impurity removal and REE recovery as a mixed product for separation and refining.

Table 7 - Solution Assays from Hydrometallurgical Leaching Tests on Foxtrot Concentrates.

Liquor, mg/L	AL2	WL-AB4	WL-AB7	WL-AB8	WL-AB9
Si	1190	192	229	223	227
Al	911	580	578	578	530
Fe	4550	4060	3860	3850	3750
Mg	44	66	63	60	58
Ca	3160	1680	1220	1480	1120
Na	61	80	94	100	82
K	911	328	705	308	713
Ti	632	428	304	389	300
P	75	34	17	29	16
Mn	348	237	216	185	210
Zr	18	11	43	39	35
Nb	31	39	25	27	24
La	488	430	404	397	400
Ce	1060	947	890	875	887
Pr	134	117	110	109	111
Nd	482	442	407	406	409
Sm	76	75	67	68	69
Eu	4	4	4	4	4
Gd	54	61	56	56	57
Tb	7	10	9	9	8
Dy	42	59	52	52	53
Ho	8	12	10	10	10
Er	21	32	28	29	27
Tm	3	4	4	4	4
Yb	18	24	21	22	21
Lu	2	3	3	3	3
Y	212	293	259	259	259
Sc	0	0	0	0	0
U	2	4	4	4	4
Th	31	29	28	27	27

LEACH SOLUTION PURIFICATION AND RECOVERY OF MIXED REE PRODUCT

The leach solution purification involved simple pH adjustment to pH 3.0. At this pH iron, aluminum, silica, titanium, phosphate, zirconium, niobium and thorium are removed as a mixed hydroxide waste precipitate.

After impurity precipitation, the solids were filtered and analyzed. The remaining solution was then treated with oxalic acid at pH 2.0 to precipitate the REE from solution. The form of the precipitate is as a mixed REE oxalate.

The mixed REE oxalate was filtered and washed and analyzed. The remaining solution was also analyzed.

The pH 3.0 precipitate contained 29.7% Fe, 1.78% Al, 2.51% Si, 2.54% Ti, 0.28% P, 0.30% Zr and 0.18% Nb. The precipitate also contained small amounts of Th and REE. Analysis of the REE in the precipitate and the loss due to co-precipitation is shown in Table 8.

Table 8 - Analysis of the Impurity Precipitate and Calculated Losses of REE.

Element	Feed Solution Analysis (mg/L)	Filtrate Analysis (mg/L)	Solid Precipitate Analysis (ppm)	Amount Precipitated (%)
La	455	392	467	0.77
Ce	1000	853	1280	0.96
Pr	121	103	170	1.06
Nd	437	374	687	1.18
Sm	78	68.5	125	1.17
Eu	4	3.39	6.3	1.19
Gd	67	55.2	86.9	1.01
Tb	11	8.73	14.5	1.07
Dy	62	51.7	86.6	1.07

Ho	12	9.99	16.8	1.08
Er	33	27.4	49.9	1.17
Tm	5	3.71	7.3	1.26
Yb	25	20.9	49.2	1.50
Lu	3	2.52	5.7	1.45
Y	295	255	440	1.12
U	4	2.59	78.2	16.4
Th	32	1.32	2020	90.9

Note: Y analysis is still pending, but estimated at 1.12 % loss to precipitate (average of Ho and Er). Y solid analysis entered as estimate using Nd analysis of precipitate as reference.

The final oxalate precipitate composition and associated recovery is shown in Table 9.

Table 9 - Mixed Oxalate Precipitate of REE Recovered from Solution: Analysis and Recovery

Element		Oxalate Precipitate Analysis (% or ppm)	Oxide	Oxalate Precipitate Analysis (% or ppm)	Recovery from Solution (%)
La	%	7.8	La_2O_3	9.15	99.96
Ce	%	18.3	Ce_2O_3	21.43	100.0
Pr	%	2.1	Pr_6O_{11}	2.54	99.97
Nd	%	8.7	Nd_2O_3	10.15	99.98
Sm	%	1.24	Sm_2O_3	1.44	99.94
Eu	ppm	759	Eu_2O_3	879	99.12
Gd	ppm	11600	Gd_2O_3	13370	99.95
Tb	ppm	1840	Tb_2O_3	2164	99.66
Dy	ppm	10600	Dy_2O_3	12165	99.90
Ho	ppm	2020	Ho_2O_3	2314	99.80
Er	ppm	5430	Er_2O_3	6209	99.85
Tm	ppm	735	Tm_2O_3	839	98.92
Yb	ppm	4240	Yb_2O_3	4828	99.90
Lu	ppm	499	Lu_2O_3	567	98.81
Y	ppm	50763	Y_2O_3	64466	99.99
U	ppm	5.5	U_3O_8	6	23.17
Th	ppm	282	ThO_2	321	97.73
		LREO	%	44.70	
		HREO	%	10.78	
		TREO	%	55.48	

Note: Y analysis not available. Y solid analysis entered as estimate using Nd analysis of precipitate as reference.

SUMMARY

The metallurgical process has been studied from initial recovery of a REE concentrate, through extraction of REE into solution, followed by purification of the solution and precipitation of a mixed REE product. The bench scale testing has been highly successful in producing a concentrate, leaching to high efficiency, precipitating of impurities (with negligible losses of REE) and finally precipitation of the mixed product.

To summarize the results of the testing, the following table (Table 10) calculates the overall recovery the Foxtrot sample to final mixed REE product.

Table 10 - Calculation of Overall Recovery of REE into Final Mixed REE Product

Oxide	Recovery to Concentrate	Leach Extraction (Test 4)	Loss to Impurity Precipitate	Precipitation Efficiency with Oxalate	Overall Recovery
	(%)	(%)	(%)	(%)	(%)
Ce_2O_3	82.98	95.89	0.96	100.00	78.80
Nd_2O_3	83.04	95.64	1.18	99.98	78.47
Y_2O_3	83.71	92.48	1.12	99.99	76.54
La_2O_3	86.21	95.29	0.77	99.96	81.49
Pr_6O_{11}	86.56	95.79	1.06	99.97	82.01
Sm_2O_3	84.32	94.70	1.17	99.94	78.88
Eu_2O_3	83.73	94.28	1.19	99.12	77.31
Gd_2O_3	82.65	95.30	1.01	99.95	77.93
Tb_2O_3	82.38	94.69	1.07	99.66	76.91
Dy_2O_3	81.36	94.21	1.07	99.90	75.76
Ho_2O_3	81.59	93.31	1.08	99.80	75.15
Er_2O_3	81.67	90.83	1.17	99.85	73.21

Tm_2O_3	81.87	86.80	1.26	98.92	69.41
Yb_2O_3	81.73	79.89	1.50	99.90	64.25
Lu_2O_3	81.75	67.70	1.45	98.81	53.90

Note: Overall Recovery = (Recovery to Concentrate) X (Leach Extraction) X (1-Loss to Impurity Precipitate) X (Precipitation Efficiency with Oxalate)

Exploration Program Update

The Port Hope Simpson REE District is 135 km long and 4 - 12 km wide, consists of 4326 claims in 86 licenses, and occupies 1081 square kilometres. There are a total of 11 REE prospects in the District, including: Rock Rolling Hill, Rattling Bog Hill, Piperstock Hill, Southern Shore, Toots Cove, Pesky Hill, HighREE Island, Foxtrot, Fox Pond, Foxy Lady, and Ocean View. The Foxtrot Project, Fox Pond and Foxy Lady prospects occur in the Fox Harbour mineralized belt. Piperstock Hill, Southern Shore, Toots Cove and Pesky Hill occur in a 13 km mineralized zone known as the HighREE Hills. The Ocean View Prospect occurs in a 3 km mineralized zone known as the Ocean View mineralized belt. The Fox Harbour, Ocean View and HighREE Hills mineralized zones are considered very prospective for both HREE and LREE.

Qualified Person:

Dr. David Dreisinger, Ph.D., P.Eng., is the Company's Vice President, Metallurgy and Qualified Person for the purposes of NI 43-101. Dr. Dreisinger has reviewed and approved the technical disclosure contained in this news release as applicable. The company will endeavour to meet high standards of integrity, transparency, and consistency in reporting technical content, including geological and assay (e.g., REE) data.

About Search:
Search Minerals Inc. (TSXV: SMY) is a TSX Venture Exchange listed company, headquartered in Vancouver, B.C. Search is the discoverer of the Port Hope Simpson REE District, a highly prospective light and heavy REE belt located in southeast Labrador where the company controls a dominant land position in a belt 135km long and up to 12km wide. In addition, Search has a number of other mineral prospects in its portfolio located in Newfoundland and Labrador, including a number of claims in the Strange Lake Complex, where Quest Rare Minerals has an earn-in agreement with the Company; and at the Red Wine Complex, where Great Western Minerals Group has a Joint Venture with the Company.

Furthermore, Search Minerals is the owner of patents relating to the Starved Acid Leaching Technology ("SALT"), a process with the potential to economically recover nickel and cobalt from known deposits currently considered sub economic.

Search Minerals is led by a management team and Board of Directors with a proven track record in the mining industry. The Company has experienced geological and metallurgical teams led by Dr. Randy Miller and Dr. David Dreisinger respectively.

All material information on the Company may be found on its website at www.searchminerals.ca *and on SEDAR at* sedar.com.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility of the adequacy or accuracy of this release.

Cautionary Statement:
This news release contains forward-looking statements that are not historical facts. Forward-looking statements involve risks, uncertainties and other factors that could cause actual results, performance, prospects, and opportunities to differ materially from those expressed or implied by such forward- looking statements. Factors that could cause actual results to differ materially from these forward- looking statements include those risks set out in Search's public documents filed on SEDAR at www.sedar.com. Although Search believes that the assumptions and factors used in preparing the forward-looking statements are reasonable, undue reliance should not be placed on these statements, which only apply as of the date of this news release, and no assurance can be given that such events will occur in the disclosed time frames or at all. Except where required by law, Search disclaims any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

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