



# MINING RESEARCH

Week Ending October 5, 2001

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**YORKTON**  
FINANCING CANADA'S FUTURE

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Indices	Net Change* 9/28 – 10/05	Gold London Spot	US \$	Commodities	US \$	Net Change* 9/28 – 10/05	
CDNX	2857.56	+18.62	Friday 9-28	293.10	Aluminum	0.617	-0.008
CDNX-MX	7276.79	+58.49			Copper	0.635	-0.011
TSE 300	6894.24	+55.68	Monday	290.60	Lead	0.208	+0.003
TSE-MM	3478.04	+15.91	Tuesday	291.65	Nickel	2.161	-0.048
TSE-MET	2236.75	+15.31	Wednesday	290.10	Zinc	0.347	-0.008
TSE-Int.M	3659.71	+15.74	Thursday	290.35	Palladium	354.00	-8.00
TSE Gold	5317.59	-98.97	Friday 10-5	291.20	Platinum	438.00	+4.70
NASDAQ	1605.30	+106.50			Silver	4.665	+0.018
DJIA	9119.77	+272.21	Euro/USD	0.9181	CRB Index	189.45	-0.968

## Featured This Week:

- **World of Mining:** focus on Gold –measuring gold company growth
- **Altius Minerals:** high grade gold intersection at Moosehead
- **Philex Gold:** more copper-gold results from Boyungan amid indications of a second porphyry system?

## World of Mining

*Measuring growth in a gold mining company:* A company's cash cost per ounce of production or level of exposure to the spot price of gold are effective tools in evaluating a gold mining company but these do not measure corporate growth. By "high grading" an existing mine, or shutting down poorly performing operations, a company can effectively decrease its cash costs at the expense of its mineral reserves. Similarly, by closing out a hedge position, the revenue from sales may increase in the future, but this has no impact on production rates or reserves.

Table 1 on the following page presents the most direct way we know for measuring gold company growth, its reserve base. The table lists Proven & Probable Reserves for the past three years. Also listed are fiscal 2001 reserves from the yearend reports of two South African companies. Surprisingly, only five of the 18 companies listed have been able to demonstrate continued growth in reserves over a three-year period (Newmont, Harmony, Goldcorp, Agnico Eagle, and Meridian). Giant gold producers such as AngloGold, Barrick or Placer Dome, at best show erratic growth. Much of the growth in reserves observed in many of these companies results more from M&A activities than from the discovery of new, large gold deposits. The paucity of significant new gold

discoveries is directly related to the overall weak grass roots exploration efforts undertaken by the gold producers. In the near future, we will present exploration expenditures for each of these companies and information on the nature of their gold exploration programs.

## News this Week

**Altius Minerals Corporation (ALS CNDX, \$0.75) 13.074 million shares o/s** and **Sudbury Contact Mines (SUD TSE, \$0.90) 19.691 million shares o/s** reported a shallow and high-grade gold intersection on their *Moosehead Gold Property* in Newfoundland. Sudbury Contact is funding the work program and may earn up to a 60% interest in the property by incurring exploration expenditures and making cash payments to Altius. Drilling by Altius commenced on September 10, 2001 and thus far 13 shallow holes totaling 1,113 metres have been drilled. Most significant is hole MH-01-13, which returned 11.05 g/t Au over a 17.11 m (true width unknown). Within this interval is a quartz vein that returned an assay of 96.72 g/t over 1.5 m (Table 2).



**Table 1. Measuring Growth Potential  
Growth in Gold Reserves**

	Proven & Probable Reserves			
	Gold, million ounces			
	1998	1999	2000	2001 <sup>1</sup>
Anglogold Ltd	125.6	106.5	87.6	
Gold Fields Ltd	71.7	72.6	70.1	78.9
Newmont Mining Corp	52.6	56.6	66.3 <sup>b</sup>	
Barrick Gold Corp	51.5	59.3	58.5	
Placer Dome Inc	39.0	65.9	47.0	
Harmony Gold Mining Ltd	23.8	24.7	27.0	32.5
Ashanti Gold Fields Co Ltd Sp	23.0	22.6	20.4	
Franco Nevada Mining Corp	15.2	16.4	16.4	
TVX Gold Inc	12.4	9.0	7.5	
Kinross Gold Corp	7.5	6.6	6.9	
Echo Bay Mines Ltd	6.8	5.3	4.5	
Goldcorp Inc	3.5	3.8	4.3	
Agnico Eagle Mines Ltd	1.3	3.0	3.3	
Cambior Inc.	5.2	3.9	2.8	
Glamis Gold Ltd	3.6	3.7	2.8	
Meridian Gold Inc	1.6	1.7	1.9	
IAMGold Corporation	3.5	3.1	1.9	
Miramar Mining Corp	1.4	0.5	0.5	

**Demonstrated growth in reserves**

<sup>1</sup>Reserves at the end of Fiscal 2001

**Altius (continued)**

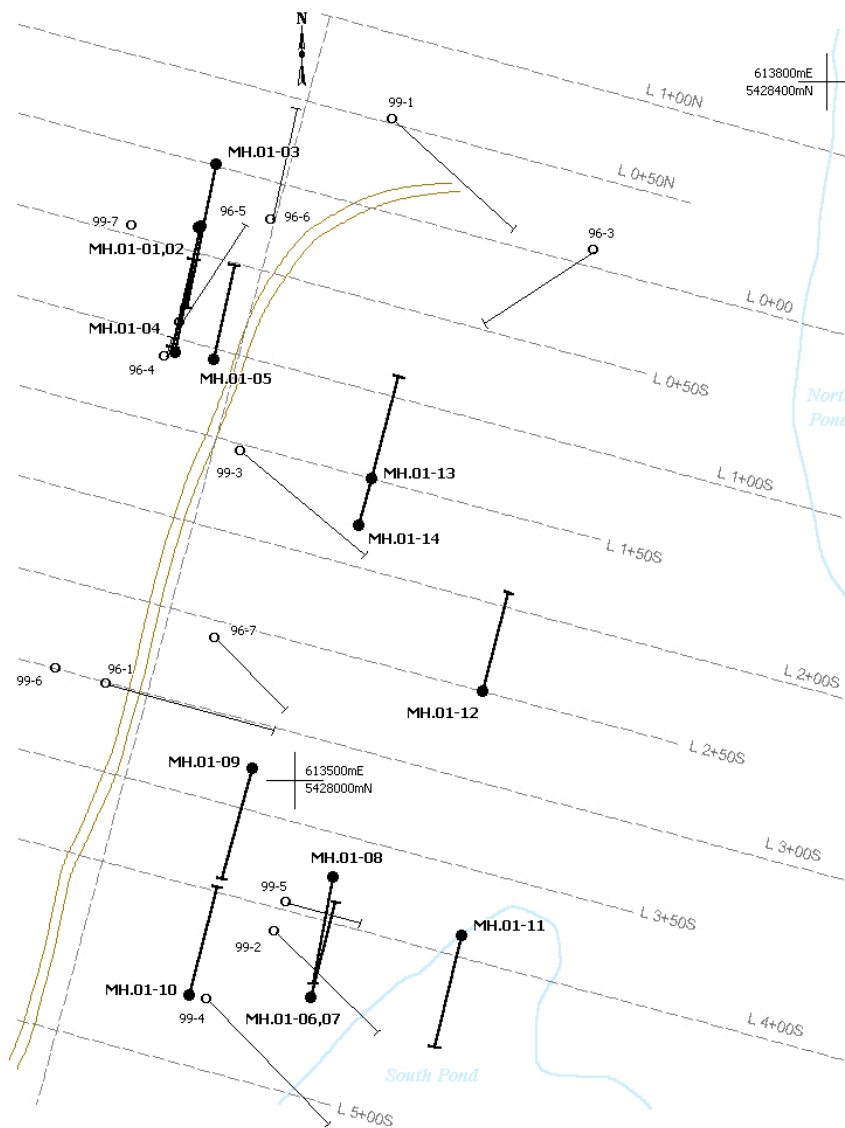
The 2,250-hectare Moosehead property forms part of the company's *Botwood Basin Gold Project*. Terrestrial to shallow marine sedimentary and volcanic rocks that are cut by several brittle structures underlie the property. These structures host high-grade, low-sulphidation epithermal veins and vein breccias observed in angular surface boulders and drill core. Previous drilling has occurred and in 1999, 757 m of drilling was completed in seven holes. The object was to test for the source of the boulders that commonly assay in the range of 15 to 400 g/t gold. Widespread epithermal alteration was

encountered, but the source for the large high-grade boulders was not determined.

A drill plan for the current exploration program is provided in Figure 1. The mineralized structure was intersected at a down-hole depth of from approximately 30-34 m to 64 m. Orientation of the structure is not yet known. Drill holes MH.01-01 through 05 were drilled approximately 150 m to the northwest of hole # 13, in the vicinity of a previous drill intercept that assayed 259 g/t gold over a 15-centimetre core length. Holes MH.01-06 through 11 were drilled on a separate target located approximately 300 m to the south of hole #13. A summary of the status of these holes is also provided in Table 2.



**Figure 1. Altius Minerals – Moosehead drill hole location map**



As hole #13 represents the first significant width of high-grade gold mineralization from the property, it is impossible to determine how extensive this zone may be. The remainder of a planned 25-30-hole program will focus on the testing of other high-priority target areas as well as additional drilling to determine the structural controls on the

mineralization discovered in MH-01-13. The property is well located with respect to infrastructure and Altius personnel manage the exploration program.

We initiated coverage on Altius Minerals during late 1998 based on their gold assets (see **Mining**



**Research** for the week ending November 27, 1998). While the company has drilled several VMS targets in Newfoundland over the past few years with minimal success, again the focus appears to be on gold. As such we are now recommending Altius as a **Speculative Buy** on price weakness over the coming winter. Speculative investors should realize however that this company has a comparatively tight share structure and if it chooses, can drill at Moosehead

throughout the winter, thus price weakness may be limited.

The author has not visited the Moosehead property.

Additional information about Altius and the Moosehead property are available at <http://www.alt-min.com/>.

## Table 2. Altius Minerals Moosehead Property – Preliminary Drill Assays

Drill Hole	Dip & Orientation	Final Hole Depth (m)	From (m)	To (m)	Interval (m)	Au (gpt)	Description
MH.01-01	-42.5 / 195	86.87					no significant assays
MH.01-02	-55.0 / 195	118.57					no significant assays
MH.01-03	-45.5 / 195	115.82	101.48	102.48	1	3.3	altered gabbro
MH.01-04	-45.0 / 015	76.20					no significant assays
MH.01-05	-45.0 / 015	100.89					assays pending
MH.01-06	-45.0 / 015	76.20					assays pending
MH.01-07	vertical	29.26					assays pending
MH.01-08	-50.0 / 195	91.44					assays pending
MH.01-09	-45.0 / 195	91.44					assays pending
MH.01-10	-45.0 / 015	91.44					assays pending
MH.01-11	-45.0 / 195	91.44					assays pending
MH.01-12	-45.0 / 015	80.77					assays pending
MH.01-13	-45.0 / 015	83.82	38.00	55.11	17.11	11.05	
		<i>including</i>	38.00	39.5	1.50	96.72	
			45.11	55.11	10.0	4.07	
			48.11	51.11	3.0	6.79	

**Philex Gold Inc. (CDNX-PGI, \$0.85) 40.383 million shares o/s** reported drill assays from six additional holes (TSD-21 to 26) on their *Boyongan project* on northeastern Mindanao Island, Philippines. Under a September 1999 JV agreement between Philex Gold and **Anglo American Philippines Inc.**, Anglo earned a 40% interest in the 25,557 ha property this year by spending \$2.2 million in exploration. They can earn an additional 30% interest by carrying the project through to the feasibility stage and providing a full guarantee for project financing. Boyongan was discovered in September 2000, when hole TSD-6 returned a 365-m interval

grading 0.70% Cu and 1.9 g/t Au. The best hole drilled since that discovery, TSD-15 drilled in the central portion of the area being explored, returned 393 m grading 1.58% Cu and 2.39 g/t Au including a 187 m section averaging 2.58% Cu and 4.47 g/t Au.

Table 3 presents assay highlights from all of the drill holes reported so far from Boyongan, including those still in progress. The reader is referred to the company's web site at <http://www.philexgold.com/> for a detailed geologic description of each drill hole.



A relatively shallow (<100 m depth) high grade core of Cu-Au mineralization appears to be developing in the area containing drill holes TSD-13, 14, 15, 18 and 20. Here, copper grades in the range of 1-2.5 % and gold values from ~1.5-5 g/t occur over a minimum length of ~200 m. This high-grade core of the emerging Boyongan system, however, represents a very small portion (<10%?) of the mineralized area drilled to date. Given the fact that a large portion of this mineralization may be oxide in nature, results from bench- scale leach testing of the ore would be an important next step in proving the potential of this system.

Philex Gold remains a **Speculative Buy** at current prices, with the realization that news flow from this project is likely to continue on an approximately quarterly basis.

The author has not visited the Boyongan property.

**ADE, Calgary, AB, October 9, 2001**

**Table 3. Philex Gold – Boyongan drill results released to date**

Hole #	Direction	From	To Metres	Interval	Copper, %	Gold, g/t
TSD-1	S-60°	-	-	-	-	-
TSD-2	N-60°	134	338	204	0.38	0.05
including		245	338	93	0.57	0.17
TSD-3	N-80°	168	183	15	0.18	0.64
TSD-4	S-80°	-	-	-	-	-
TSD-5	N-80°	-	-	-	-	-
TSD-6	N-60°	57	422	365	0.81	1.90
including		93	422	329	0.90	2.07
TSD-7	S-60°	128	408	280	0.46	0.40
TSD-8	N-60°	-	-	-	-	-
TSD-9	W-60°	79	500	421	0.56	0.90
including		79	338	259	0.74	1.14
TSD-10	W-60°	159	504	345	0.50	0.70
including		195	305	110	0.61	1.09
TSD-11	E-60°	286	602	316	0.41	0.50
TSD-12	N-60°	292	389	97	0.28	0.68
TSD-13	E-85°	85	564	479	0.70	0.94
including		85	372	287	0.98	1.44
TSD-14	N-60°	53	441	388	1.07	2.03
including		53	188	135	2.21	5.11
TSD-15	S-75°	61	454	393	1.58	2.39
including		61	248	187	2.58	4.47
TSD-16	S-60°	184	562	378	0.64	0.46
TSD-17	S-60°	108	500*	392	0.65	0.44
including		408	500	92	0.44	1.46
TSD-18	Vertical	53	909*	856	0.49	1.57
including		53	330	277	1.04	3.52
TSD-19	W-60°	235	550	315	0.35	0.48
TSD-20	W-60°	92	486	394	0.77	1.51
including		113	318	205	1.01	2.22



**Table 3. Philex Gold – Boyongan results continued**

Hole #	Direction	From	To metres	Interval	Copper, %	Gold, g/rt
TSD-21	N-60°	166	384	218	0.60	0.29
		291	478	187	0.41	0.45
TSD-22	N-65°	250	335	85	0.20	0.17
TSD-23	vertical	64	375	311	0.47	1.13
including		82	245	163	0.60	1.76
TSD-24	N-60°	135	702	567	0.42	0.68
including		135	303	168	0.62	1.28
		717	810	93	0.27	0.64
		837	1001	164	0.35	0.48
including		912	1001	89	0.51	0.62
TSD-25	N-60°	327	476	149	0.37	0.16
TSD-26	S-60°	451	522	71	0.28	0.29
including		508	522	14	0.45	0.71
TSD-27	N-75°	<i>In progress @ 560 m. Altered diorite breccia intersected from 101-560 m</i>				
TSD-28	W-60°	<i>In progress @ 600 m. Altered diorite breccia intersected from 204-600 m</i>				
TSD-29	N-60°	<i>In progress @ 500 m. Altered and weakly mineralized diorite porphyry intersected from 338-500 m</i>				
TSD-30	Vertical	<i>In progress @ 177 m. A debris flow containing fragments of altered and mineralized diorite porphyry was intersected from 52-91 m. The diorite is different from that drilled previously.</i>				

\* 0.1 g/t Au cut-off not applied

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