

Fundamental

Research Corp.

Brian Tang, CFA
Analyst

Kevin Liu, BBA, BSc
Research Associate

September 24, 2008

Investment Analysis for Intelligent Investors

Enerchem International Inc. (TSX: ECH) – Q2 2008 Update; Revenues Exceed Expectations; Gross Margins Dropped; Caution on Oilfield Activity in Alberta

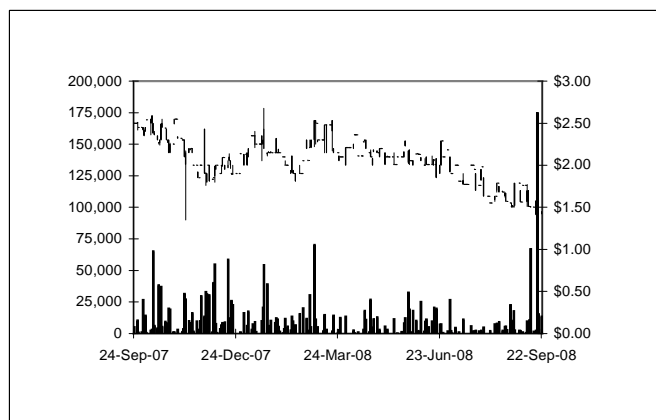
Sector/Industry: Oilfield Services

www.enerchem.com

Market Data (as of September 23, 2008)

Current Price	\$1.42
Fair Value	\$3.04 (↓)
Rating*	BUY
Risk*	4 (Speculative) (↓)
52 Week Range	\$1.20 - \$2.68
Shares O/S	15.22 MM
Market Cap	\$21.61 MM
Current Yield	N/A
P/E	N/A
P/B	0.42x
YoY Return	-43.2%
YoY TSX	-8.6%

*See back of report for rating and risk definitions



Key Financial Data and Statistics (\$000s)

	2003	2004	2005	2006A	2007A	2008E	2009E
Revenues	34,464	63,619	109,132	107,746	80,300	107,493	122,600
Net Income	-815	758	3,884	5,931	-4,481	-271	1,764
Gross Margins	20.1%	16.1%	15.3%	19.4%	10.4%	7.5%	10.0%
Net Margin	-2.4%	1.2%	3.6%	5.5%	-5.6%	-0.3%	1.4%
Return on Capital	0.6%	4.0%	11.5%	15.0%	-8.7%	-0.6%	0.0%
EPS (ex extra)	(0.06)	0.05	0.26	0.39	(0.29)	(0.02)	0.12
Total Debt to Capital	16.6%	16.4%	11.5%	0.5%	0.0%	7.0%	6.8%

Q2 2008 Highlights

- Revenues exceeded expectations, and grew 186.4%, and 56.0%, in Q2 2008, and the first 6 months of 2008, respectively. The company processed more feedstock during the first half of 2008, and had stronger customer demand in Q2 2008, compared to the same periods in 2007.
- Gross margins were disappointing: 5.2% in the first half of 2008, compared to 14.1% in same period in 2007. In Q2 2008, gross margins continued to be negatively affected by oil and gas producers' focus on reducing service costs, increased feedstock costs, and operating issues with the heaters at the Sundre Refinery.
- Enerchem continued to experience construction issues with its new heating units for the Sundre plant. As a result, the company is reinstalling its original salt-bath heaters in order to return the plant to an operating state. The reinstallation is expected to be completed during Q3 2008.
- In light of increased provincial royalties, we believe current natural gas prices need to move higher; otherwise, they will restrain oilfield activity significantly in the WCSB for the rest of 2008.
- Drilling rig utilization has remained at the low levels observed in 2007; 34.5% YTD, compared to 34.5% in 2007.
- In Q2 2008, the company posted restructuring costs of \$0.85 million relating to the consolidation of the company's accounting and administrative offices from Leduc to Calgary in Alberta, which Enerchem expects to complete by the end of October 2008.
- The company reported a net loss of \$1.07 million (EPS: -\$0.07) in Q2 2008, versus a net loss of \$0.65 million (EPS: -\$0.04) in Q2 2007. Net losses in the first half of 2008 were \$1.14 million (EPS: -\$0.07), versus net income of \$1.20 million (EPS: \$0.08) in the same period in 2007.
- We have maintained our BUY rating and lowered our fair value estimate to \$3.04 per share from \$4.85 per share. We have also increased our RISK to 4 (Speculative) from 3 (Average) until we see actual improvement of margins and operations at the Sundre plant.

Enerchem International Inc. is a manufacturer and distributor of hydrocarbon drilling and fracturing fluids designed to provide cost effective solutions to the oil and gas industry, and specialty solvents to help resolve production and processing problems. ECH is also a provider of energy marketing services, fluid transportation, and other related oilfield services.

Oilfield Activities in Alberta

The recent drop in oil and gas prices has raised caution about the previously expected recovery of the Alberta oilfield industry in Q4 2008. The increase in provincial royalties announced last year, which lead to a higher breakeven point for many oil and gas projects, would cause many drilling programs to become uneconomic at current prices of below US\$8/Mcf (particularly for the projects required to pay higher provincial royalties starting this year). Canadian Natural Resources Ltd. (NYSE: CNQ) expects many gas wells in Alberta will need prices of higher than US\$12 to be profitable under the new royalty program, whereas EnCana Corp. (NYSE: ECA) indicates that gas prices of \$9 are healthy (Source: Financial Post). Overall, we believe current low price levels have the potential to restrain oilfield activities significantly for the rest of 2008, and consequently, oilfield services companies operating in WCSB would be negatively affected.

Oilfield activities in Alberta (shown below) have not improved in the first half of 2008, from the low levels observed in the comparable period in 2007. Year to date, rig utilization is at 34.5% versus 34.5% in 2007. However, in Q3 2008 (up to first week of September), drilling rig utilization in Alberta improved to 38.0% versus 33.8% in Q3 2007.

Alberta Rigs	Q1		Q2		Q3		Q4		YTD	
	AVG	Utilization	AVG	Utilization	AVG	Utilization	AVG	Utilization	AVG	Utilization
2008 Available	683		689		648				673	
2008 Drilling	362	52.9%	90	13.0%	246	38.0%			233	34.5%
2007 Available	663		723		708		704		700	
2007 Drilling	391	58.9%	97	13.3%	239	33.8%	238	33.8%	241	34.5%
2006 Available	580		643		624		641		622	
2006 Drilling	522	89.9%	233	36.2%	384	61.5%	348	54.3%	372	59.7%

Source: CAODC, FRC

Revenues exceed expectations

For the first 6 months of 2008, Enerchem reported revenues of \$55.14 million, up 56.0% from revenues of \$35.34 million in the same period in 2007. This exceeded our expectations as we had estimated revenues of \$85.0 million for entire FY2008 in our previous report. In Q2 2008 (ended June 2008), revenues increased 186.4% to \$21.39 million compared to \$7.47 million in Q2 2007. The company processed considerably more feedstock compared to the first half of 2007, which resulted in more finished and by-products available for sale in the first half of 2008. The table below presents the company's YTD and Q2 2008 revenues by segment.

	2006A	2007A	6 mo 2007	6 mo 2008	Q2 2007	Q2 2008
Oilfield Services	75,668	51,394	22,938	29,508	3,787	10,478
Energy Marketing	25,423	19,225	7,704	20,404	1,614	9,014
Transportation Services	6,655	9,681	4,702	5,226	2,067	1,899
Total Revenues	107,746	80,300	35,344	55,137	7,468	21,390

Oilfield Services – Q2 2008 revenues in this segment amounted to \$10.48 million, up 176.7% compared to \$3.79 million in Q2 2007. Six month revenues in 2008 grew 28.6% to \$29.51 million, compared to \$22.94 million in 2007. The revenue increase in Q2 2008 was the result of stronger demand from this segment's existing customer base, and the establishment of several new customers, which in turn increased sales volume of the company's fracturing, drilling and solvent products.

Energy Marketing – Q2 2008 revenues in this segment were \$9.01 million, up 458.4% from \$1.61 million in Q2 2007. For the 6 month period ended June 2008, revenues increased to \$20.40 million, up 164.9% compared to \$7.70 million in the same period last year. When the company processes feedstock to produce its finished products (i.e., fracturing, drilling and solvent products), a percentage of the feedstock will result in petroleum by-products. Enerchem has significantly increased the volume of feedstock put into production in the first 6 months of 2008, versus the same period last year, which resulted in increased sales volumes of by-products. The increase in underlying crude oil prices in the first half of 2008, over 2007, also helped increased revenues in this segment.

Transportation Services – Segment Revenues declined 8.1% to \$1.90 million in Q2 2008, compared to \$2.07 million in Q2 2007. The decrease in revenues in Q2 2008 was because part of the fluid hauling fleet was directed to providing services to the company's own oilfield services segment as a result of the increase in its manufacturing and sales activities. However, for the first 6 months of 2008, the company posted revenues of \$5.23 million, up 11.1% compared to \$4.70 million in the same period in 2007, due to new business arrangements secured in Q1 2008.

Revenues Forecasts: Our revised revenue forecasts for the company are **\$107.5 million in 2008, and \$122.6 million in 2009 (previous estimates: \$85.0 million in 2008, \$107.9 million in 2009).**

Margins Disappointing

Gross Margins: In Q2 2008, gross margins continued to be squeezed by oil and gas producers' focus on reducing service costs and increased feedstock costs (as result of increasing crude oil prices). The operating issue of the heaters at the Sundre Plant also negatively affected the company's margins. As shown in the table below, gross margins (percentage of revenues minus operating expenses over revenues) were 5.9% in Q2 2008, compared to 8.1% in Q2 2007. For the first 6 months of 2008, gross margins were 5.2%, compared to 14.1% in the same period of 2007. We have lowered our gross margin assumptions to 7.5% in 2008, from 14.5% in our previous report.

Margins	2006A	2007A	2008E	2009E	2008 (6 mo)	2007 (6 mo)	Q2 2008	Q2 2007
Gross Margins	19.4%	10.4%	7.5%	10.0%	5.2%	14.1%	5.9%	8.1%
EBT	7.7%	-5.6%	-0.4%	2.2%	-2.6%	4.5%	-6.3%	-13.9%
Net	5.5%	-5.6%	-0.3%	1.4%	-2.1%	3.4%	-5.0%	-8.7%
G&A/Revenues	5.4%	5.3%	5.2%	5.2%	4.0%	6.2%	5.3%	14.1%

Note: Gross margins in 2006 are based on COGS. Enerchem started to report Operating Expenses instead of COGS in Q4 2007.

The following table shows gross margins of both the oilfield services and energy marketing segments decreased for the first 6 months of 2008, compared to the same period in 2007. Although the oilfield service segment has seen good revenue growth in 2008 over comparable periods in 2007, this segment's gross margins decreased significantly to -3.4% (operating loss) for the first 6 months in 2008, compared to 10.2% in the same period in 2007. This is disappointing because the oilfield service segment accounted for the most revenues of all segments (53.5% for the first half of

2008, and 64.0% in 2007). On a positive note, we are glad to see gross margins of the energy marketing segment (which accounted for 37.0% of revenues for the first half of 2008) improve to 10.1% in Q2 2008 versus 1.8% in Q2 2007, when the segment's revenues increased 458.4% in Q2 2008, over the comparable period in 2007.

Gross Margins by Segments	6 mo 2008	6 mo 2007	Q2 2008	Q2 2007
Oilfield Services	-3.4%	10.2%	-5.5%	-1.9%
Energy Marketing	6.4%	11.9%	10.1%	1.8%
Transportation Services	29.2%	25.1%	27.4%	25.2%

Note: Revenues of Transportation Services include intersegment revenues

Operating Issues at the Sundre Plant

The company continued to experience operational issues with the new direct fired heaters at the Sundre refinery, which affected the capacity of the plant to process clean flowback in the manufacturing of fracturing fluids during the first half of 2008. As a result, Enerchem has decided to reinstall its original salt-bath heaters in order to return the plant to an operating state, while it works to address the issues with the new heaters. The reinstallation is expected to be completed during Q3 2008, which, based on our discussion with management, will bring all three towers at the Sundre facility back into production and improve gross margins for the balance of 2008.

In our previous report, we had listed several developments by the company to streamline its operations such as the installation of a desalter at the Slave Lake refinery. We had also expected the use of flowback to improve gross margins. At the end of Q2 2008, we have not seen improvement in gross margins, in light of operating issues at the Sundre plant. At this time, we adopt a cautious approach until we observe an actual improvement in margins.

Overall, we are glad to see the company was able to increase revenues through processing more feedstock. However, we believe the key for the company to improve its financial performance going forward is through controlling its operating expenses thereby improving its gross margins. In addition, as a result of increased processing of feedstock, the company's inventory has increased to \$10.61 million at the end of Q2 2008, compared to \$5.84 million at the end of 2007.

For the 6 month period ended June 2008, G&A expenses were 4.0% of revenues, versus 6.2% in the same period in 2007, and 5.3% in 2007. We continue to assume G&A expenses will represent 5.2% of revenues in our DCF model.

Earnings

The company reported a net loss of \$1.07 million (EPS: -\$0.07) in Q2 2008, versus a net loss of \$0.65 million (EPS: -\$0.04) in Q2 2007. The net loss in Q2 2008 was primarily due to squeezed gross margins as discussed above, and restructuring costs of \$0.85 million relating to the consolidation of the company's accounting and administrative offices from Leduc to Calgary, Alberta, which Enerchem expects to complete by the end of October 2008. For the 6 month period ended June 2008, the company posted a net loss of \$1.14 million (EPS: -\$0.07), versus net income of \$1.20 million (EPS: \$0.08) in the same period of 2007.

Given the changes to our valuation model, we expect a net loss of \$0.27 million (EPS: -\$0.02) versus our previous estimate of net income of \$0.02 million (EPS: \$0.00) in 2008. We have also lowered our 2009 forecast to net income of \$1.76 million (EPS: \$0.12) compared to net income of \$4.3 million (EPS: \$0.28) in our previous report.

Capital Structure and Cash Flow

In the first 6 months of 2008, the company had positive cash flows from operations of \$0.86 million and spent \$3.36 million in investing activities (including \$2.89 million on PPE). The company raised \$4.72 million through its bank credit facility in Q1 2008, and repaid \$4.66 million of its bank indebtedness in Q2 2008, to reduce the balance to \$0.06 million at the end of Q2 (from \$4.72 million at the end of Q1 2008). In addition, the company paid \$0.08 million to repurchase 37,000 of its common shares at an average price of \$2.07 during the first half of 2008. Cash outflows have brought Enerchem's cash position down to \$0.19 million at the end of Q2 2008, from \$2.71 million at the end of 2007.

Cash outflows from investing activities during the first half of 2008 have exceeded our expectations considerably. According to management, the company expects significantly less capital expenditures in the second half of 2008. We have raised our capex estimate to \$4 million in 2008, from \$3 million in our previous report, and have maintained our capex forecasts at \$2 million for 2009+. Although ECH continues to be long term debt free at the end of Q2 2008, we believe the company will have to raise \$3.9 million, likely through its bank credit facilities, to finance its capital expenditures and working capital for the rest of 2008.

Outlook on oil

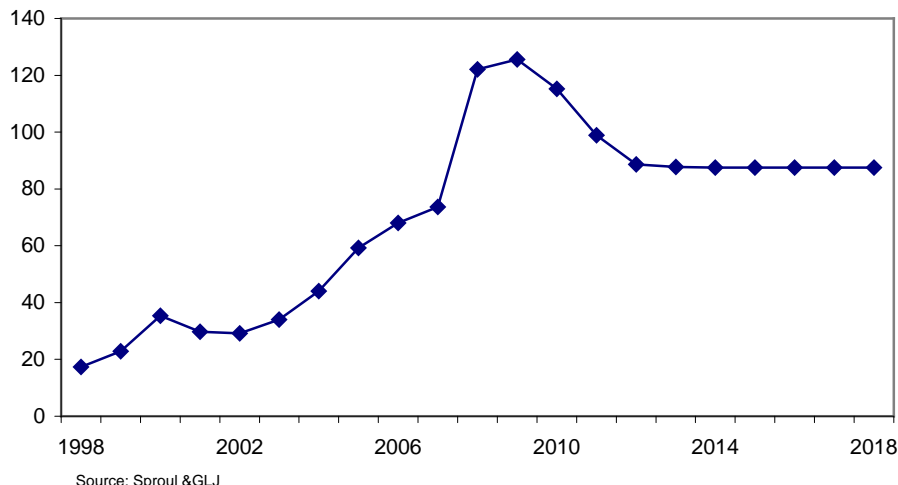
Despite the recent drop, oil prices are expected to stay strong in the short term, at an average of US\$122.06/bbl in 2008, and US\$128.26/bbl in 2009. (Source: EIA, Sproule, and GLJ), compared to an average price of US\$72.47/bbl in 2007. In the long term, the supply of oil is forecasted to be sufficient to meet demand through 2030.

Oil Supply and Demand (in Million boe/d)	2005	2010	2015	2020	2025	2030	CAGR (2005-30)
World Production	84.3	89.2	95.7	101.3	106.5	112.5	1.16%
World Consumption	83.6	89.2	95.7	101.3	106.5	112.5	1.19%
Deficit	0.7	0.0	0.0	0.0	0.0	0.0	

Source: EIA

While we expect oil prices to soften a bit in the longer term, though we believe that oil demand growth is strong enough to support prices above historical averages (\$35.5/bbl during 1996-2007). For instance, China's crude oil imports reached a new record of 163.17 million tonnes in 2007, representing growth of 12.4% over the previous year. In addition, we think changes in fundamentals such as increased finding costs also support oil prices above historical averages. The consensus forecast is that oil prices are expected to stay above US\$80.00/bbl (inflation adjusted) through 2018. The following chart shows long term price forecasts for oil prices.

Oil (WTI Cushing Oklahoma), US\$/bbl



Outlook on Gas

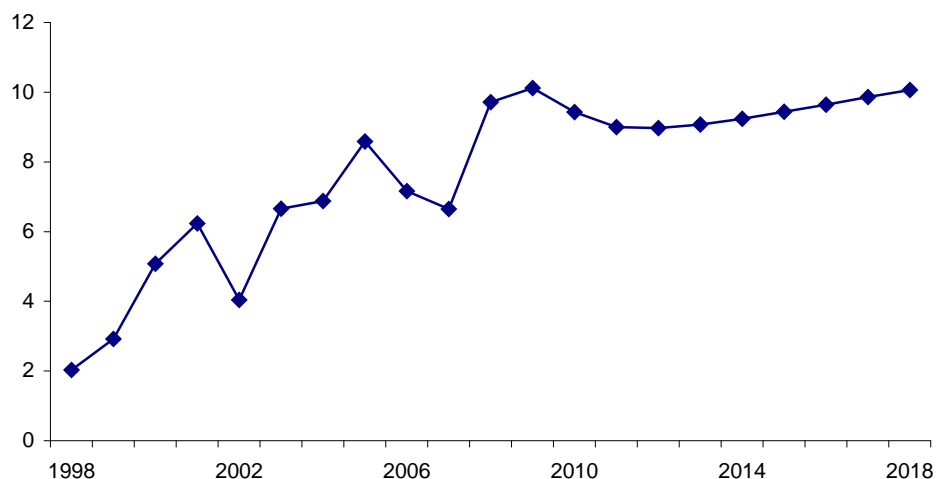
The following tables show U.S. gas supply is forecasted to be in deficit through 2030. This is positive for the Canadian natural gas industry since the deficit is likely to result in increased demand for imports from Canada. In addition, the world supply of natural gas is also expected to be in a deficit position during the forecast period.

Gas - Supply and Demand (in Tcf)	2005	2010	2015	2020	2025	2030	CAGR (2005 - 30)
The U.S.							
Production	18.1	19.4	19.6	19.7	19.7	19.5	0.29%
Consumption	22.2	23.2	23.7	23.3	23.0	22.7	0.09%
Deficit	-4.1	-3.8	-4.1	-3.6	-3.3	-3.2	
World Total							
Production	101.7	114.9	128.3	140.5	149.0	157.7	1.77%
Consumption	103.7	115.7	129.2	141.1	149.5	158.0	1.70%
Deficit	-2.0	-0.8	-0.9	-0.6	-0.5	-0.3	

Source: EIA

Gas prices (AECO) are forecasted at \$9.72/Mcf in 2008, and \$10.12/Mcf in 2009 (Source: Sproule and GLJ). The following chart shows that gas prices are expected to decline to about \$9.00/Mcf in 2012, and start to appreciate to about \$10.00/Mcf by 2018.

Natural Gas (AECO S- C Spot), Cdn\$/Mcf



Source: Sproule, GLJ

Valuation

Given the changes discussed above, our revised DCF model (shown below) valued the company at \$4.39 per share (previous: \$4.85 per share).

Enerchem - DCF Valuation (000s)

	2008E	2009E	2010E	2011E	2012E	2013E	2014E	Terminal
Net Income	(271)	1,764	6,402	7,268	8,005	8,794	9,641	10,549
Non Cash Charges	2,777	2,862	2,802	2,746	2,694	2,645	2,600	2,558
Funds from Operations	2,506	4,627	9,204	10,014	10,698	11,439	12,241	13,107
Investment in W/C	(4,555)	(2,425)	(1,616)	(1,623)	(1,748)	(1,880)	(2,029)	(2,178)
Cash From Operations	(2,049)	2,202	7,588	8,391	8,950	9,559	10,212	10,929
Capex	4,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Free Cash Flow	(6,049)	202	5,588	6,391	6,950	7,559	8,212	8,929
PV	(5,852)	174	4,310	4,401	4,274	4,150	4,025	48,630
Discount Rate	12%							
Terminal Growth	3%							
Firm PV	64,111							
Cash (Beg. of Year)	2,711							
Debt	-							
PV Equity	66,822							
Shares O/S	15,216							
DCF Value/Share	4.39							

As shown in the table below, Enerchem is valued at \$1.68 per share based on industry multiples. Since we have forecasted a net loss in 2008, the valuation is based on our 2009 EPS estimate of \$0.12 per share. The industry P/E has decreased to 14.50x compared to 20.08x in our previous report, particularly in light of reduced oilfield activities experienced in Western Canada.

Oil Related Services & Equipment Industry

Industry P/E	14.50
Forward ECH P/E (2009)	12.16

EPS (2009)	\$0.12
Value Based on 2009 EPS	\$1.68

Source: Reuters, FRC

Rating

The average valuation of the company based on our DCF model and industry multiples, is \$3.04 per share.

We are maintaining our BUY rating with a fair value of \$3.04 per share, reflecting 114% upside potential from the current price levels. The company is currently trading at a significant discount to its book value. We believe current share prices represent a good entry point for investors with high risk tolerance and longer investment horizons.

The company's gross margins continued to be squeezed by oil and gas companies focusing on reducing service costs and high feedstock costs. In addition, Enerchem has experienced continued issues with its new heaters at the Sundre plant, which limited the plant's ability to utilize flowback in the production of premium fluids. Although we have expected, and continue to expect, that the use of flowback will result in an improvement in margins, at this time, we adopt a cautious outlook until we see margins improve. **Therefore, we increase our Risk Rating on the company to 4 (Speculative) from 3 (Average).**

Risks

- The company is exposed to commodity prices both on the revenue and expense side. Rising oil prices increase input costs while decreasing oil prices may cause less demand for products.
- A sustained drop in energy prices would cause less drilling activity and hence, less demand for ECH's products.
- The company competes in an industry where certain competitors may have better access to capital and larger infrastructure.
- The company is exposed to environmental legislation risks.
- Low average trading volumes

APPENDIX**Income Statement****Enerchem International Inc (C\$000s)**

Fiscal Period:	2006A	2007A	2008E	2009E
Total Revenue	107,746	80,300	107,493	122,600
Cost of Sales/Operating expenses	86,877	71,974	99,431	110,340
Gross Margins	20,869	8,325	8,062	12,260
Salaries/Benefits	5,097			
Selling/General/Administration	5,861	4,221	5,590	6,375
Restructuring costs			100	
Depreciation/Amortization	1,678	2,357	2,764	2,850
Amort. Dfrd. Costs				
Amort. Pre-Opening	87	87		
Accretion Expense	12	13	13	13
Interest on Long Term Debt	70	8	0	273
Interest-Bank			35	35
Interest-Leases				
Other Interest				
Write-Down Invest.				
Total Operating Expense	12,806	6,685	8,501	9,546
Interest Income and other		235	50	
Plant tank farm remediation		-240		
Goodwill impairment		-6,050		
Loss on write-down of investment on foreign Ops		-58		
Asset Disposal	95	-27		
Loss on Settlement of Legal Claim				
Other	120			
Net Income Before Taxes	8,279	-4,500	-389	2,714
Provision for Income Taxes	2,348	-18	-119	950
Net Income After Taxes	5,931	-4,481	-271	1,764
Discontinued Operations	0	0		
Net Income	5,931	-4,481	-271	1,764

Balance Sheet**Enerchem International Inc (C\$000s)**

Fiscal Period:	2006A	2007A	2008E	2009E
Cash	2,414	2,711	84	286
Accounts Receivable	16,387	16,075	18,274	20,842
Other Receivable			--	--
Taxes Recoverable		306	306	306
Inventories	9,289	5,840	10,142	11,255
Promissory Notes	61		-	-
Discontinued Operations			--	--
Current portion of future tax asset		73	73	73
Prepaid Expenses & Other	198	117	972	1,025
Total Current Assets	28,348	25,121	29,851	33,787
PPE	32,878	39,489	40,712	39,849
Goodwill, Gross				
Amortization				
Discontinued Operations				
Promissory Notes				
Goodwill	6,050		-	-
Other Assets	1,280	316	794	794
Total Assets	68,555	64,926	71,356	74,430
Bank Indebtedness			3,900	3,900
Payable/Accrued	7,258	9,130	11,932	13,241
Taxes Payable	324		-	-
Current Portion Lease				
Current Portion of Long Term Debt	116		-	-
Total Current Liabilities	7,697	9,130	15,832	17,141
Capital Leases				
Long Term Debt	171		-	-
Total Long Term Debt	171		-	-
Asset Retirement Obligation	192	205	205	205
Deferred Taxes	4,440	3,746	3,746	3,746
Total Liabilities	12,501	13,082	19,783	21,092
Share Capital	29,676	29,631	29,631	29,631
Contributed Surplus	1,124	1,501	1,501	1,501
Retained Earnings	25,254	20,712	20,441	22,205
Total Equity	56,054	51,844	51,573	53,337
Total Liabilities & Shareholders' Equity	68,555	64,926	71,356	74,430

Cash Flow Statement**Enerchem International Inc (C\$000s)**

Fiscal Period:	2006A	2007A	2008E	2009E
Net Income	5,931	(4,481)	(271)	1,764
Depreciation	2,573	2,456	2,777	2,862
Stock Based Compensation	220	377		
Amortization of plant turnaround costs		843		
Dispose Assets & other	(95)	27		
Deferred Taxes	(194)	(766)		
Working Capital				
Write-Down Invest.	230	58		
Goodwill impairment		6,050		
Accounts Rcvbl.	8,845	312	(2,199)	(2,568)
Inventories/Prepays	137	3,530	(5,157)	(1,166)
Payable/Accrued	(6,599)	1,872	2,801	1,309
Interest Payable				
Taxes Payable	(2,086)	(629)	-	-
Discontinued Ops.				
Cash from Operating Activities	8,961	9,647	(2,049)	2,202
Capital Expenditures	(7,446)	(9,118)	(4,000)	(2,000)
Promissory Notes	122	61	-	-
Dispose Assets	546	123	-	-
Sale of Assets			24	
Acquisition	(2,733)	826	-	-
Sale of Subsidiary			-	-
Other Assets	(867)	(850)	(502)	-
Discontinued Ops.			-	-
Cash from Investing Activities	(10,378)	(8,957)	(4,478)	(2,000)
Share Capital	1,147	104		
Common share repurchase		(209)		
Preferred Redeem				
Preferred Conv.				
Bank Indebted.	(3,695)		3,900	
Increase-LTD				
Increase-Leases				
Repay. Leases				
Repayment LTD	(4,596)	(287)		
Dividends-Pref.				
Discontinued Ops.				
Cash from Financing Activities	(7,145)	(392)	3,900	-
Net Change in Cash	(8,561)	298	(2,627)	202
Net Cash - Beginning Balance	10,975	2,414	2,711	84
Net Cash - Ending Balance	2,414	2,711	84	286

Fundamental Research Corp. Equity Rating Scale:

Buy – Annual expected rate of return exceeds 12% or the expected return is commensurate with risk

Hold – Annual expected rate of return is between 5% and 12%

Sell – Annual expected rate of return is below 5% or the expected return is not commensurate with risk

Suspended or Rating N/A— Coverage and ratings suspended until more information can be obtained from the company regarding recent events.

Fundamental Research Corp. Risk Rating Scale:

1 (Low Risk) - The company operates in an industry where it has a strong position (for example a monopoly, high market share etc.) or operates in a regulated industry. The future outlook is stable or positive for the industry. The company generates positive free cash flow and has a history of profitability. The capital structure is conservative with little or no debt.

2 (Below Average Risk) - The company operates in an industry where the fundamentals and outlook are positive. The industry and company are relatively less sensitive to systematic risk than companies with a Risk Rating of 3. The company has a history of profitability and has demonstrated its ability to generate positive free cash flows (though current free cash flow may be negative due to capital investment). The company's capital structure is conservative with little to modest use of debt.

3 (Average Risk) - The company operates in an industry that has average sensitivity to systematic risk. The industry may be cyclical. Profits and cash flow are sensitive to economic factors although the company has demonstrated its ability to generate positive earnings and cash flow. Debt use is in line with industry averages, and coverage ratios are sufficient.

4 (Speculative) - The company has little or no history of generating earnings or cash flow. Debt use is higher. These companies may be in start-up mode or in a turnaround situation. These companies should be considered speculative.

5 (Highly Speculative) - The company has no history of generating earnings or cash flow. They may operate in a new industry with new, and unproven products. Products may be at the development stage, testing, or seeking regulatory approval. These companies may run into liquidity issues, and may rely on external funding. These stocks are considered highly speculative.

Disclaimers and Disclosure

The opinions expressed in this report are the true opinions of the analyst about this company and industry. Any "forward looking statements" are our best estimates and opinions based upon information that is publicly available and that we believe to be correct, but we have not independently verified with respect to truth or correctness. There is no guarantee that our forecasts will materialize. Actual results will likely vary. The analyst and Fundamental Research Corp. "FRC" does not own any shares of the subject company, does not make a market or offer shares for sale of the subject company, and does not have any investment banking business with the subject company. Fees of less than \$30,000 have been paid by ECH to FRC. The purpose of the fee is to subsidize the high costs of research and monitoring. FRC takes steps to ensure independence including setting fees in advance and utilizing analysts who must abide by CFA Institute Code of Ethics and Standards of Professional Conduct. Additionally, analysts may not trade in any security under coverage. Our full editorial control of all research, timing of release of the reports, and release of liability for negative reports are protected contractually. To further ensure independence, ECH has agreed to a minimum coverage term including four updates. Coverage can not be unilaterally terminated. Distribution procedure: our reports are distributed first to our web-based subscribers on the date shown in this report then made available to delayed access users through various other channels for a limited time. The performance of FRC's research is ranked by Investars. Full rankings and are available at www.investars.com.

The distribution of FRC's ratings are as follows: BUY (82%), HOLD (7%), SELL (2%), SUSPEND (9%).

To subscribe for real-time access to research, visit <http://www.researchfrc.com/subscription.htm> for subscription options.

This report contains "forward looking" statements. Forward-looking statements regarding the Company and/or stock's performance inherently involve risks and uncertainties that could cause actual results to differ from such forward-looking statements. Factors that would cause or contribute to such differences include, but are not limited to, continued acceptance of the Company's products/services in the marketplace; acceptance in the marketplace of the Company's new product lines/services; competitive factors; new product/service introductions by others; technological changes; dependence on suppliers; systematic market risks and other risks discussed in the Company's periodic report filings, including interim reports, annual reports, and annual information forms filed with the various securities regulators. By making these forward looking statements, Fundamental Research Corp. and the analyst/author of this report undertakes no obligation to update these statements for revisions or changes after the date of this report. A report initiating coverage will most often be updated quarterly while a report issuing a rating may have no further or less frequent updates because the subject company is likely to be in earlier stages where nothing material may occur quarter to quarter.

Fundamental Research Corp DOES NOT MAKE ANY WARRANTIES, EXPRESSED OR IMPLIED, AS TO RESULTS TO BE OBTAINED FROM USING THIS INFORMATION AND MAKES NO EXPRESS OR IMPLIED WARRANTIES OR FITNESS FOR A PARTICULAR USE. ANYONE USING THIS REPORT ASSUMES FULL RESPONSIBILITY FOR WHATEVER RESULTS THEY OBTAIN FROM WHATEVER USE THE INFORMATION WAS PUT TO. ALWAYS TALK TO YOUR FINANCIAL ADVISOR BEFORE YOU INVEST. WHETHER A STOCK SHOULD BE INCLUDED IN A PORTFOLIO DEPENDS ON ONE'S RISK TOLERANCE, OBJECTIVES, SITUATION, RETURN ON OTHER ASSETS, ETC. ONLY YOUR INVESTMENT ADVISOR WHO KNOWS YOUR UNIQUE CIRCUMSTANCES CAN MAKE A PROPER RECOMMENDATION AS TO THE MERIT OF ANY PARTICULAR SECURITY FOR INCLUSION IN YOUR PORTFOLIO. This REPORT is solely for informative purposes and is not a solicitation or an offer to buy or sell any security. It is not intended as being a complete description of the company, industry, securities or developments referred to in the material. Any forecasts contained in this report were independently prepared unless otherwise stated, and HAVE NOT BEEN endorsed by the Management of the company which is the subject of this report. Additional information is available upon request. THIS REPORT IS COPYRIGHT. YOU MAY NOT REDISTRIBUTE THIS REPORT WITHOUT OUR PERMISSION. Please give proper credit, including citing Fundamental Research Corp and/or the analyst, when quoting information from this report.

Fundamental Research Corp is registered with the British Columbia Securities Commission as a Securities Adviser which is not in any way an endorsement from the BCSC. The information contained in this report is intended to be viewed only in jurisdictions where it may be legally viewed and is not intended for use by any person or entity in any jurisdiction where such use would be contrary to local regulations or which would require any registration requirement within such jurisdiction.