

CNOOC Limited

Energy Value and China Growth

Symbol	Price	Shares	Market Cap (mm) (US\$mm)	Net	Debt/ Present Value	McDep Ratio	EV/	EV/	P/E	Div'd	PV/
	(\$/sh)			Present Value (US\$/sh)			Sales	Ebitda		NTM	NTM
CEO (19%)	25.26	78	1,970	33.00	-	0.76	3.4	4.4	9	2.5	5.7

McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses

EV = Enterprise Value = Market Cap and Debt:

US\$mm 1,970

Ebitda = Earnings before interest, tax, depreciation and amortization:

US\$mm 452

NTM = Next Twelve Months Ended December 31, 2003; P/E = Stock Price to Earnings

PV = Present Value of oil and gas:

US\$mm 2,580

Recommendation

We continue our recommendation of current purchase of the common shares of CNOOC Limited (CEO) on the basis of low valuation of a politically advantaged oil and gas position in the rapidly growing China market. Owning the rights to current and future oil and gas discoveries under the waters offshore China, CEO participates in the economic benefit while much of the exploratory risk is shifted to international companies like ChevronTexaco and ConocoPhillips. Gains accelerated with CEO's China production up 27% year over year in the third calendar quarter. At the same time the international oil companies that want to sell liquefied natural gas to China from Australia and Indonesia have sold CEO a respective 25% and 12.5% producer share in the projects on an apparently favorable basis that promises long-term profitability. Though we thought the stock was undervalued nearly a year ago when the cash flow multiple (EV/Ebitda NTM) was 5.1, the multiple now is even lower at 4.4 despite stock price appreciation since then. Thus there appears to be scope for reward to justify incurring the volatility of the market assessment of energy value and China growth prospects.

Volume Growth Accelerates

In addition to growing oil and gas production in China, CEO has added volume in Indonesia as a result of a purchase of properties from Repsol, the Spanish company, for almost \$600 million. The Repsol properties started adding to CEO volume in the second quarter. Political perceptions may have taken a turn for the worse in the island nation after the bombing of a nightclub in Bali. Yet CEO is still diversified with the purchase of

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McDep Associates
Independent Stock Idea
October 30, 2002

the producing properties equaling about 4% of our estimated present value of the company.

We project next twelve months (NTM) volume at the third quarter rate (see Table Q). Our period ends on December 31 next year rather than September 30 because CEO discloses financial detail only on a six-months basis. Rather than trying to project how much volume gain there might be in the next several quarters, we just keep the potential in mind when we assess a multiple of cash flow in estimating present value.

Table Q
CNOOC Limited
Next Twelve Months Operations

	<i>Q3</i>	<i>Q4</i>	<i>Year</i>	<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4E</i>	<i>Year</i>	<i>Next</i>
	<i>9/30/01</i>	<i>12/31/01</i>	<i>2001</i>	<i>3/31/02</i>	<i>6/30/02</i>	<i>9/30/02</i>	<i>12/31/02</i>	<i>2002E</i>	<i>Twelve</i>
									<i>Months</i>
Volume									
Natural gas (bcf)	19	18	71	18	25	27	27	97	106
Natural Gas (mmcf)	202	198	195	202	274	291	291	265	291
Days	92	92	365	90	91	92	92	365	365
Oil (mmb)	21	21	84	23	26	31	31	110	122
Oil (mbd)	226	229	229	252	282	333	333	300	333
Total gas & oil (bcf)	144	145	572	154	179	211	211	754	835
Total gas & oil (mmbd)	260	262	261	286	328	382	382	344	382
Price									
Natural gas (\$/mcf)									
Henry Hub (\$/mmbtu)	2.75	2.41	3.17	2.53	3.38	3.21	4.19	3.33	4.07
Company	3.10	3.02	3.08	3.15	3.01	3.19	3.19	3.14	3.19
Oil (\$/bbl)									
WTI Cushing	26.69	20.40	24.99	21.60	26.27	28.33	28.36	26.14	25.54
Company	24.59	17.23	23.34	19.01	24.28	25.21	25.23	23.72	22.73
Total gas & oil (\$/mcf)	3.97	2.89	3.79	3.17	3.90	4.07	4.08	3.85	3.71
Revenue (\$mm)									
Natural Gas	58	55	219	57	75	85	85	303	339
Oil	512	363	1,950	431	623	772	773	2,600	2,762
Other			-						
Total	570	418	2,169	488	698	858	859	2,903	3,101

Reserves Expand by Half in 2002

CEO's purchase of reserves from Repsol and in the two LNG projects adds some 850 million barrels equivalent by management's estimate. That is almost half of the 1820 million barrels of proven reserves the company reported for the end of last year (see Table R). Even without taking the new reserves into account the company's adjusted reserve life index at 9.1 years is near average. The life index for proven developed oil is short at 4.8 years, but not unusual for offshore properties. Take out Indonesian production that is in the denominator, but not in the numerator and 4.8 becomes 5.6. Meanwhile oil reserves may still be expanding offshore China. Yet, existing and new long life natural gas reserves imply that eventually the production mix may shift from oil to natural gas.

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Table R
CNOOC Limited
Natural Gas and Oil Reserves

	<i>Natural Gas</i>	<i>Oil</i>	<i>Total</i>	
	<u>(bcf)</u>	<u>(mmb)</u>	<u>(bcf)</u>	<u>(mmb)</u>
<u>Reserves (bcf or mmb)</u>				
Proven (P)	3248	1279	10922	1820
Proven Developed (PD)	765	582	4257	710
Proven Undeveloped (PUD)	2483	697	6665	1111
<i>Production, Next Twelve Months</i>	106	122	835	139
<u>Reserve Life Index (years)</u>				
R/P P	30.6	10.5	13.1	13.1
R/P PD	7.2	4.8	5.1	5.1
R/P PUD	23.4	5.7	8.0	8.0
R/P PD+.5PUD	18.9	7.7	9.1	9.1

Futures Prices Also Imply Strong Cash Flow

After volume the next important variable affecting projected cash flow is commodity price. We simply use futures quotes as the indicator of price changes. Volatile as it may be, the futures market at least is an objective measure that moderates both the most optimistic and the most pessimistic expectations. Then after estimating a few cost items we have a cash flow forecast that looks similar to what it would be for other low cost producers of oil and gas (see Table H).

Gauge Present Value as a Multiple of Cash Flow

Our present value for CEO increased to \$33.00 per share from \$30.00 when we reclassified the company from Small Cap to Mid Cap several weeks ago (see *Meter Reader*, September 23, 2002). Now with a higher cash flow forecast we see that the multiple of Present Value to cash flow becomes 5.7 times. The multiple seems low compared to Mega Caps at 9.0 times and appears at the low end of the range for Mid Cap producers. While no two companies have wholly identical prospects and estimates can always be further refined, CEO's preferred strategic exposure to new discoveries and its existing reserve position are important strengths.

Table H
CNOOC Limited
Next Twelve Months Operating and Financial Estimates

	<i>H1</i>	<i>H2</i>	<i>Year</i>	<i>H1</i>	<i>H2E</i>	<i>Year</i>	<i>H1E</i>	<i>H2E</i>	<i>Next Twelve Months</i>
	<i>6/30/01</i>	<i>12/31/01</i>	<i>2001</i>	<i>6/30/02</i>	<i>12/31/02</i>	<i>2002E</i>	<i>6/30/03</i>	<i>12/31/03</i>	<i>12/31/03</i>
Volume									
Natural gas (bcf)	34	37	71	43	54	97	53	54	106
Natural Gas (mmcf)	190	200	195	238	291	265	291	291	291
Oil (mmb)	42	42	84	48	61	110	60	61	122
Oil (mbd)	230	228	229	267	333	300	333	333	333
Total gas & oil (bcf)	284	288	572	333	421	754	414	421	835
Price									
Natural Gas (RMB/mcf)	25.62	25.30	25.45	25.30	25.30	25.92	25.30	25.30	26.36
Oil									
WTI Cushing (\$/bbl)	28.35	23.55	25.95	23.94	28.34	26.14	26.46	24.63	25.54
Company (RMB/bbl)	213	173	193	175	208	196	194	181	188
Revenue (mmRMB)									
Natural Gas	881	931	1,812	1,094	1,412	2,506	1,389	1,412	2,800
Oil	8,880	7,236	16,116	8,714	12,772	21,486	11,727	11,100	22,828
Other	(199)	(168)	(367)	(179)	(179)	(359)	(179)	(179)	(359)
Total	9,562	7,999	17,561	9,629	14,004	23,633	12,936	12,333	25,269
Expense									
Fixed	793	873	1,666	1,297	1,297	2,595	1,297	1,297	2,595
Variable	793	873	1,666	1,297	1,876	3,174	1,735	1,655	3,390
Other	(199)	(168)	(367)	(179)	(179)	(359)	(179)	(179)	(359)
Ebitda	8,175	6,421	14,596	7,213	11,010	18,224	10,083	9,559	19,643
Exploration	452	587	1,039	635	635	1,270	635	635	1,270
Deprec., Deplet., & Amort.	1,295	1,272	2,567	1,590	1,690	3,280	1,690	1,690	3,380
Ebit	6,428	4,562	10,990	4,988	8,685	13,674	7,758	7,234	14,993
Interest	-	-	-	-	-	-	-	-	-
Ebt	6,428	4,562	10,990	4,988	8,685	13,674	7,758	7,234	14,993
Income Tax	1,838	1,210	3,048	1,373	3,040	4,413	2,715	2,532	5,247
Net Income	4,590	3,352	7,942	3,615	5,645	9,261	5,043	4,702	9,745
Shares (millions)	7,650	8,380	7,942	8,217	8,217	8,217	8,217	8,217	8,217
Per share (RMB)	0.60	0.40	1.00	0.44	0.69	1.13	0.61	0.57	1.19
Ebitda Margin	85%	80%	83%	75%	79%	77%	78%	78%	78%
Tax Rate	29%	27%	28%	28%	35%	32%	35%	35%	35%

Risks Are Partly Diversifiable

Perhaps more than usual these are uncertain times. We are judging CEO on the basis of its public disclosures put in the context of our industry experience. While we like what we see, there can always be negative as well as positive surprises.

Energy risk can be diversified in the context of the McDep Energy Portfolio wherein we suggest an approximate 5% unlevered weighting for CEO. Broader stock market risk can be diversified with government bonds, for example.

Kurt H. Wulff, CFA

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