McDep Associates
Stock Idea
November 23, 2001

Buy/Sell Rating: 2 - Buy

CNOOC Limited
China Energy Growth Company

Symbol	*Price ($/sh) 21-Nov 2001*	*Shares (mm)*	*Market Cap (US$mm)*	*Net Present Value (US$/sh)*	*Debt/ Present Value*	*McDep Ratio*	*EV/ Sales 2001E*	*EV/ Ebitda NTM*	*P/E NTM*	*Div'd NTM (%)*	*PV/ Ebitda NTM*
CEO	18.60	411	7,640	29.00	-	0.64	3.7	5.1	11	1.3	8.0

McDep Ratio = **M**arket **c**ap and **De**bt to **p**resent value of oil and gas and other businesses		
EV = Enterprise Value = Market Cap and Debt:	*US$mm*	7,640
Ebitda = Earnings before interest, tax, depreciation and amortization:	*US$mm*	1,490
NTM = Next Twelve Months Ended September 30, 2002; P/E = Stock Price to Earnings		
PV = Present Value of oil and gas:	*US$mm*	11,920

Summary and Recommendation

We recommend current purchase of the common stock of CNOOC Limited because the company has a choice resource position in a country whose energy growth prospects are likely to gain greater recognition by investors in a post war world. Having the rights to practically all of China's offshore oil and gas resources, CEO seems sure to grow with new discoveries in its lightly explored territory and with the development of discoveries already made. Recalling that the French oil companies, Total and Elf, were among the best performing energy stocks after the Persian Gulf War in 1991, we sense that the same could happen to CNOOC after the Afghanistan War, if all turns out well. CEO's multiple of Enterprise Value to Cash Flow could be double the current level if investors had the same confidence in CEO they have in international producers, many of whom partner with CEO. While financial risk is low because the company has no debt, there are obvious economic, political and business risks to an investment in a government-owned oil and gas producer on the other side of the world.

Progress in Afghanistan May Make Investors More Confident Globally

We neither wish to be premature while war still rages, nor do we wish to appear to be crassly interested in profits when humans may be suffering. Nonetheless events have a way a moving quickly. Meanwhile we can't help but think we have been here before. "History may not repeat itself, but it rhymes". Thus we looked back to our research at the time of the Gulf War in 1991.

Only a few weeks ago, September 17, 2001, the title of Meter Reader was "WAR". Looking back to February 1991, we see that the title of our monthly publication was "WAR!" Remembering that energy stocks underperformed for a while, as was the case for a few days recently, we wondered what worked in 1991? What caught our eye was our observation at the end of that year, "The French companies are a bright spot in current trends."

During 1991 we expanded our research to include more overseas companies in addition to our U.S. and Canadian stalwarts. We initiated our coverage of Total with the heading, "France's Second Largest Oil Company Appears Undervalued". We pointed to its lowest McDep Ratio and cash flow life among integrated oil companies. Later in the year, the French government privatized some Total shares in a well-publicized underwriting. The stock had a good year outperforming energy stocks overall and went on to a good decade.

Now in 2001, CNOOC has already had its underwriting of shares. The stock has already outperformed some. Yet the valuation leaves quite a bit of upside. Should we be favored with good news in Afghanistan, investors may seek greater representation in global investments to benefit from a positive spirit of international cooperation redirected to peaceful pursuits.

CNOOC Offers Resource Growth Offshore China

The initials in CNOOC Limited stand for China National Offshore Oil Company, owner of 81% of the publicly traded entity. Investors will find the stock in our Small Cap Natural Gas and Oil Producer Group as we count only the $1.5 billion of market cap of the publicly traded shares for our classification purposes.

While recommended PetroChina is China's large major integrated oil company, CNOOC Limited (CEO) is its rapidly growing independent producer. CEO has the rights to practically all of China's offshore oil and gas resources. All of the international oil explorers and producers active in China waters are partners of CEO.

CEO seems sure to grow with new discoveries in its lightly explored territory and with the development of discoveries already made. The company expects to double production in five years. Current revenues derive 88% from oil production at a proven developed reserve life of 6.5 years with proven undeveloped reserves exceeding the amount developed. Natural gas reserves, mostly undeveloped, are half as large as oil reserves.

Long Reserve Life Most Important Positive Valuation Factor

To start valuing CEO we project next twelve months cash flow with production at the present rate. The company discloses financial detail only on a six months basis, but provides production and revenue information quarterly (see Table H and Table Q). The disclosures for CEO are actually quite good. When we first initiated coverage on Total it had no U.S. filings or stock price.

With a cash flow estimate in hand, we can see that CEO is priced at an unlevered cash flow multiple (EV/Ebitda) of 5.1 times, among the lowest in our coverage. The multiple could be 10 times as it is for some producers and it would still be less than the 11 times for Mega Cap companies. We assess a multiple for CEO of 8 times as reasonable for today, near the median for Large Cap and Small Cap producers.

Note that all oil and gas multiples are higher than what we were looking at a month ago. The new multiples would apply to the lower base of cash flow from futures prices as of November 16, 2001. The trajectory of price expectations influences cash flow multiple. If current realizations are low, then the multiple should be higher and vice versa.

Reserve life, or how long cash flow will last, is the single most important factor influencing cash flow multiple. CEO's adjusted reserve life, counting undeveloped reserves half as much per unit as developed reserves, is a long 12.6 years (see Table R). The median for a dozen producer stocks is near 8 years. A longer reserve life justifies a higher multiple of present value to cash flow.

We ignore any value for unusual exploration potential. CEO has an unusual acreage position. Yet government control of the company justifies a reduction in multiple.

Cash flow times a multiple leads to present value, the denominator of the McDep Ratio. On that basis, CEO's McDep Ratio is among the lowest. In an environment where investors have a little more confidence in globalization, we could see appreciation of 60% in CEO stock to present value of $29 with further gains eventually.

An Investment in the Future of China

The big unknown is how the political development of China will favor investors. While investors in the French oil companies, Total and Elf have been rewarded; investors have been less rewarded in Norsk Hydro and ENI, also in our coverage. Government ownership has been mostly sold down in Total, but Norway still owns a majority of Norsk and Italy still owns about a third of ENI. Among other stocks currently in our coverage, investors have done well in Petro-Canada, but it has taken a decade for government ownership and control to be diminished. PetroChina stock has not yet gained and indeed has lost some ground since our recommendation a few months ago. Thus although we are optimistic and reasonably confident that investment in CEO will be rewarding, we must also be patient and must recognize that results are by no means guaranteed.

Kurt H. Wulff, CFA

Table H
CNOOC Limited
Next Twelve Months Operating and Financial Estimates

	H1 *6/30/01*	*H2E* *12/31/01*	***Year*** ***2001E***	*H1E* *6/30/02*	*H2E* *12/31/02*	***Next Twelve*** *Months* *12/31/02*
Volume						
Natural gas (bcf)	34	35	**69**	34	35	**69**
Natural Gas (mmcfd)	190	190	**190**	190	190	**190**
Oil (mmb)	42	42	**84**	42	42	**84**
Oil (mbd)	230	230	**230**	230	230	**230**
Total gas & oil (bcf)	284	289	**573**	284	289	**573**
Price						
Natural Gas (RMB/mcf)	25.62	25.62	**25.62**	25.62	25.62	**25.62**
Oil						
WTI Cushing ($/bbl)	28.35	23.12	**25.73**	18.85	19.68	**19.27**
Company (RMB/bbl)	213.31	173.92	**193.45**	141.83	148.05	**144.96**
Revenue (mmRMB)						
Natural Gas	881	896	**1,777**	881	896	**1,777**
Oil	8,880	7,360	**16,240**	5,904	6,265	**12,170**
Other	1,480	1,480	**2,960**	1,480	1,480	**2,960**
Total	11,241	9,736	**20,977**	8,265	8,641	**16,906**
Expense						
Fixed	476	476	**952**	476	476	**952**
Variable	476	403	**879**	331	349	**680**
Other	1,480	1,480	**2,960**	1,480	1,480	**2,960**
Ebitda	8,809	7,377	**16,185**	5,978	6,335	**12,314**
Exploration	452	452	**904**	452	452	**904**
Deprec., Deplet., & Amort.	1,295	1,295	**2,590**	1,295	1,295	**2,590**
Ebit	7,062	5,630	**12,691**	4,231	4,588	**8,820**
Interest	-	-	**-**	-	-	**-**
Ebt	7,062	5,630	**12,691**	4,231	4,588	**8,820**
Income Tax	2,472	1,970	**4,442**	1,481	1,606	**3,087**
Net Income ($mm)	4,590	3,659	**8,249**	2,750	2,982	**5,733**
Shares (millions)	7,650	8,214	**7,890**	8,214	8,214	**8,214**
Per share ($)	0.60	0.45	**1.05**	0.33	0.36	**0.70**
Ebitda Margin	78%	76%	**77%**	72%	73%	**73%**
Tax Rate	35%	35%	**35%**	35%	35%	**35%**

Table Q
CNOOC Limited
Next Twelve Months Operations

	H1 6/30/01	*Q3 9/30/01*	*Q4E 12/31/01*	***Year 2001E***	*Q1E 3/31/02*	*Q2E 6/30/02*	*Q3E 9/30/02*	*Q4E 12/31/02*	***Next Twelve** Months 12/31/02*
Volume									
Natural gas (bcf)	17	19	19	**54**	19	19	19	19	**74**
Natural Gas (mmcfd)	190	202	202	**198**	202	202	202	202	**270**
Oil (mmb)	21	21	21	**63**	21	21	21	21	**84**
Oil (mbd)	230	226	227	**228**	226	227	228	227	**227**
Total gas & oil (bcf)	143	144	144	**431**	144	144	145	144	**577**
Total gas & oil (mbd))	262	260	261	**261**	260	261	262	261	**273**
Price									
Natural gas ($/mcf)									
Henry Hub ($/mmbtu)	4.36	2.75	2.42	**3.17**	2.88	2.92	3.04	3.30	**3.04**
Company	3.10	3.10	3.10	**3.10**	3.10	3.10	3.10	3.10	**3.10**
Oil ($/bbl)									
WTI Cushing	27.90	26.69	19.54	**24.71**	18.58	19.12	19.53	19.83	**19.27**
Company	25.81	24.59	18.01	**22.80**	17.12	17.62	17.99	18.27	**17.68**
Total gas & oil ($/mcf)	4.16	3.97	3.01	**3.71**	2.89	2.96	3.01	3.05	**2.97**
Revenue ($mm)									
Natural Gas	54	58	58	**169**	58	58	58	58	**230**
Oil	540	512	377	**1,429**	357	369	378	382	**1,480**
Other				-					-
Total	594	570	434	**1,598**	414	426	436	440	**1,711**

Table R
CNOOC Limited
Natural Gas and Oil Reserves

	Natural Gas	*Oil*	*Total*	
	(bcf)	*(mmb)*	*(bcf)*	*(mmb)*
Reserves (bcf or mmb)				
Proven (P)	3430	1216	10726	1788
Proven Developed (PD)	558	546	3834	639
Proven Undeveloped (PUD)	2872	670	6892	1149
Production, Next Twelve Months	74	84	577	96
Reserve Life Index (years)				
R/P P	46.1	14.5	18.6	18.6
R/P PD	7.5	6.5	6.6	6.6
R/P PUD	38.6	8.0	12.0	12.0
R/P PD+.5PUD	26.8	10.5	12.6	12.6