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Energy Risk  
Management Services

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International Petroleum Analysis

December 2, 2008

## World Petroleum Perspectives Monthly Review and Outlook

### Summary

Since the publication of our last monthly report, the prompt NYMEX crude oil contract has declined by roughly \$10.00 per barrel. In contrast to previous behavior, somewhat less impacting WTI's decline over the last month has been the dollar/euro rate, while more influential has been the decline in the S&P 500. While clearly the fall in the equity market has reflected concerns over weakening economic activity and in turn the prospects for oil demand, there is also no question that those hedge funds who remain viable moved on to the next "correlation trade".

From a fundamental standpoint, for 2008 we have incorporated the latest downward U.S. oil demand revisions from the DOE, which we have assumed will continue through the remainder of the year. As such, world oil demand is likely to experience no growth in 2008, and may even register a modest decline, confirming our conservative bias as previously discussed. For 2009, from the standpoint of refined product demand and non-OPEC supply, we have made relatively little revision to our outlook. However, as a result of the global credit crisis and the resultant refiner need to minimize global inventories, including the "extra effect" we have discussed reflecting an inability to procure letters of credit, our forecast demand for OPEC crude oil has been revised down from our previous report. Our outlook may in fact reflect any official decision by OPEC to "cut" production at its December 17 meeting.

With regard to our price forecast, given the recent collapse to 2004 levels the consensus has now passed us by on the downside following its unprecedented optimism and assumption of price inelasticity of demand. As such, our Base Case of \$90.00 per barrel average for 2009 now appears impossibly "bullish", having previously struck many as overly conservative. There is absolutely no question that given the proper combination of financial variables our Base Case can be realized. However, given our downward revision in the demand for OPEC crude oil and the implied increase in excess OPEC capacity, primarily in Saudi Arabia, a modest downward revision is justified, tempered by our belief that we will not see a complete elimination of non-commercial length from the crude oil market. On balance, we now anticipate that prompt WTI will average in a range of \$70.00-\$75.00 per barrel in 2009.

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+ World oil demand is forecast to increase by 0.7%, or some 540 MB/D next year.

+ Non-OPEC supply is expected to rise by 540 MB/D in 2009.

+ Saudi crude oil sales will average about 8.6 MMB/D next year, assuming a net global stock draw.

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## **Viewpoint**

Since the publication of our last monthly report, the prompt NYMEX crude oil contract has declined by roughly \$10.00 per barrel. Thus far at least, prompt WTI modestly below \$50.00 per barrel has proven to be the short-term market trough.

In various reports we have cited a number of non-fundamental factors that have helped determine crude oil prices since 2004, including exchange rates, interest rates and, more recently, the fate of the S&P 500. Price action since July has confirmed that our inclusion of non-fundamental factors has been appropriate.

While many analysts had assumed that prompt WTI well in excess of \$100.00 per barrel was primarily fundamentally driven, there is no question that the near-\$100 per barrel decline since July's peak has largely reflected global hedge fund de-leveraging and a major recovery in the dollar versus the euro.

However, the dollar/euro rate has statistically and anecdotally had less influence on WTI's decline over the last month, with significantly more influence deriving from the decline in the S&P 500.

While clearly the equity market's fall has reflected concerns over weakening economic activity and in turn the prospects for declining oil demand, there is no question that many hedge funds who are fortunate enough to remain in business have moved on to this "correlation trade".

From a fundamental standpoint, for 2008 we have incorporated the latest and significant downward U.S. oil demand revisions from the DOE, which we have assumed will continue through the remainder of the year.

As such, even if China does not deteriorate to the extent that many now expect, world oil demand is likely to experience no growth in 2008, and clearly may register a modest decline, confirming our conservative demand bias since 2008 began.

For next year, however, from the standpoint of only refined product demand and non-OPEC supply, we have made relatively little revision to our outlook.

However, as a result of the global credit crisis and the need to minimize global inventories, including the "decremental" effect we have discussed reflecting an inability to procure letters of credit, our forecast demand for OPEC crude oil has been revised down from our previous report.

Our current 2009 outlook for OPEC crude oil supplies may end up mirroring any decision by OPEC to "cut" production at its December 17 meeting.

With regard to price forecasts, given the recent collapse in WTI to 2004 levels the consensus has now passed us by on the downside following its unprecedented optimism and assumption of price inelasticity of demand. As such, our long-standing Base Case of a \$90.00 per barrel average for 2009 appears impossibly "bullish".

Though there is absolutely no question that given the proper combination of financial variables our Base Case can be realized, given our downward revision in the demand for OPEC crude oil and the implied increase in excess OPEC capacity, primarily in Saudi Arabia, a modest downward price revision is justifiable.

Precluding any larger revision, as we have discussed in previous reports, is our assumption that non-commercial length will not completely desert the crude oil market. On balance, we now anticipate that prompt WTI will average about \$70.00-\$75.00 per barrel in 2009.

## **Global Oil Demand**

World oil demand is forecast to rise by 0.7%, or about 540 MB/D in 2009, little changed from last month's report. As a result, the consensus and the IEA have now passed us by and are more pessimistic, reacting to and to a degree extrapolating, current conditions.

We expect OECD oil demand to fall by 0.9%, or some 365 MB/D next year, while non-OECD oil demand is anticipated to rise by 2.3%, or about 910 MB/D.

## United States

With the virtual predictability of the sunrise, the DOE slashed its estimate of September oil demand relative to the preliminary data as reported in the Weekly Petroleum Status Report. These “near final” numbers, as reported in the latest Petroleum Supply Monthly, suggest that total U.S. refined product demand collapsed by 12.7% versus September of 2007.

With anecdotal and statistical evidence suggesting that October economic activity deteriorated significantly compared to the prior months, we assume that further downward revisions are in store when the PSM data for the fourth quarter are reported.

We estimate that 2008 U.S. oil demand will decline by 5.3%, or more than 1.1 MMB/D, but the bias is lower and not higher. Of greater importance, however, is how 2009 will develop.

At this point, while we must be mindful that the decline in manufacturing activity may be somewhat deeper and more prolonged, we do not believe it is valid to extrapolate current trends.

For gasoline, we have long assumed that a progressive improvement in average fleet fuel efficiency will lead to sequential declines in demand, but with lower retail prices and what we believe will be the beginnings of economic stabilization by the second half the year, we believe the decline will be limited to 1.5%.

Distillate fuel oil is the only product where we are looking for an increase in demand, assuming normal winter weather, tempered by further conservation/fuel substitution.

In addition, however, our Base Case assumes that manufacturing output will begin to recover over the prior year by the middle of the second quarter, leading to gains in diesel fuel demand.

Overall, we anticipate that U.S. refined product demand will decline by 1.0%, or some 190 MB/D in 2009, a significant moderation in the rate of decline compared to the experience of 2008.

## Europe

The economic picture in Europe clearly has not improved, and thus overall refined product demand remains weak, only periodically stimulated by pre-season gas oil stocking as consumers estimate where the price bottom will be.

This stocking behavior was evident in reported September demand, particularly in Germany, where end-month consumer heating oil stocks as a percent of capacity came in two percentage points above the end of August.

The estimated overall decline in third quarter oil demand, adversely impacted by gasoline and heavy fuel oil, is expected to continue through the end of this year.

In addition, further consumer conservation and substitution of heating fuels as we progress through the first quarter of next year will temper implied demand versus the previous year, even assuming consumer stocks remain below previous year levels.

For next year as whole, however, we believe that lower retail pump prices will retard the decline in gasoline demand relative to the trend in 2008.

Also, our assumed beginnings of economic stability in the second half of the year will ultimately lead to a modest recovery in industrial fuel consumption.

On balance, we expect OECD Europe oil demand to decline by 1.1%, or about 560 MB/D, little changed from last month and now less pessimistic than the latest IEA assessment.

## Japan and South Korea

Preliminary data suggest that third quarter Japan oil demand declined somewhat more than expected. We have previously discussed how gasoline demand has succumbed to higher prices and the preferences of the aging population, and this trend is continuing.

More recently, however, the demand for heavy fuel oil, crude for direct burning, and other products has faltered, reflecting

alternative fuel availability and a moderation in economic activity.

With regard to the latter, products such as petrochemical feedstock naphtha have also recently been weaker, particularly in September. Thus, the declines in product demand in Japan have been both structural and cyclical in nature.

For 2009, we are looking for Japan oil demand to decline by 0.9%, or about 40 MB/D, a modest downward revision from last month's report.

Little has changed with regard to South Korea from our last report, with consumers and the economy continuing to react to higher fuel prices in contrast to relative resilience in the first half of the year.

Declines in heavy fuel oil demand reflecting alternative fuel substitution are compounding weaker petrochemical feedstock and transport fuel demand.

At this point, however, there appears little to cause us to make any material revision to our outlook for next year. As such, we still expect South Korea oil demand to decline by 1.3%, or about 25 MB/D in 2009.

## **Non-OECD**

Compounding the decline in oil prices has been concern over the slowdown in China. Earlier in the year, the bullish consensus was arguing that weaker demand in the United States "did not matter" because it was more than offset by ongoing growth in China and much of the rest of the OECD.

While true to a degree at the time, the psychological impact was always stronger than the fundamental influence. Because of even weaker U.S. and OECD oil demand as a result of faltering economic activity and the lagged response to higher prices, China's major export markets are finally proving to be a drag and at least partially offsetting domestic consumption growth.

There has been in fact some "post Olympic" slowdown in implied oil demand, but much of it has reflected the anticipated net

destocking of refined products that were "over built" as a precaution earlier in 2008.

Despite continued declines in heavy fuel oil demand, adjusting for the Olympic effect suggests that at this point there is little need to revise our demand outlook for China, unless real GDP rises at less than a 5% rate next year. As such, we anticipate China implied oil demand will rise by 3.5%, or some 235 MB/D in 2009, unchanged from our last report.

Elsewhere outside the OECD we have made little revision to our Base Case except for marginally revising up forecast FSU oil demand for next year. We now expect FSU oil demand to increase by 1.7%, or about 60 MB/D in 2009, which may end up on the conservative side based on current trends.

Overall, however, we believe non-OECD oil demand will increase by 2.3%, or around 910 MB/D next year, roughly unchanged from last month.

## **Global Oil Supply**

### **Non-OPEC**

In this report we wish to devote somewhat more space to the OPEC part of the supply equation given the renewed relevance of "official" action, and less to production outside of the Organization. In addition, we have made little change to our estimates and forecast of non-OPEC supply.

Our primary thesis remains that mature sources such as the North Sea will continue to decline through next year. U.S. crude oil production should experience a 4.2%, or 210 MB/D recovery, however, reflecting the assumed lack of hurricane-induced downtime as well as the impact of new platform production.

Elsewhere, we have remained conservative with regard to the prospects for FSU production given the stagnation and even modest declines experienced by Russia this year and likely to experience in 2009.

We remain optimistic on Brazil production despite the decline in price, and have not assumed a material adverse impact on

output for next year. Our forecast suggests an average 130+ MB/D rise in production for 2009 versus 2008.

Putting all countries together, we expect non-OPEC supplies to rise by 540 MB/D next year. We once again remain conservative relative to the consensus and IEA, but we would note that in their latest assessment the IEA has now finally cut their outlook closer to our own.

## OPEC and Inventory

At its recent Cairo “brainstorming” session, OPEC decided to forgo any further production “cuts” for the time being, which the bulls did not appreciate.

Of even greater concern were statements from Saudi oil minister Ali Naimi to the effect that if all members fully complied with agreements already in place, global stocks would decline by 3+ days supply, balancing the market and leveraging prices back up to what Naimi and King Abdullah consider a “desired” price of around \$75.00 per barrel.

Saudi Arabia essentially pointed a finger at Venezuela and Iran, perennial price hawks but who have yet to show they are willing to comply and cut production to the extent that Saudi Arabia would like to see.

Thus, the market began reducing the odds that a production cut on December 17 was a “layup”. Our customary table laid out below itemizes once again the current official target ceiling and individual allocations along with our estimate of November production levels.

<b>OPEC “11”</b>			
<b>Targeted Vienna Allocations</b>			
<b>v.</b>			
<b>Estimated November Production</b>			
<b>(MB/D)</b>			
	<b>“Quota”</b>	<b>Production</b>	<b>Prod. Vs. “Quota”</b>
Algeria	1,287	1,340	+53
Angola	1,801	1,870	+69
Ecuador	493	500	+7
Iran	3,619	3,720	+101

Kuwait	2,355	2,400	+45
Libya	1,615	1,730	+115
Nigeria	2,060	1,880	-180
Qatar	781	800	+19
S. Arabia	8,529	8,800	+271
UAE	2,412	2,400	-12
Venezuela	2,356	2,400	+44
<b>Total</b>	<b>27,308</b>	<b>27,840</b>	<b>+532</b>

Saudi Arabia remains somewhat above its official allocation, but our balances suggest that production will continue to fall toward 8.4 MMB/D by the first quarter. In any event, the Kingdom will be reluctant to reduce any further until history “rewrites itself” and most if not all other members reduce sales to some degree at prices substantially higher than previous levels that have catalyzed “real”, proactive reductions.

Our balances suggest that OPEC “11” crude oil deliveries in the first quarter of next year will average about 26.94 MMB/D with refiners essentially allocating lower volumes among most producers. This would imply deliveries about 370 MB/D below the current agreement.

By definition, therefore, our balances suggest the odds favor perhaps another 1.0 MMB/D reduction on December 17, but not full compliance. The implied reductions by non-Gulf producers would be sufficient, however, to preclude Saudi Arabia from rethinking its own reductions.

Under this Base Case scenario, at the end of the first quarter usable commercial inventories would stand at roughly 16 days supply, about 2 days higher than we estimate for the end of March of this year. Full compliance under a 1.0 MMB/D, however, would reduce days supply to about one day below the prior year by the end of June 2009.

Under such a scenario, however, unless we are off the mark in terms of demand, OPEC would have to proactively deny refiners some barrels, and Saudi Arabia would have to comply with a quota of about 8.2 MMB/D.

We believe the Kingdom would be willing to do this only if all other members denied barrels to refiners, perhaps not to 100% compliance, but 80% at a minimum. At this

point we are not convinced that OPEC is willing to accomplish this for any extended period of time.

For 2009 as a whole, however, our Base Case balances imply a net global stock draw averaging about 235 MB/D, suggesting that by the end of 2009, usable commercial, or discretionary stocks will stand about one day lower than we estimate for the end of 2008.

### Implications for Price

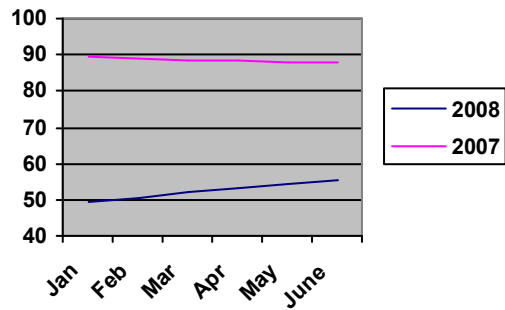
Saudi oil minister Naimi has suggested that \$75.00 per barrel will be achieved through a reduction in global stocks by 3 days or so, and thus by definition assumes that fundamentals will largely, if not exclusively, lead to the price target that he and other OPEC ministers have stated is “desirable”.

We tend to more often agree with Naimi than disagree with regard to the global balance, and there is no question that lower inventories will likely leverage prices back up.

However, our estimates of “supply elasticities” suggests that to achieve \$75.00 per barrel will require a combination of fundamental and financial factors working together, as they have in varying degrees since 2004.

A relaxation of the current global credit squeeze will have the double effect of not only enabling some buyers to reenter global markets and buy incremental crude to a modest degree, but also encourage non-commercials such as hedge funds to leverage modestly back up again and who are likely to see current crude oil prices as “buys” rather than “sells”.

### Current Six-Month NYMEX Crude Oil Term Structure 2008 vs. 2007



In addition, integral to our Base Case for weaker crude oil prices off the July peaks has been the assumption of a substantial reduction in passive length, but not a complete elimination. At current crude oil prices, we would look for pension funds to consider allocating incremental capital to hydrocarbons in 2009.

Clearly, the fate of the dollar and the health of the equity markets will play a role in this entire non-commercial decision making by varying degrees. Right or wrong, we anticipate the dollar will, overtime, begin to weaken once again versus the euro.

In addition, we are more inclined to be buyers rather than sellers of equities in general, and we expect the S&P 500 to begin discounting an easing of the credit squeeze and a recovery in the manufacturing sector within the next six months, if not sooner. All of these factors should encourage the re-establishment of net length in crude oil by non-commercials.

From a fundamental standpoint, as previously discussed we do not expect OPEC to preemptively and proactively deny barrels to refiners. However, our balances imply that OPEC will allow sales to “fall off” sufficiently so as to lead to a rebalancing by the end of next June.

As we have discussed in previous reports, we believe there have been, and will continue to be, structural changes in the global oil demand profile that will temper growth over the next several years.

However, as also previously discussed in this report, we believe that a small gain in demand can be eked out next year, in contrast to the consensus who has now passed us by on the downside.

If we are closer to the mark, the market may be “sufficiently satisfied” to provide some price support on this basis alone.

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Putting this all together into a price forecast remains as difficult as ever. We would not begin to suggest that the NYMEX will revisit \$100.00+ per barrel in the next year or so.

However, putting our assumptions with regard to fundamental and financial variables together, we believe the odds favor higher prices next year relative to current levels.

Because our revised balances imply lower OPEC “11” requirements in 2009 than previously, the implied increase in spare capacity in and of itself suggests a price cap. Thus, we believe some adjustment to our Base Case price outlook is justified.

As our table below shows, we now believe that a \$70.00-\$75.00 per barrel WTI average for next year is reasonable. We strongly emphasize, however, that we do not forecast this value simply because it now appears to be Saudi Arabia’s “desired” price.

We do so because of the net effect of the fundamental and financial factors that we have assumed in combination. We do not believe fundamentals alone can leverage prices up to this level. By the same token, however, our ongoing fundamental/financial price modeling suggests that under the financial assumptions we have made, a \$70.00-\$75.00 per barrel average for next year is plausible.

**Forecast Prompt NYMEX Crude  
Oil Prices By Quarter: Base Case**

	<b>2008(E)</b>	<b>2009(E)</b>
<b>Q1</b>	<b>\$97.90</b>	<b>\$60.00</b>
<b>Q2</b>	<b>\$123.76</b>	<b>\$75.00</b>
<b>Q3</b>	<b>\$116.19</b>	<b>\$80.00</b>
<b>Q4</b>	<b>\$62.00</b>	<b>\$80.00</b>
<b>Yr.</b>	<b>\$99.96</b>	<b>\$73.75</b>

Table 1  
OECD Oil Demand  
(Thousands of Barrels Daily)

BASE CASE 12/01/08											% Chng	
	Q1	Q2	Q3E	Q4E	2008E	% Chng 08/07	Q1E	Q2E	Q3E	Q4E	2009E	% Chng 09/08
DEMAND												
United States	19876	19683	18825	19992	19594	-5.3	19559	19348	18906	19812	19406	-1.0
Motor Gasoline	8908	9135	8877	8971	8973	-3.4	8702	8923	8905	8816	8837	-1.5
Jet Fuel	1539	1582	1540	1549	1553	-4.3	1508	1550	1509	1518	1522	-2.0
Distillate	4200	3924	3690	4137	3988	-5.6	4272	3987	3885	4243	4097	2.7
Residual	598	678	576	651	626	-14.8	538	610	547	644	585	-6.5
Other	4631	4364	4142	4684	4455	-7.8	4538	4277	4059	4590	4366	-2.0
Canada	2203	2099	2121	2133	2139	-0.2	2192	2093	2132	2153	2142	0.2
Naphtha	74	72	69	78	73	1.0	74	73	70	79	74	1.0
LPG	217	280	225	139	215	1.3	215	290	227	140	218	1.3
Gasoline	739	755	810	782	771	0.0	731	757	818	794	775	0.5
Kerosene	81	79	91	81	83	1.0	81	79	91	81	83	-0.1
Gasoil/Diesel	675	473	491	598	559	-1.1	675	463	496	604	559	0.1
Fuel Oil	141	94	83	157	119	-0.8	143	92	81	154	118	-0.8
Other	278	346	352	298	318	-0.4	272	339	349	301	315	-1.0
Mexico	1972	2032	2050	2077	2033	0.7	1952	2033	2061	2098	2036	0.2
United Kingdom	1504	1403	1387	1578	1468	-0.6	1490	1397	1385	1577	1462	-0.4
Naphtha	85	75	61	90	78	1.0	86	75	62	91	79	1.0
LPG	134	134	114	132	128	1.0	135	135	115	133	130	1.0
Gasoline	431	383	388	407	402	-3.4	416	371	380	399	392	-2.6
Kerosene	248	202	220	215	221	0.5	248	202	219	215	221	-0.1
Gasoil/Diesel	368	474	460	577	470	0.6	372	479	465	583	474	1.0
Fuel Oil	143	44	39	52	69	-1.4	139	43	39	52	68	-1.7
Other	95	92	105	104	99	-0.4	94	91	105	104	99	-0.4
France	1772	1597	1762	1615	1686	0.0	1773	1568	1745	1613	1675	-0.7
Naphtha	168	145	224	251	197	0.5	169	146	225	252	198	0.5
LPG	163	94	76	130	116	0.1	163	94	76	130	116	0.1
Gasoline	204	270	230	179	221	-3.8	195	260	224	175	213	-3.3
Kerosene	96	112	122	88	104	0.8	95	111	121	87	103	-1.0
Gasoil/Diesel	983	767	907	788	861	0.9	993	751	898	792	859	-0.3
Fuel Oil	90	93	60	79	80	-1.0	89	90	58	76	78	-2.4
Other	68	116	143	100	107	0.2	68	116	143	101	107	0.2
Italy	1561	1477	1479	1481	1499	-3.1	1547	1415	1442	1456	1465	-2.3
Naphtha	68	78	47	38	58	1.0	69	79	48	38	58	1.0
LPG	149	99	105	146	125	1.0	150	100	106	148	126	1.0
Gasoline	339	310	322	301	318	-3.3	329	300	316	295	310	-2.5
Kerosene	67	73	77	64	70	0.8	67	73	76	64	70	-0.1
Gasoil/Diesel	602	473	575	559	552	-0.4	621	468	569	565	556	0.6
Fuel Oil	194	341	226	230	248	-13.2	169	290	199	202	215	-13.2
Other	141	103	126	143	128	1.0	143	104	127	144	130	1.0
Germany	2334	2287	2318	2524	2366	0.0	2328	2252	2289	2491	2340	-1.1
Naphtha	257	225	218	252	238	0.2	257	225	218	252	238	0.2
LPG	135	135	117	114	125	0.1	135	135	117	114	125	0.1
Gasoline	531	582	516	566	549	-2.7	515	564	506	554	535	-2.5
Kerosene	99	140	145	122	126	1.0	98	140	145	122	126	-0.1
Gasoil/Diesel	1130	944	1011	1198	1071	1.4	1141	925	991	1174	1058	-1.2
Fuel Oil	66	77	113	99	89	-2.3	62	75	112	100	87	-1.5
Other	117	186	198	173	168	1.0	118	188	200	175	170	1.0
Austria	224	214	237	289	241	-1.2	220	211	235	286	238	-1.2
Belgium	427	418	390	459	423	-2.3	416	408	382	450	414	-2.2
Denmark	215	190	198	209	203	0.2	213	188	200	213	203	0.3
Finland	222	219	217	214	218	0.6	220	222	219	218	220	0.6
Greece	301	260	281	344	296	-1.5	295	255	279	340	292	-1.5
Iceland	12	16	26	25	20	2.0	12	16	26	25	20	2.0
Ireland	125	115	125	134	124	1.0	126	116	126	135	126	1.0
Luxembourg	52	48	47	46	48	2.0	53	48	48	47	49	2.0
Netherlands	421	398	401	399	405	-2.4	411	388	391	389	395	-2.5
Norway	192	188	194	205	195	1.1	195	190	196	207	197	1.1
Portugal	195	283	266	289	258	1.0	196	285	269	292	261	1.0
Spain	897	785	963	919	891	-2.3	870	762	934	900	867	-2.7
Sweden	381	332	309	319	335	-0.2	380	332	308	318	335	-0.2
Switzerland	275	271	282	355	296	-0.6	269	268	277	361	294	-0.6
Turkey	564	472	621	554	553	-1.2	553	462	620	549	546	-1.2
OECD Europe	11672	10972	11502	11957	11526	-0.9	11565	10782	11371	11869	11397	-1.1
Japan	5653	4428	4218	5070	4842	0.7	5595	4374	4181	5052	4801	-0.9
Naphtha	673	579	577	790	655	1.4	681	587	586	802	664	1.4
LPG	918	624	572	702	704	1.6	941	633	578	709	715	1.6
Gasoline	965	950	860	923	925	-2.7	936	922	843	914	904	-2.3
Kerosene	1036	455	365	656	628	2.1	1025	450	361	650	622	-1.0
Gasoil/Diesel	1169	1069	901	1242	1096	-2.2	1134	1037	883	1244	1075	-1.9
Fuel Oil	416	400	532	349	424	13.5	420	404	527	332	420	-0.9
Other	194	174	206	225	200	-0.3	190	172	207	227	199	-0.3
Direct Crude	282	178	203	182	211	0.6	268	169	195	174	202	-4.5
South Korea	2094	1954	1808	1932	1947	-1.5	2052	1896	1790	1952	1922	-1.3
Australia	878	837	839	898	863	1.1	887	845	851	907	873	1.1
New Zealand	106	108	105	113	108	0.5	106	108	106	114	108	0.5
Total OECD	44453	42111	41468	44172	43051	-2.7	43908	41478	41397	43956	42685	-0.9

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Table 2  
World Oil Demand  
(Thousands of Barrels Daily)

BASE CASE 12/01/08												% Chng	
	Q1	Q2	Q3E	Q4E	2008E	08/07	Q1E	Q2E	Q3E	Q4E	2009E	09/08	
DEMAND													
United States	19876	19683	18825	19992	19594	-5.3	19559	19348	18906	19812	19406	-1.0	
Canada	2203	2099	2121	2133	2139	-0.2	2192	2093	2132	2153	2142	0.2	
Mexico	1972	2032	2050	2077	2033	0.7	1952	2033	2061	2098	2036	0.2	
United Kingdom	1504	1403	1387	1578	1468	-0.6	1490	1397	1385	1577	1462	-0.4	
France	1772	1597	1762	1615	1686	0.0	1773	1568	1745	1613	1675	-0.7	
Italy	1561	1477	1479	1481	1499	-3.1	1547	1415	1442	1456	1465	-2.3	
Germany	2334	2287	2318	2524	2366	0.0	2328	2252	2289	2491	2340	-1.1	
Austria	224	214	237	289	241	-1.2	220	211	235	286	238	-1.2	
Belgium	427	418	390	459	423	-2.3	416	408	382	450	414	-2.2	
Denmark	215	190	198	209	203	0.2	213	188	200	213	203	0.3	
Finland	222	219	217	214	218	0.6	220	222	219	218	220	0.6	
Greece	301	260	281	344	296	-1.5	295	255	279	340	292	-1.5	
Iceland	12	16	26	25	20	2.0	12	16	26	25	20	2.0	
Ireland	125	115	125	134	124	1.0	126	116	126	135	126	1.0	
Luxembourg	52	48	47	46	48	2.0	53	48	48	47	49	2.0	
Netherlands	421	398	401	399	405	-2.4	411	388	391	389	395	-2.5	
Norway	192	188	194	205	195	1.1	195	190	196	207	197	1.1	
Portugal	195	283	266	289	258	1.0	196	285	269	292	261	1.0	
Spain	897	785	963	919	891	-2.3	870	762	934	900	867	-2.7	
Sweden	381	332	309	319	335	-0.2	380	332	308	318	335	-0.2	
Switzerland	275	271	282	355	296	-0.6	269	268	277	361	294	-0.6	
Turkey	564	472	621	554	553	-1.2	553	462	620	549	546	-1.2	
OECD Europe	11672	10972	11502	11957	11526	-0.9	11565	10782	11371	11869	11397	-1.1	
Japan	5653	4428	4218	5070	4842	0.7	5595	4374	4181	5052	4801	-0.9	
South Korea	2094	1954	1808	1932	1947	-1.5	2052	1896	1790	1952	1922	-1.3	
Australia	878	837	839	898	863	1.1	887	845	851	907	873	1.1	
New Zealand	106	108	105	113	108	0.5	106	108	106	114	108	0.5	
Total OECD	44453	42111	41468	44172	43051	-2.7	43908	41478	41397	43956	42685	-0.9	
Non-OECD	38652	39935	40308	38807	39425	2.8	39519	40834	41272	39715	40335	2.3	
FSU	4237	3190	3187	4014	3657	1.1	4301	3238	3244	4094	3719	1.7	
Non-OECD Europe	2519	2373	2408	2531	2458	-0.5	2503	2358	2394	2531	2446	-0.5	
China	5614	8113	7900	5479	6777	5.6	5811	8397	8177	5671	7014	3.5	
OPEC	7845	7247	7721	7743	7639	5.9	8330	7682	8183	8199	8099	6.0	
Argentina	484	528	509	546	517	0.3	484	530	511	548	518	0.3	
Brazil	1919	2159	2253	2258	2147	1.5	1957	2213	2276	2281	2182	1.6	
Other L. A.	1514	1603	1771	1834	1681	1.3	1530	1619	1807	1852	1702	1.3	
Egypt	569	583	583	589	581	2.4	581	598	598	604	595	2.4	
South Africa	460	496	509	521	496	2.1	469	508	519	531	507	2.1	
Other Africa	1075	1118	1180	1188	1140	1.7	1095	1136	1203	1207	1160	1.7	
Non-OPEC M. E.	653	634	648	651	647	2.3	672	646	661	664	661	2.3	
India	2285	2312	2195	2249	2260	4.3	2354	2370	2249	2296	2317	2.5	
Other Asia	4086	4169	4064	3840	4040	0.5	4102	4185	4080	3856	4056	0.4	
Int. Bunkers	2062	2074	2069	2060	2066	0.1	2036	2050	2051	2054	2047	-0.9	
Refinery F/L	3329	3336	3311	3305	3320	0.9	3295	3304	3320	3328	3311	-0.3	
Grand Total Demand	83105	82046	81776	82979	82477	-0.1	83427	82312	82669	83670	83019	0.7	

Note: Demand by country is shown on an "inland" basis, i.e., excluding bunkers and refinery fuel/loss.

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**Table 3**  
**World Oil Supply**  
**(Thousands of Barrels Daily)**

BASE CASE 12/01/08						% Chng							% Chng	
	Q1	Q2	Q3E	Q4E	2008E	08/07	Q1E	Q2E	Q3E	Q4E	2009E	09/08		
Grand Total Demand	83105	82046	81776	82979	82477	-0.1	83427	82312	82669	83670	83019	0.7		
Inventory Change	114	1349	1004	-356	528		-1054	277	324	-482	-234			
<b>SUPPLY</b>	<b>83219</b>	<b>83395</b>	<b>82780</b>	<b>82623</b>	<b>83004</b>	<b>0.9</b>	<b>82373</b>	<b>82589</b>	<b>82992</b>	<b>83188</b>	<b>82785</b>	<b>-0.3</b>		
United States	5115	5146	4655	4933	4962	-2.7	5195	5180	5165	5150	5173	4.2		
United Kingdom	1508	1424	1395	1550	1469	-4.3	1545	1339	1409	1504	1449	-1.4		
Norway	2215	2125	2125	2195	2165	-4.7	2171	2083	2083	2151	2122	-2.0		
Denmark	380	380	380	380	380	-0.7	380	380	380	380	380	0.0		
Netherlands	52	51	51	53	52	-1.0	52	51	51	53	52	0.0		
Other OECD Europe	460	460	460	460	460	0.0	460	460	460	460	460	0.0		
Non-OECD Europe	305	305	305	305	305	0.0	305	305	305	305	305	0.0		
Mexico	2945	2775	2765	2750	2809	-9.1	2725	2710	2705	2695	2709	-3.6		
Canada	2605	2615	2695	2710	2656	0.9	2655	2610	2710	2710	2671	0.6		
Argentina	655	625	635	640	639	-3.2	645	645	645	645	645	1.0		
Brazil	1905	1885	1880	1955	1906	5.2	2010	2035	2050	2060	2039	7.0		
Colombia	515	525	545	530	529	5.8	525	530	530	530	529	0.0		
Peru	105	105	105	105	105	0.0	105	105	105	105	105	0.0		
Trinidad & Tobago	130	130	135	130	131	0.0	130	130	135	130	131	0.0		
Other L. A.	75	80	80	80	79	0.0	75	80	80	80	79	0.0		
Bahrain	37	37	38	38	38	0.0	37	37	38	38	38	0.0		
Oman	695	685	675	675	683	-3.7	670	670	670	670	670	-1.8		
Syria	345	345	345	345	345	-10.7	345	345	345	345	345	0.0		
Other Middle East	365	365	365	65	290	0.0	365	365	365	65	290	0.0		
Congo	195	195	195	195	195	0.0	195	195	195	195	195	0.0		
Egypt	625	645	635	625	633	1.6	620	625	620	620	621	-1.8		
Gabon	265	265	265	265	265	0.0	265	265	265	265	265	0.0		
Tunisia	130	130	125	125	128	0.0	130	130	125	125	128	0.0		
Other Africa	365	375	380	380	375	0.0	365	375	380	380	375	0.0		
Australia	525	560	595	600	570	12.9	600	595	590	590	594	4.2		
India	685	690	690	690	689	0.9	685	685	685	685	685	-0.5		
Indonesia	875	850	835	835	849	-1.0	840	840	845	845	843	-0.7		
Malaysia	670	670	670	680	673	-3.9	670	675	670	680	674	0.2		
Brunei	135	135	130	130	133	0.0	135	135	130	130	133	0.0		
Other Asia/Pacific	610	610	615	615	613	1.9	610	610	615	615	613	0.0		
FSU	11775	11985	11636	11679	11769	2.1	12011	12225	11869	11913	12004	2.0		
China	3745	3805	3795	3800	3786	1.4	3790	3795	3790	3790	3791	0.1		
NGL	4879	4876	4928	4983	4916	1.3	4942	4941	4995	5050	4982	1.3		
Ref. Gain/Other	1870	1846	1840	1867	1856	-0.1	1877	1852	1860	1883	1868	0.7		
Non-Conventional	1189	1194	1200	1215	1199	2.5	1219	1224	1230	1245	1229	2.5		
Total Non-OPEC	48949	48894	48168	48583	48648	-0.2	49348	49226	49094	49086	49189	1.1		
OPEC SUPPLY	34270	34501	34612	34040	34356	2.6	33025	33363	33898	34102	33597	-2.2		
OPEC NGL	1895	1910	1915	1915	1909	7.8	1925	1930	1930	1935	1930	1.1		
OPEC CONDENSATE	1875	1885	1880	1880	1880	7.5	1885	1885	1890	1900	1890	0.5		
OPEC CRUDE SALES	30500	30706	30817	30245	30567	2.0	29215	29548	30078	30267	29777	-2.6		
Saudi Arabia	8950	9100	9100	8900	9013	3.1	8400	8500	8600	8800	8575	-4.9		
Iran	3690	3651	3632	3525	3625	-2.7	3400	3598	3628	3612	3559	-1.8		
Iraq	2295	2295	2265	2275	2283	9.6	2275	2275	2275	2275	2275	-0.3		
Kuwait	2425	2525	2550	2450	2488	1.0	2250	2250	2450	2450	2350	-5.5		
Qatar	835	835	840	840	838	2.8	835	835	840	840	838	0.0		
UAE	2550	2650	2650	2425	2569	2.6	2250	2250	2450	2450	2350	-8.5		
Algeria	1410	1410	1410	1410	1410	4.6	1410	1410	1410	1410	1410	0.0		
Angola	1895	1900	1875	1900	1893	13.4	1900	1910	1910	1910	1908	0.8		
Nigeria	1905	1805	1995	2005	1928	-8.3	2000	2000	2000	2000	2000	3.8		
Libya	1745	1745	1725	1745	1740	1.2	1745	1745	1745	1745	1745	0.3		
Ecuador	485	475	480	475	479	5.8	460	475	460	465	465	-2.9		
Venezuela	2315	2315	2295	2295	2305	-1.7	2290	2300	2310	2310	2303	-0.1		
Inventory Change	114	1349	1004	-356	528		-1054	277	324	-482	-234			
<b>Assumed Inventory Position(c)</b>														
Days Supply of MOV	50	51	50	49	49		50	50	49	49	49			
Days Supply of UC	14	16	17	17	17		16	16	16	16	16			
Days Supply of MOV+	64	66	66	66	66		65	65	65	64	64			
Days Supply of S/C	14	14	14	14	14		14	14	14	14	14			

a) OPEC supply measured on a delivered sales basis, i.e. accounting for tanker transit and storage time lag, plus net producer stock change.

b) Includes share of Neutral Zone, shared equally.

c) MOV: Minimum Operating Volume; UC: Usable Commercial; S/C: Strategic/Compulsory.

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