OP-ED/DOCUMENTS

The Rush For Oil: Iraq's Oil Capacity Potential And Regional Geopolitics

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Introduction

The year 2009 will go down in history as the year when Iraq opened again for business to Big Oil, just as 1975 was the year the door closed behind the last of the Iraq Petroleum Company (IPC) partners as they were pushed out in the wave of nationalizations of the 1970s.

It took six years since the change of regime and the lifting of UN sanctions for Baghdad to sign the first long term deals with western oil companies, and three of them so far (BP, ExxonMobil, Royal Dutch Shell) are former partners in the old IPC. China's CNPC, which made an aggressive entry into Iraq, has already planted a foot by reviving and renegotiating last year the old Al-Ahdab oil field production sharing agreement signed in 1997.

The speed at which companies that participated and lost in the first ever bid round held in Baghdad on 30 June reversed their positions and accepted the Iraqi oil ministry's stiff terms took many, including within Iraq, by surprise. As a result, instead of the modest success illustrated by a BP/CNPC service contract to redevelop the Rumaila field, two further contracts have now been awarded to a consortium of ExxonMobil and Shell to develop the West Qurna-1 field and to Eni with partners Occidental Petroleum and Kogas to develop the Zubair field. That is over 30bn barrels of reserves to be managed indirectly by foreign oil companies.

But as Baghdad celebrates the promised influx of tens of billions of dollars of foreign investment to developing resources that were for a long time hostage to wars and sanctions, many are becoming conscious of the more urgent need to closely monitor and plan Iraq's return as a major oil producer and potentially the second largest world oil exporter, and its position within OPEC, which it helped create in Baghdad in 1960.

This paper looks at the different conditions as well as the schedules and timelines set up in the contracts awarded in recent weeks - plus those that could be awarded in the second bid round scheduled for 11 December 2009 - and the possible impact of the additional crude capacity on markets in the context of world supply and demand projections in the medium and long term. Beyond the technical aspect, the regional balance of power, Iraq's bilateral relationships and its position within OPEC are equally set to be affected by Baghdad's potential new role as the second largest oil producer in the region, and longer term, in the world. All this is provided the many domestic and external risks do not interfere to derail this huge enterprise.

Beyond the contracts for the three producing fields, where plans would see output there increase from the current 1.5mn b/d to 1.65mn b/d within a couple of years and to a staggering 6mn b/d within six years, the exact capacity additions from the second licensing round fields will not be known until bids are made next month. The calculations of the term incremental capacities assume that five of the 10 contract areas offered in the next round would be awarded to foreign companies after excluding those associated with higher risk due to their geographical location or size of reserves. The five "most attractive" used for the analysis of long term capacity potential are the two giants Majnoun and West Qurna-2, as well as Halfaya, Gharraf and East Baghdad, all previously sought or studied by international oil companies.

The Chosen Trio: Rumaila, Zubair and West Qurna

The contracts awarded for producing fields offered in the first bid round stipulate a rehabilitation phase of three years starting from the effective date of the contract and ending 36 months after the approval date of the rehabilitation plan. The rehabilitation plan itself should be submitted for approval within six months from the effective date.

The rehabilitation plan consists of a remedial program that is meant to deal with the problems suffered by the fields over the long years of sanctions and wars and of an appraisal program for producing as well as non-developed reservoirs. The remedial program involves three steps starting with a halt to any non-optimal operations in the oil fields that Iraqi oil engineers had to revert to in past years, often due to the lack of other options; then arresting the production decline in the oil fields, especially at Rumaila where it currently averages 5-10%; and finally achieving a sustainable and improved production rate of 10% above the initial rate prevailing at the start of the contract.

According to the agreements, the improved production target rate should be achieved as soon as possible after the approval of the rehabilitation plan. And since foreign companies will only recover costs once this initial incremental production is brought on stream, it is expected that they will seek to realize it in the shortest delays, probably in the first year of the contract. For the three fields in question, it means about 150,000 b/d could be added within a year.

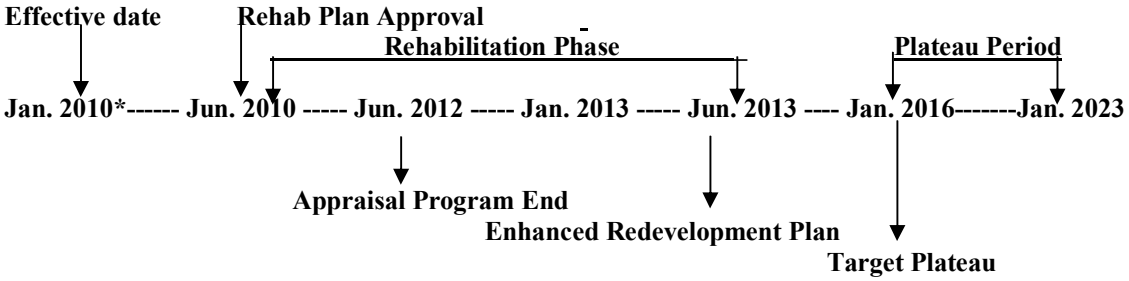
First Round Oil Projects

	Rumaila	Zubair	West Qurna-1	Total
Reserves (Bn Barrels) Initial Production	17.767	4.080	8.584	30.43
Rate (Mn b/d) Improved Production Rate	1.050	0.195	0.260	1.50
(Mn b/d) Target Plateau (Mn b/d)	1.155	0.214	0.286	1.655
	2.85	1.125	2.325	6.3

Source: Ministry of Oil Data.

During the three-year rehabilitation period, and with the intensive capital investment required and the improved reservoir management brought in by the foreign companies, output from the three fields should gradually start building up as new facilities are installed. By the time the rehabilitation phase ends, output is expected to be up by at least 30% as they embark on an enhanced redevelopment plan. That implies a production average from the three fields of some 1.97mn b/d in early 2013 from just over 1.5mn b/d currently being produced.

Timeline Of A Producing Field Technical Service Contract



* Jan 2010 is a hypothetical effective date meant for illustration purposes only.

The next milestone following the rehabilitation period is the achievement of the plateau production target consisting of crude and natural gas liquids (NGLs), as bid by the consortium which won the field technical service contract. According to the terms of the contract that target – collectively in excess of 6mn b/d for the three fields – should be achieved no later than six years from the effective date and should be maintained during the seven years of the plateau production period. The plateau production period starts once the plateau production target, which shall include production from producing reservoirs only, has been achieved for a continuous period of 30 days.

The Green Fields

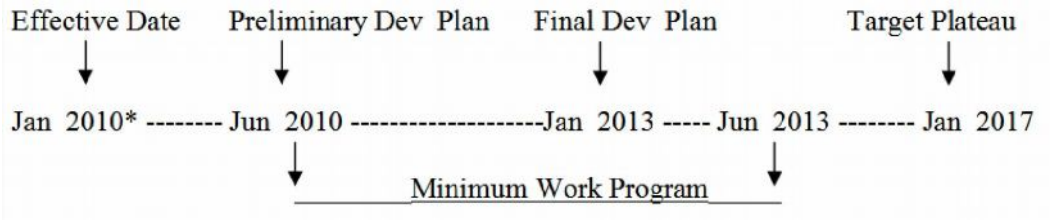
The Development and Production Service Contract (DPSC) used for the development of the green fields in the second bid round involves major differences from the oil field "redevelopment" contract used for the award of Rumaila, Zubair and West Qurna-1. The most important difference is the absence of an initial production rate. As such, and despite minor production in some of the fields (Majnoun is currently producing 60,000 b/d, Halfaya is producing 3,000 b/d, and East Baghdad 10,000 b/d) the winning consortium is expected to carry out appraisal, development and production as well as exploration within the field area awarded, all under the same contract.

The first task defined by the contract is the submission of a preliminary development plan, defining targets and phases for the development of the known reservoirs in the field in question, as well as plans for further exploration and appraisal work, within six months from the effective date. The final development plan should be submitted no later than three years from the effective date.

The first milestone is the completion of the minimum work within three years of the approval of the preliminary development plan. The minimum work program includes a combination of exploration and appraisal drilling, and subsurface work such as reservoir characterization and dynamic modeling, including 3D seismic acquisition.

With a contractual obligation that in-field work should start within six months of the approval of the preliminary development plan, it is fair to assume that first commercial production from the new fields would start within some 18-24 months from the signing of the contracts. Companies have an interest in starting early production as soon as possible to generate the first cash flow from cost recovery once commercial production comes on stream.

Timeline Of A Development And Production Service Contract



* Jan. 2010 is a hypothetical effective date meant for illustration purposes only.

The second milestone is the achievement of the production plateau target within seven years from the effective date. This production target, being a biddable parameter, is expected to be high compared to what previous ministry studies have been targeting for each of the fields offered in the second bid round. To avoid exaggerated production plateau targets, the oil ministry decided to alter the scoring formula by giving more weight to the remuneration fee rather than the production plateau target, as was the case in the first bid round.

Still, if the production plateau bids in the first licensing round are anything to go by, the bidding companies are expected to aim high this time too, to guarantee a foothold in the country, since no more fields are likely to be offered for development by foreign companies for a long time to come.

In the first bid round, the 2.85mn b/d production plateau target bid by BP/CNPC for the Rumaila field was 60% higher than the minimum production plateau target of 1.75mn b/d designated by the ministry. Eni and partners Occidental Petroleum and Kogas bid almost three times (1.125mn b/d) the ministry's minimum

production plateau bid of 400,000 b/d. ExxonMobil together with Shell bid 2.325mn b/d for West Qurna-1, or more than three times the ministry's minimum of 600,000 b/d.

Both Majnoun and West Qurna-2 are giants in the same league as West Qurna-1 in terms of reserves size. West Qurna-2 is in reality the northern half of the super giant West Qurna field, West Qurna-1 being the southern half. While the super giant Rumaila field – which is also split into two giants, the North Rumaila and South Rumaila – which started production several decades ago and has been going at an output rate of more than 1mn b/d for long years, the three other fields are yet to achieve their potential in comparison. West Qurna-1 in fact only started production less than a decade ago.

Old oil ministry studies have used modest average production indications for those fields when it first offered them to international oil companies in the 1990s. For example, Majnoun's target was put at 600,000 b/d when Total negotiated a production sharing agreement (PSA) for the field in 1998 but stopped short of signing it due to international sanctions imposed on Iraq at the time. Lukoil's PSA for West Qurna-2 (signed in 1997 and later annulled by Iraq in 2002) targeted a similar peak output.

During negotiations with international oil companies in the 1990s Halfaya's average production target was put at 250,000 b/d, Gharraf's at 120,000 b/d and East Baghdad which has not been fully appraised in the past and is considered geologically challenging to develop, at between 120,000 b/d and 160,000 b/d.

Selected Second Round Oil Projects ('000 b/d)

	Commercial Production	Plateau Period (Years)	Average Production Indications*	Reserves (Bn Barrels)
Majnoun	175	10	600	12,580
West Qurna-2	120	13	560	12,876
East Baghdad	30	10	120-160	8,108
Halfaya	70	13	250	4,098
Gharraf	35	13	120	0.863

Source: Ministry of Oil Data.
*Average Production Indications as given by an oil ministry official at a presentation in Baghdad in February 2009.

Production Capacity Boom

The three contracts awarded for the fields tendered in the first licensing round will become effective successively during the month of November. Provided the second licensing round concludes as smoothly as expected, with lessons from the first one learnt, the second group of contracts are set to be ratified by the council of ministers by January at the latest.

Based on the timelines specified by the two types of contracts, it is reasonable to assume that the first production increments would come from the improved production rates in the producing field and the first commercial production in the green fields in 2011 and considerable capacity additions would be achieved by 2013. However, by 2016 and 2017 all fields will be hitting their production plateau target. The three producing fields awarded under the first bid round (Rumaila, Zubair and West Qurna-1) will collectively be producing more than 6mn b/d.

Iraqi Minister of Oil Husain al-Shahristani estimated at a press conference held in Baghdad on 13 October that the 10 contract areas on offer in the second bid round would have a production ceiling of 4-5mn b/d. Based on these assumptions and taking into consideration the size of the reserves of the five "most attractive" fields, it appears quite acceptable to assume a collective production plateau of just over 3mn b/d from this group of five fields.

The table assumes that both Majnoun and West Qurna-2 fields receive production plateau bids in the range of 1.2-1.25mn b/d, and Halfaya a plateau bid of around 450,000 b/d, or about double the old oil ministry estimates for the three fields, and about 80% above old ministry estimates for the small Gharraf and East Baghdad.

Current output from the main remaining fields in the north (Kirkuk, Bai Hasan, Jambur) and the south (Missan, Nour,) is about 900,000 b/d of which 100,000 b/d is produced in Misan, 75,000 b/d from Majnoun

and the rest (700,000 b/d) from the northern fields. By 2016, one can assume that output from Kirkuk will continue to decline by 5% per year but could be compensated by an increase in output from Bai Hasan. Nassiriya currently at 20,000 b/d will be producing 150,000-200,000 b/d by 2012 if an engineering, procurement and construction contract currently being negotiated with Japan's Nippon is awarded this year.

Production Capacity Estimates According To Contracts Timelines (Mn B/D)

			Plateau Target Date	End of Plateau Periods		
	2011	**2013***	**2016-2017****	**2023**	**2027**	**2030**
Rumaila	1.155	1.365	2.85	2.85		
Zubair	0.214	0.253	1.125	1.125		
WQ-1	0.286	0.338	2.325	2.325		
Total	**1.655**	**1.956**	**6.3**	**6.3**		
Majnoun	0.175	0.36	1.2	1.2	1.2	
WQ-2	0.12	0.375	1.25	1.25		1.25
Halfaya	0.07	0.135	0.45	0.45		0.45
Gharraf	0.035	0.067	0.225	0.225		0.225
East Baghdad	0.03	0.067	0.225	0.225	0.225	
Total	**0.430**	**1.004**	**3.35**	**3.35**		
Other Fields	0.8	0.8	1.0	1.0		
KRG fields	0.5	1.0	1.0	1.0		
Total	**3.385**	**4.76**	**11.65**	**11.65**		

*2013 estimates based on an increase of 30% of the initial production in the producing fields and a similar percentage of the target plateau in the non-producing fields.
** Production Plateau Targets for 2nd licensing round fields are assumptions.

For the sake of the illustrations, we assume – conservatively – that oil production capacity maintained by national effort remains around 900,000 b/d by 2013 and increases to 1mn b/d by 2016. Kurdistan Regional Government (KRG) fields' output could contribute up to 1mn b/d in the medium term, though sustaining a stable output from the KRG fields is contingent on reaching an agreement between Irbil and Baghdad on all pending issues. Once the production plateau targets are achieved by 2016 for the first group of fields and 2017 for the second, they are to be maintained at least until 2023 for the group of the three producing fields and to between 10 and 13 years for the others, which means up to 2030 for some.

The Dilemma For OPEC

The expected rapid developments in the Iraqi oil sector and the accelerated build up of output capacity over the next decade and beyond – provided they are not interrupted by internal or external threats – pose two major challenges for OPEC. One is related to the organization's ability to maintain supply at a level that insures oil prices remain within the range that guarantees adequate revenues to its member countries and the other concerns the cohesion within the producers' club as members – or some of them – compete for higher production quotas.

After the drop in demand for OPEC crude in 2009 due to the global economic contraction, the organization's number crunchers expect it to rise again over the medium term until it returns back to the 2008 levels by 2011. However by that time Iraq could add about 1mn b/d to its current production of 2.4mn b/d, while world demand would have increased by just 2.3mn b/d and supply would be already outstripping demand by 300,000 b/d.

By 2013, OPEC expects crude oil spare capacity, excluding that of Iraq, to rise to 6mn b/d. If spare capacity rises too high, it might induce downward pressure on prices, especially taking into consideration the impact of the recent recession, the organization warned in its *World Oil Outlook* released last summer. Based on the previous assumptions, Iraq could be adding some 2mn b/d on its own by 2013 as it targets an output capacity of 4.7mn b/d. If the 11.5mn b/d capacity targeted is realized according to schedule by 2016-17, OPEC – and Iraq – will be facing a real dilemma.

After 2013, the amount of OPEC crude required is projected to continue to rise to just over 41mn b/d by 2030. That is 2.5mn b/d less than what it was in 2008. The share of OPEC crude in total supply by 2030 is just 39%, according to forecasts based on OPEC's reference case scenario. "The key issue is therefore not related to availability of crude but to deliverability and sustainability," OPEC concludes.

OPEC Medium And Long Term Outlook [1] (Mn B/D)

	2008	2009	2010	2011	2012	2013	2015	2020	2025
Oil Supply Outlook	85.8	83.1	84.7	85.8	87.0	88.2	90.5	95.7	100.7
Oil Demand Outlook	85.6	84.2	84.6	85.6	86.7	87.9	90.2	95.4	100.4

Long Term Supply And Demand Comparative Projections [2] **(Mn B/D)**

	OPEC	2015	EIA	OPEC	2030	EIA
		IEA			IEA	
World Oil Supply Projections						
Non-OPEC	52.4	49.9	52.5	56.3	53.5	62.8
OPEC	38.1	44.4	38.1	49.6	52.9	43.8
Total	90.5	94.3	90.6	105.9	106.4	105.6
World Oil Demand Projections	90.2	94.4	90.6	105.6	106.4	106.6

The last time Iraq had a quota assigned was on the eve of the invasion of Kuwait in July 1990. At the time, it was set at 3.14mn b/d or some 14.5% of OPEC's total compared to a production capacity of 3.5mn b/d. Baghdad could indeed attain that output capacity again by 2011, based on the scenario above.

To accommodate Iraq's projected 3.4mn b/d within the next two years, and a further 1.3mn b/d less than two years later is a tall order for OPEC in view of its own forecast of the call on its members' crude and its estimates of the 6mn b/d spare capacity that will be sitting idle at a time when Iraq would be pumping at full throttle six to seven years from now. As it appears today, Iraq will then be sitting on redundant capacity.

Judging by previous reactions when Iraq had the potential to restart exports back in 1996, when it agreed the oil-for-food program with the UN, and again in 2003 when the sanctions were lifted and Baghdad was allowed to export at will, the issue is expected to be divisive within the producers' organization.

When it was assumed in 1996 that Iraq could be allowed to sell unlimited amounts of crude to buy food, disagreement over who should make room for Iraqi exports gave early signs of the war of quotas that was about to start. Iran for one was uncompromising when it made clear that if OPEC had to cut output to make room for Iraq, Saudi Arabia (and to a lesser extent the UAE) should bear the main brunt of any cutback required since it was the main beneficiary of the 1991 Gulf crisis.

"The whole intra-OPEC nexus of conflicting interests, entrenched positions and mutual distrust is indeed highly intractable. But the real tragedy will be if an effective path towards a solution cannot be found except through a price collapse," warned former *MEES* Editor-In-Chief Ian Seymour then. [3]

The Iranian argument was based on the fact that Riyadh, which was producing 5mn b/d in 1989 and had stepped in to replace Iraqi and Kuwaiti output when both disappeared from the market in 1991, had since increased its output by 60% above pre-war production at over 8mn b/d.

However, it was the restrictions which were eventually imposed on Iraqi exports at the time which saved the organization from having to face up to the inevitable.

The specter of Iraq's aggressive return to the market in 2003 and the lifting of UN sanctions following the US-led war that toppled the Ba'ath regime again threatened the cohesion within OPEC as members debated how to digest Iraq's anticipated extra production. Yet again, OPEC was saved from that moment of truth as Iraq plunged into years of internal strife and instability and the promised comeback was delayed by several years as its oil sector struggled to get back on its feet.

So, what are the choices as that moment of truth seems to be drawing nearer – again – provided contracts signed are executed according to the agreed timeline?

Concerned over security of demand, as much of the extra capacity thought in 2007 and early 2008 to be needed, turns out to be unwarranted for, at least partially, as OPEC notes in its 2009 report, many producers have already revised their upstream investment plans for the coming few years and shelved projects where

work had not started. A new contingency plan and possibly a further revision of projects to be executed could later be dictated by the potential extra Iraqi capacity.

Iraqi oil officials for their part maintain that they will not go it alone and will preserve the interest of the organization they helped found in 1960. Without coordinating its act with OPEC, Iraq is set loose from dumping its oil on the market and drawing oil prices to a plunge at a time it is in dire need of all the revenue it could put its hand on.

"Iraq is going to follow a well balanced strategy satisfying the national interest on one hand and working for stable and fair price by coordinating with OPEC members on the other. The build up of our capacity will be gradual and shall take many years to reach high levels. We will not look at it from volume or capacity point of view only but shall also take cost to us and revenue into consideration," points out Thamir al-Ghadhban, former oil minister and chief advisor to the Iraqi prime minister, when asked about possible tension with OPEC members over Iraq's planned aggressive output capacity push in the next few years. "Such a high production capacity would cost the country a lot in adding facilities since capital expenditure is repaid back to the foreign companies. In return, the revenue of the state will be dependent on the price of the barrel and therefore we have to assess the effect of such a large surplus capacity on the oil prices on the market." [4]

Saudi-Iraqi Relations

When it comes to Saudi Arabia, the stakes are much higher than for anybody else where Iraq's potential return as a force on the market is concerned, not just because of the possible renewal of the old debate over who took over Iraq's market share in the early 1990s, but more so because of the uneasy relationship between the two neighbors since the ousting of the Sunni Ba'ath regime in 2003 and the advent of Shi'ite- ruled governments since.

Historically, political differences between Iraq and Saudi Arabia have been the norm in the 1960s and early 1970s due to the different natures of the two regimes at that time, one being conservative and the other championing the cause of Arab nationalists. As a result, their relations within OPEC and between their two respective oil ministers were tense. A rapprochement started occurring in the early 1980s as Iraq went to war against Iran, in what was conceived by its neighbors as facing up to the Iranian ambition of "exporting" the Islamic Revolution westwards. This ushered in a golden era of cooperation which witnessed an agreement over the IPSA pipeline across Saudi Arabia giving Iraq an alternative export outlet on the Red Sea after Syria closed the Iraqi Trans Syria oil pipeline to the Mediterranean in 1982.

Former Iraqi oil minister Issam al-Chalabi describes the relationship in the 1980s as exceptional: "Saudi Arabia was extremely cooperative then and it was them who suggested that the first stage of the IPSA pipeline project ties up with their East-West pipeline built in 1985. This cooperation continued during the time of oil minister Hisham Nazer and when I was oil minister it extended to the other sectors, while I became the head of the joint Iraqi-Saudi committee. We inaugurated the second stage of IPSA together in January 1990. Riyadh never raised a worry on account of increasing Iraqi capacity for export even when we hit the 3mn b/d level. Our total export capacity at the time was over 5.5mn b/d but the production capacity was not there yet." [5]

To help Iraq during its war years with Iran, Saudi Arabia had also bankrolled Baghdad with $25bn in low interest loans and grants and reserved part of its crude oil produced in the Neutral Zone to Iraqi customers when loading at Basrah was suspended due to the war and when later the terminal was shelled and partly destroyed.

Driven by their common interest, it was not surprising then when Riyadh backed Iraq's demands during two particularly crucial OPEC meetings in the summer of 1990 as it challenged other fellow members suspected of overproducing to restrain their output and support prices at a time when it was in great need of revenue for post-war reconstruction. At those same meetings, it was also Saudi Arabia that stood by Iraq as it sought to obtain an increase in its quota to make at parity with that of Iran.

According to Mr Chalabi: "Hisham (al-Nazer) and I played a major role in June and July 1990 during the two OPEC meetings in Jiddah and Geneva, to defuse the tension over Kuwait. The Geneva agreement was only possible with approval and backing from Riyadh. As a result, Iraq was able to dictate the terms." [6]

Iraq's production capacity had gone down from 3.8mn b/d in 1980 to 2.8mn b/d by the time the war ended after hovering around 1mn b/d for years. By the summer of 1990, it had bumped up to 3.5mn b/d. However, the invasion of Kuwait in August that year and the 1991 Gulf War knocked Iraq off track as sanctions were imposed and were not lifted until 13 years later.

Iraq's potential return as a major oil producer undoubtedly creates a challenge for Saudi Arabia more than any other member in OPEC. First because the recent contracts put Baghdad on track to attain a production capacity in line with its reserves and could, based on the expected results of the second licensing round in December push it higher – at least theoretically – to be at par with that of Riyadh. Second, because Saudi Arabia associates the Shi'ites governments that have run Iraq since 2003 with the Iranian Shi'ite regime and have backed the Sunni minority groups as an opposition to the ruling Shi'ite majority.

But both share a concern over oil prices and associated revenues, so crucial to both state budgets, that cooperation and close coordination seems inevitable. As Mr Ghadban points out, with big oil muscle comes big responsibilities. Both have a shared interest in insuring a stabilized system of world oil supplies, without which there won't be any winners, but only losers.

Conclusion

Despite the euphoria of the unprecedented successive contracts' signing ceremonies witnessed in Baghdad in recent weeks, there are still many 'ifs' surrounding the realization of the full potential created by the introduction of international oil companies into the Iraqi oil sector for the first time since nationalization in the mid-1970s. Some have to do with the ability of the sector itself to cater for the number of foreign operators working simultaneously according to the same timeline. Others are related to the capability of the Iraqi governments, current and future, weakened by the political system that emerged in the last six years, to channel the rent created back into the society.

In addition to internal instabilities that still exist despite the relatively improved environment in the last couple of years, regional uncertainties could also derail the Iraqi oil project. There are still big question marks over Iran's relations with the west and the implications of the different paths those relations could take on the geopolitical set up in the region. Iraq's own relationships with some of its neighbors are also still a wild card and have the potential to spoil Baghdad's grand plans.

Notes:

1. OPEC, World Oil Outlook 2009. Tables reproduce reference case scenarios only. For an overview and main assumptions of the reference case see www.opec.org
2. OPEC, World Oil Outlook 2009.
3. 'Can OPEC Handle A Resumption of Iraqi Oil Exports?', *MEES*, 12 February 1996.
4. Private correspondence, 4 November 2009.
5. Private correspondence, 2 November 2009.
6. Ibid.