Iraq's Oil Historical Perspective: Why? When? How?

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Iraq's Oil Historical Perspective: Why? When? How?

It is often said that: 'Iraq's oil has been the target of the major consumers, their governments and IOCs': Why? When? And How?

The brief answers are as follows:
1. Why? The answer is because: Iraq's oil is the jewel in a global context.

2. When? The answer is in the historical background: the oil concessions of the First World World War and the oil PSAs and Service contracts post-2003 Occupation are witness.

3. Why? The answer is because: the events speak for themselves:
- 3/5 of Iraq's oil reserves are committed
- 49 PSAs
- Power struggle: Erbil Vs. Baghdad
- The tsunami race: rounds 1, 2,3 & 4

4. In conclusion? We will discuss this when we get there in details

I will start with:

1. Why? The answer is because: Iraq's oil is the jewel in a global context

Iraq reserves are plentiful and its finding and development costs are amongst the lowest, regionally and global.

1.1 Iraq's oil reserves: proven & potential oil reserves

- In 1966, during my tenure in the Iraq National Oil Company (INOC) we carried out a study of potential oil reserves covering an area of approximately 215,000 sq km south of the horizontal line, at the centre of the country, excluding the major producing fields of Rumaila and Zubair. The information and data were derived from the records of the

Iraq Petroleum Company (IPC) and its Associated Company, the Basra Petroleum Company, (BPC). A total of 301 structural anomalies were identified, mainly by gravity and some seismic surveys. Of these, only 135 anomalies (enclosures) were considered sufficiently credible. Aided by their geological settings and by probability analysis of the quality of the data, the oil-in-place (the total oil in a formation, of which we recover only part; the recovered is called the proven reserve) of the two known formations of Tertiary and Cretaceous age, was estimated at 350 Billion barrels (Bb) and the potential recoverable oil reserves (the proven reserve) at 111 Bb.

- In 1994, I presented a paper for a geological oil conference in Amman, Jordan, which I developed further a year later for an oil conference by the Centre for Global Energy Studies (CGES) in London, based on the knowledge of the number of structural anomalies and size their distribution.

  In Iraq, there are some 530 structural anomalies that have been identified by geophysical surveys. By 1994, only 115 have been drilled, and oil and gas was established in 80 structural anomalies. I estimated the total ultimate discovered oil reserve to be in the order of 144 bn barrels, which is in conformity with the published data and consistent with the experience of Iraqi experts.

  I utilized an empirical relationship, which relates the discovered oil in a geological basin to the exploration effort along a time-scale. The graph shows successful exploration effort starts low at the initial phase, then picks up sharply and grows almost linearly until the bulk of the reserves are discovered, when it slows down as the discovered ultimate reserves of the basin are reached.

Table 1: Iraq's Exploration Prospects

- With the use of size distribution and varying reserves success ratios, I estimated the potential oil reserves in the remaining 415 structural anomalies to be in the order of 280 Bb housed in 143 structural anomalies to 360 Bb, housed in 183 structural anomalies (oil fields). Once a closure proves oil it is then called field; this distinction is important in the interpretation of article 112 of the constitution.

- In the joint study on Iraq with CGES, which I referred to above, carried out as a multi-client consultancy study in 1997, 'Oil Production in the Gulf Volume IV', the Petrolog & Associates team, involving myself as Executive Director of Petrolog & Associates, with others amongst the most experienced petroleum engineers and geologists, carried out an extensive analysis of Iraq's exploration potential, taking over three man-year. The proven ultimate oil reserves were estimated at 128 Bb, housed in 80 fields, of which 124 Bb (billion barrels) were housed in 43 discovered and delineated fields and 37 fields have been discovered but not sufficiently delineated. Each of the latter field has been assigned very conservative reserves of only 0.1 Bb. Upon development most of these are expected to contain many more reserves. As a matter of fact subsequent development has supported this premise.

- Iraq's potential reserves were estimated conservatively to be in excess of 216Bb. Many of these are large fields with as many reserves as in some of the discovered fields. The largest eight potential fields housed some 50 Bb, compared with 92 Bb housed in eight discovered fields. Our estimate was based on conservative volumetric calculations, using average porosity, oil shrinkage and a recovery factor not exceeding 31% (present oil fields experience has proved recovery of 50% and the target is 60-70%) for oil reserves recoverable from 224 anomalies, among the total of 440 surface and sub-surface identified anomalies which are sufficiently prospected to be included. The potential proven reserves were estimated at 455 Bb barrels, to which a success rate of 47.5% was applied (being the average of 70% terminating at 25% at the end of the exploration period), giving 216 Bb of proven reserves. On the basis of the above results, we endorse estimates of an ultimate proven reserve of 140 Bb and a potential reserve of 216 Bb, often rounded to 215 Bb as shown in the next table.

Table 2: Iraq's Oil Resource

1.2 Iraq's finding and development costs

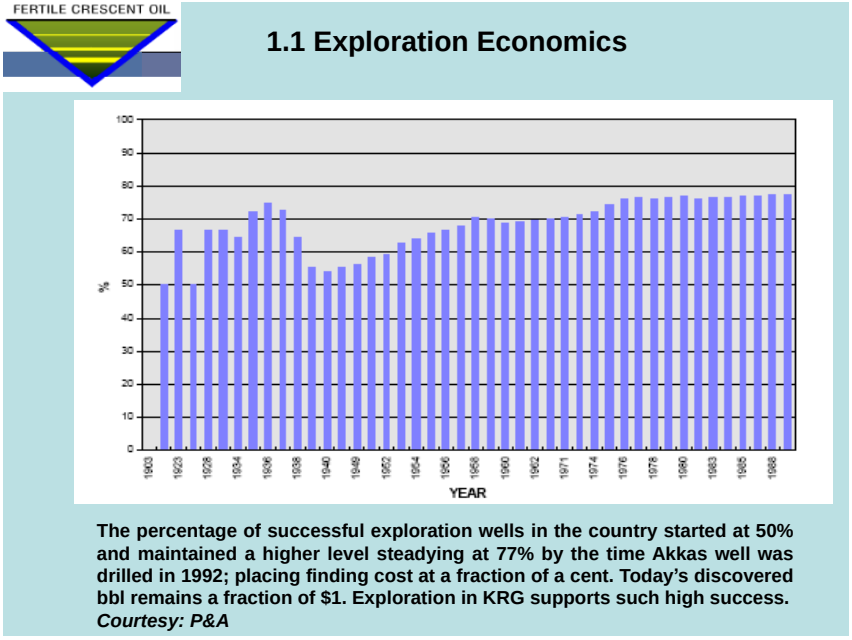
In the joint 1997 study, referred to above, past accounting records for the IPC and associated companies were examined and tangible and intangible assets were analysed and adjusted for inflation in order to reflect current costs at the date of publication in 1997.

1.2.1 Finding costs

During past exploration, 157 exploration wells were drilled in Iraq to investigate 116 structures, of which 122 wells were successful in finding oil or gas, providing reserves of some 145 Bb, housed in 80 fields. This is an international record, which makes the cost of discovering a barrel of oil at a fraction of a US Cent.

Almost every oil field has multi reservoirs. As a result, the drilling success rate is almost 8 out of 10, and discovery rate is 7 out of 10.

Figure 1 Iraq Finding Costs



It is no surprise, therefore, that the finding cost has been less than US 0.5 cents per barrel in 1997 dollars. Allowing for inflation and as the search progresses into more difficult and deeper horizons and smaller oil fields, the finding cost would be higher, but still a fraction of a dollar for a long time to come

The weighted average finding (exploration) cost for Iraq amounted to $0.003 per barrel; that is: a fraction of a Cent amounting to 0.3 Cent per barrel. The IPC, BPC and MPC

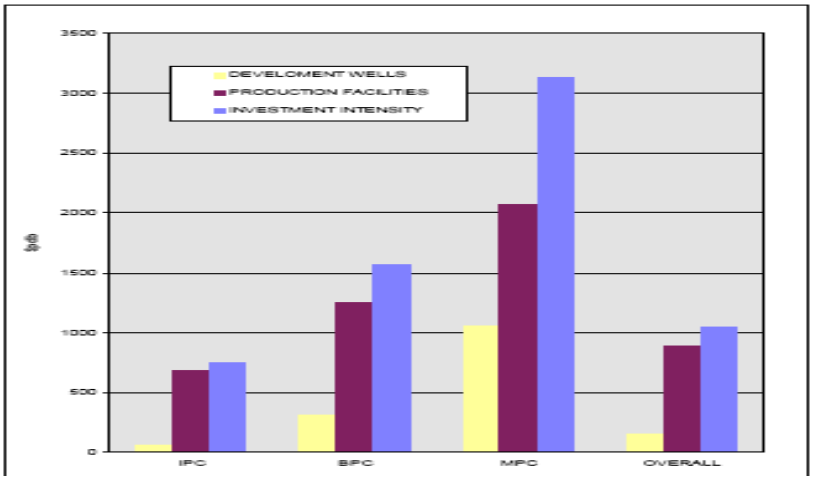
revealed different costs for their different respective concession areas. The BPC area in the south had the lowest finding cost of $0.001 per barrel, followed by a cost in the north to the east of the Tigris river of $0.004 per barrel, and a much higher cost for the north-west of the Tigris of $.056 per barrel. Clearly, these costs reflect the relative richness of their respective areas and not different management or technical skills, as the three companies shared common management and shareholders.

Present day finding costs would be a fraction of $1 per discovered barrel. Present exploration in Kurdistan supports this conclusion.

1.2.2 Development Cost

The CAPEX (capital investment expense) historical costs is $750-$3,250 per daily barrel, averaging at $1,050 per daily barrel ($ 1997); that is to say: the cost to develop a production capacity of one barrel per day (a daily barrel) which is equivalent to 365 barrels per year.

Figure 2. Iraq's development costs



$ Dollars Cost VS Company: IPC, BPC, MPC & Overall

Courtesy P&A

Yellow=Development Wells Cost

Red=Production Facilities Cost

Blue=Total Cost

Today, the CAPEX is in the region of $7,500-$11,000 and OPEX (operating expense) is in the region of $1.5-$2 per barrel.

The two major cost components, production facilities and wells shown in the above graph, were assessed and the average development cost at the field boundary was derived. Our assessments revealed that Iraq's overall average Development Investment Intensity (cost per rate of one barrel per day) in the different areas amounted to an average of $1,040 per barrel per day (bpd), which is made up of $750 per bpd for the IPC fields, $1,570 per bpd for the BPC fields and $3,130 per bpd in the MPC fields, at the field boundary; that is to say, not including the transfer pipeline and storage facilities and terminals outside and beyond the oil field.

It should be mentioned at this juncture, that the future development cost in Iraq will be higher to reflect, apart from adjustment for inflation, lower well production productivity in the new fields, restricted natural water drive requiring full water injection, deeper wells, and in some areas more difficult drilling conditions and generally smaller fields to develop. However, costs will remain on par or lower than that of Saudi Arabia and Kuwait.

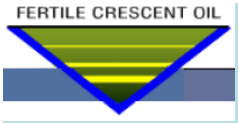
On the whole the Finding Cost should remain in the region of a fraction of $1 per barrel and the Development cost around $7500-$11,000 per bpd of built production capacity, which is equivalent to $1.5-$2 per one discovered barrel. The associated operating cost should be in the region of $1.5-$2.

Both development costs and the operating costs are closely associated with the production rate capacity of the producing wells.

1.3 Iraq's oil in a global context

The table below provides conceptual conclusions of Iraq and Middle East oil reserves in a global context. World proven reserves have been upgraded from their assumed 35% world average recovery to 50%, which is well within the grasp of today's oil field management technology. However, while the accuracy of cited reserves might be somewhat debatable, the conceptual conclusions derived herein remain reasonably valid.

Table 3. Iraq's Oil in a Global Context



1.3 Iraq Oil in a Global Context

Iraq on par with Saudi. It is furthest away from peak oil decline. Produced 8% of its resource while the non-OPEC producers are at or near peak oil decline..

Country or Region	Production Bb	Production % Total	Proven + 15% & Potential	Resources Oil Base Total
UAE	24	15.1	135	159 (55.5 Bb from Peak)
Kuwait	35.8	20.3	140	176 (55.2 Bb from Peak)
Iran	58.3	23.5	190	248 (65.7Bb from Peak)
Iraq	30.5	8	380*	410 (174Bb from Peak)
Saudi Arabia	106.4	22.6	365	471 (129 Bb from Peak)
MEM	255	17.4	1209	1464 (477 bb from Peak)
World	1016	34.1	1964	2980 (474 Bb from Peak)
World Excluding MEM	761	50.2	754	1515 (-3.5 Bb from Peak)

Courtesy: P&A.
Potential at 20% of proven reserves while Iraq's quoted P&A Study result at 215 Bb*.
Proven Reserves on 1/1/07. Increased proven reserves by15% for Enhanced Recovery.

Bb= Billion barrels

The conceptual conclusions derived from the table are summarised as follows:

- Iraq's cumulative oil production to-date is only a small fraction, some 8% of oil resource base, which puts Iraq even behind the UAE, whose oil production started some five decades ago, while oil production from Iraq started eight decades ago.

- Iraq will maintain its oil peak when the other major producers are on production decline. With peak oil decline setting-in in non-OPEC producing countries, security of supply becomes an overriding factor, particularly for the international oil companies (IOCs) such as BP, whose oil production is a portion of its refining need.

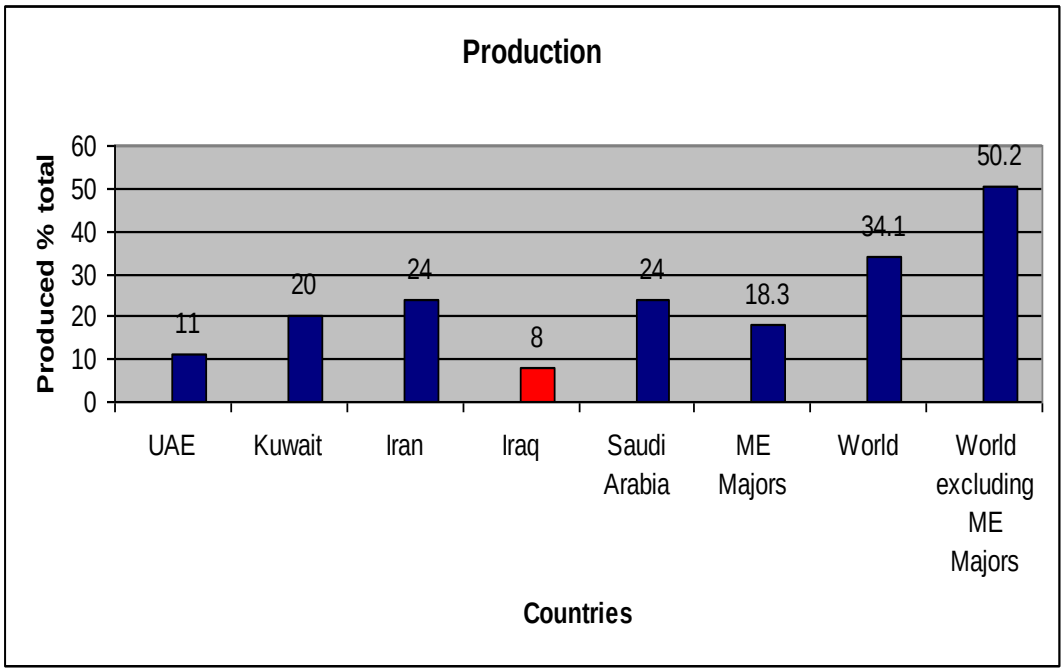
- Iraq's oil reserves are on par with the world leader, Saudi Arabia, and its oil resource base is not far behind. Iraq's present oil resource (present and potential) constitute

31% of the total Middle East Major five producers (MEM), and some 19% of the World's.

- Iraq and the rest of the ME Majors, whose produced oil thus far is only 18% of their total reserve resources and 62% of the world's proven and potential reserves, will be able to sustain upward production rates for many years to come, deferring the off-peak decline by decades.

- The graphical presentation of Fig 3 shown below illustrates Iraq has produced only 8% of its oil resource while Saudi Arabia 24% and the world outside the MEMs 50% of their oil resource.

Figure 3: Comparative Resource Depletion



- Iraq's resource reserves depletion, which is in the region of only 8%, allows Iraq to sustain high production rate, while the others, including Saudi Arabia, would have already entered their peak and started their decline. Peak production capacity rate ends when around half of field's oil reserves are depleted and production rate decline

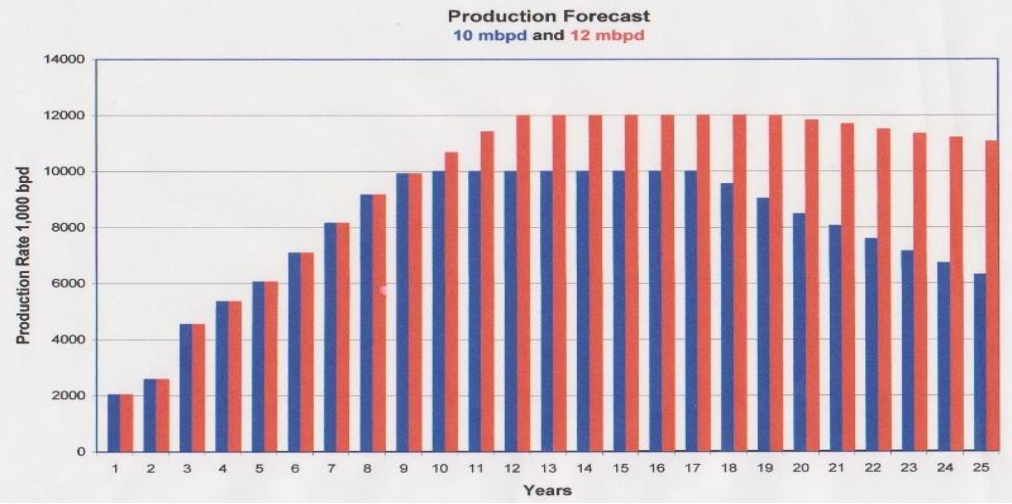
sets in. Hence Iraq oil becomes the most sought source. The IEA predicts Iraq oil would supply half of the global annual incremental consumption by 2020 onwards.

- Iraq's enormous proven and potential oil is the only major MEM, with relatively untapped and inexpensive oil resources, making Iraq the world's only practically untapped resource base. At the same time, it raises alarm amongst Iraqis, fearing interference by powerful consuming nations and states in the country's political and economic future, and fuelling the argument that the invasion was for oil.

1.4 Iraq's oil production forecast

At an annual depletion rate of 4-5%, Iraq can continue its upward production rate to 10 million barrels per day, mbpd, and beyond to12+ mbpd (conditional on adding in new potential reserves in order not to exceed the above depletion rate), when other ME Majors would have passed their reserve mid-point and started to decline. IOCs commitment to sustain12 mbpd peak from 82 Bb can only be achieved at higher costs and potential damage to recovery. However, in accordance with almost all supply and demand studies, the production rates are beyond global demand.

Figure 4. Production Forecast



There are many prohibiting consequences associated with a production capacity rate at 12 mbpd:

- It is beyond Iraq's supervisory capacity. The draft petroleum law adopted fully by the Ministry of Oil (MoO) requires technical and commercial audit.
- It is likely to be beyond the IOC's capacity to achieve, working within failed state conditions in Iraq.
- The government would face penalty payments for every barrel capacity built by the IOCs, which is not produced. And, would face frozen investment with no return, on the unused production capacity, on account of being in excess of global demand.
- As a matter of fact, Iraq's contracted capacity would come up to 13+ mbpd when Kurdistan's (KRG) planned capacity is added.

In conclusion: Planned Capacity of 13+ mbpd is beyond Iraq and IOCs to achieve by 2017 and the global market demand. Unless rescheduled in line with IEA Study of 2012 (given below), of 6mbpd by 2020 and 8 mbpd by 2035, overcapacity will result in heavy financial penalties payable to the IOCs. One can only hope that the present negotiation of the MoO with the IOCs contractors would bring the total capacity down to avert much of the likely difficulties.

1.5 IEA study recommendations

The IEA study recommends in its central scenario, that Iraq's oil production increases to 6 mbpd in 2020, and reaches 8.3 mbpd in 2035. However, even the high case scenario, in which Iraq's production surpasses 9 mbpd in 2020, before rising to 10.5 mbpd in 2035, remains much lower than Iraq's present committed plateau of 13+ mbpd. The IEA stresses that meeting these trajectories will require rapid, co-ordinated progress in many areas to ensure the timely availability of rigs, sufficient water for injection to maintain reservoir pressure and adequate storage, transportation and export capacity. And, I would like to add that Iraq will also require more professionalism and less political interference.

Figure 5. Growth in Oil Production 2011-2035 (Courtesy of IEA)

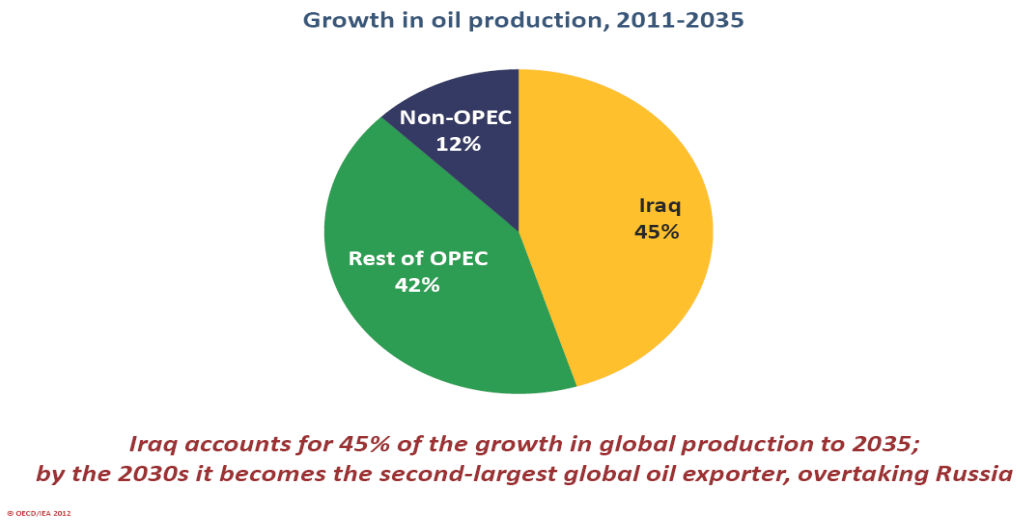
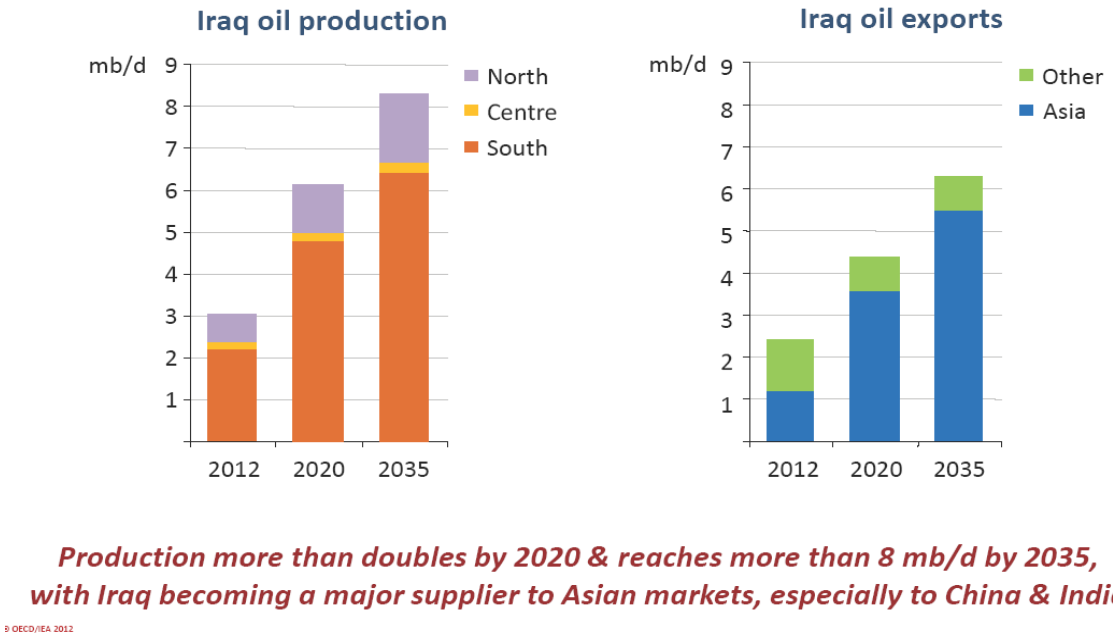


Figure 6. Iraq's oil production and exports (courtesy of IEA).



It is my belief that a policy of oil exploration and/or development which places the country's bulk resources under the jurisdiction of the IOC's long-term contracts, may well run into difficulty to live out its term.

It is an opportune time for the government, in their present review, negotiating their present service contracts with the IOCs, to elect a model technical support contract with an option for INOC to takeover following a reasonable period post the development of a sustained plateau.

But can this happen? One can only hope though the clock seems to be ticking beyond a point of no return.

I will move now to the question of:

2. When?

2.1 Post First World War and 2003 Occupation

The IPC's long-term oil concession contracts provided loot for the victorious powers of the major oil consuming nations. Similarly, post 2003 Occupation, the oil contracts of the KRG PSAs and the Central government service contracts, have provided the bulk of Iraq's oil reserves as loot for the major consuming countries.

The history of the IPC's formation and the way shares were distributed between the British, French, Dutch and later the American companies are evidence of the colonial role of politics in the Middle East in acquiring oil concession rights during and in the aftermath of the First World War.

The inclusion of Exxon and Mobil took place post the creation of the IPC in1925, to meet the demand of the American State Department.

Oil was the loot of the victorious powers of the First World War, despite the fact that oil was not necessarily the main cause or primary objective. However, the Iraqi occupation of 2003 took place in the full knowledge of Iraq's oil wealth and at a time when the global oil peak oil was judged to be around the corner, making security of long-term supplies even more paramount. Oil was and remains a war motive and objective by the powerful consuming nation's governments for economic or strategic objective as circumstances dictate.

Clearly Iraq's and the ME's concessions were the outcome of the First World War. Similarly, the return of the Major IOCs to Iraq appears to be the outcome of the two Gulf wars and of the March 2003 Iraqi invasion.

2.2 The Concession Era

The San Remo Conference of April 1920 set out the formal framework between Britain (BP) and France (CFP) of an oil concession in Iraq, which provided 20% unrealised participation to Iraq. Concessions in the rest of the ME followed, providing the war loot to the victorious powers.

The traditional slow-go approach of the IPC and its Associated Companies, its ability to shift exploration and production to where it best served its colonial interests has kept Iraq production rate way below the capacity of its reserves richness. Similarly the failure of negotiations over relinquishment and participation, which led to the enactment of Law 80 in 1961 and the Companies retaliation, had kept Iraq production and export frozen for almost a decade.

The IPC and its Associated Companies neglected totally issues relating to Local Content and formed distinctive economic and social enclaves, which were foreign and privileged and, thus, the terms 'concession' and 'concessionaire' developed controversial implications. Nationalisation became inevitable post Law 80 of 1961, following the failure of negotiations over relinquishment and participation and at a time when OPEC succeeded in nationalising, through negotiating majority or total share acquisition of the shareholding of the concession agreements.

The cost to Iraq was high resulting from the untimely unilateral enactment of Law 80. Iraq lost market share as its production capacity was frozen around 1 mpbd, while Saudi Arabia's, which was at 1.25mbpd, took off targeting 10mbpd. Iraq production remained frozen until post nationalisation of 1972, when its production and discovery rates registered historical levels.

2.3 Nationalisation era

On past record, the formation of INOC proved to be a success during its 1970s performance. It built up production capacity to over 3.5 mbpd in a few years and added oil reserves at a world global record of 6+ Bb per year. However, the government's politically-driven decisions, confrontational policy and unnecessary and destructive wars and years of sanctions proved serious impediments to maintaining its successes and led to dilapidation of infrastructure and decline in production capacity. Iraq's production rate has never caught up with its reserves capability.

2.4 Post 2003 Occupation era

The primary impediments in era of post 2003 Occupation may be summarised as Iraq's failed state conditions, characterised by acts of violent terror, ethno-sectarian division, corruption, and the absence of institutions which limit the Iraqi government's ability to govern effectively or to promote co-operative and coordinated planning and policies by the different parties within any one ministry or between ministries.

The oil industry has had its full share of such impediments. Iraq's oil exploration and development has taken a two-track oil and gas model: one by the KRG, which pursued the PSA model, and the other by Ministry of Oil (MoO), which pursued the Service Contract model, and symbolising the power struggle between the Regions and Central government. Strange enough, Regional power has shown itself to be superior, to the extent of smuggling crude oil and products in and out of the country, while the Central government is impotent to control it, so that the Regions may soon carry out the export of crude oil through their own pipelines, in a clear violation of the 2005 Constitution.

Neither the enactment of the PSAs nor the Service Contracts (SCs) are compatible with the recent 2005 Constitution, nor Law 84 of 1985. The PSAs and the SCs assessment will follow under **3.1 Erbil PSAs** onwards.

2.4.1 The CPA, TAL and Provisional Government

- The Temporary Administration Law (TAL) designed by the Central Provisional Administration (CPA) set out the principles of the 2005 Constitution. It introduced as the principal foundation of governance, ethnic and sectarian tensions, exemplified by

the make-up of the CPA and the Provisional Government. It denied Federal government sufficient authority and granted the Regions (of which KRG is one) and provinces de-facto confederate status and sufficiently wide authority to form distinctive enclaves, which replaced the sense of a unified national culture that had been Iraq.

- The Prime Minister of the Provisional Government, Dr Ayad Alawi, made efforts at formulating an oil policy, which had to be abandoned in due course due to its conflict with the TAL, which denied, rightly, the Provisional Government from enacting a policy that impacted on the long-term interests of the nation.

- Dr. Alawi intended to re-establish INOC, whose operations, however, were to be limited to the then existing oil producing fields, with the prospect of its partial or total privatization.

- Dr. Alawi emphasised expediting the entry of the IOCs to start developing Iraq's undeveloped fields on a modified type of PSA that bars any government entity from becoming a party in the PSA contracts.

- However, his vital policy lines would have run counter to the terms of the TAL annex that governs the transitional governments. It prohibits long-term contracts that could impact on the long-term development of the country.

This raises the legal question: Does a government, which falls into the definition of a badly failed state, of questionable competence, qualify to enact long-term oil contracts that impact on the management of its most valuable assets of the nation, its oil and gas assets?

2.5 The Constitution: Constitutional review seven years overdue and the draft Petroleum Law stalled

The first original petroleum draft's legal basis is compatible with the published constitutional interpretation of a study by prominent legal authority Joseph C. Bell, Hogan and Hartson LLP, and Professor Cheryl Saunders, University of Melbourne, Australia, "Iraqi Oil Policy - Constitutional Issues Regarding Federal and Regional Authority." It is unpaid study written for the public interest and published by Iraq Revenue Watch, www.iraqrevenuewatch.org in May 1996.

The constitutional articles governing the management of the oil and gas assets and the Draft Petroleum Law are as follows:

- Article 111 states that oil and gas are the property of the entire nation in all the regions and governorates.

- Article112 is in two parts. The first deals with further development of the producing oil and gas fields, and the second with the shaping of the strategic policy thereof.

- Both parts require that policy be made by the Federal Government, in consultation with the provincial Regions and Governorates, which should ensure the "highest benefit to the nation" and be based on the latest technology, market principles and investment promotion. This made it mandatory that the most efficient exploration and development, management policy and plans be sought, and that any policy that does not lead to achieving the highest benefit, revenue and fringe benefits to the nation is unacceptable.

- The KRG has already granted some 49 explorations and developments (E&D) rights to mini IOCs (with the exception of a few introduced recently) based on the PSA model, outside of the country's strategic policy.

- The Federal government granted some 14 Service contracts hurriedly in a Tsunami-like race, covering 3/5 of Iraq's proven reserves.

- The petroleum draft law was based on Articles 111 and 112 seen in the light of Article 2, 49, 109 and 110 of the Constitution, which broadly defines the authorities and responsibilities of the Federal and Provincial authorities within the petroleum sector.

- Article 110 tasks the Federal government exclusive powers, among others, of formulating fiscal and customs policy, and regulating commercial policy across regional and governorate boundaries.

The struggle over power between KRG and the Central government has denied the country of a Constitutional Review and stalled the draft Petroleum Law.

2.5.1 Objective of the Petroleum Law

- The draft Petroleum Law's overall objective is to optimise the oil and gas exploitation, maximize return and unite the country.

- It aims at uniformity of plans and policy throughout the country. It provides prior consultation with the Provinces. Decision-making at the Centre involves the participation of the Provincial Regions and Governorates.

- Supervision of oil and gas operations is shared between the Provinces and Ministry. The decision making process has checks and balances to enhance transparency and anticorruption practices.

- The draft also broadly defines the authorities and responsibilities of the Federal government in consultation with the Provinces. All model contracts are required to honor the following five main principles:
    - National control.
    - Ownership of resources.
    - Optimum economic rent to the country.
    - Appropriate return on investment to the investor.

- Reasonable incentives to the IOCs for ensuring solutions which are optimal to the country in the long-term related to i.a., improved and enhanced recovery, technology transfer, training and development of Iraqi personnel, optimal utilisation of the infrastructure and environmentally friendly solutions.

For elucidation: national control is a must and supervision and audit are its vital components; ownership of the oil and gas remains in the nation or state until point of export; optimum return to the nation; return to investing contractor in the region of 10-15% IRR but rarely exceeds 20% and added incentives are justifiable as illustrated.

3. How?

Having explained why Iraq oil's has been a target, I will move on to explain the How?
As I have said, events speak for themselves: 49 PSAs cover the bulk of the Kurdistan region and 3/5 of Iraq's reserves are committed and the power struggle between Erbil and Bagdad continues.

3.1 Erbil PSAs:

Erbil enacted unilaterally some 49 oil and gas exploration and development PSA agreements in areas within and beyond the governorates of the Kurdistan region. Among the many shortcoming of these agreements are:

- The PSAs were negotiated agreements on a non-competitive and non-transparent basis and were not published until years later, perhaps not in full even then.

- They grant a high profit share in the production stream, which amounts to windfall profit to the companies. Libya has managed the grant of as low as 7% in their PSAs a few years ago. Today, during the prevailing oil prices which are in the region of $100 per barrel, and Iraq's low oil finding, low capital investment costs, the oil profit share for a developed field is as low as 1-2%, which may go as high as 5-10%, as the capital investment cost doubles or triples, as the case might be in exploration areas.

- They provide high-level front-loading expenses (speedily and early) at 50% or more in a few cases. PSAs traditionally allow a production stream of 10 to 20% and seldom more than 30% towards payment of contractor costs, unless in areas of very low exploration prospect.

- The agreements do not contain the important Local Content clause. Local Content would oblige the contractor to share with local enterprises the execution of 51%, as in Iran or Russia and even 70% of the contract exploration and development operations, as in Norway. It ensures the transfer of management and technology know-how and retains wealth in the country. A local content requires the IOCs and INOC alike to parcel part of its obligation in a subcontract to an Iraqi firm by way of retaining wealth in the country and encouraging the building of local private market in addition to transfer of managerial and technical know-how.

  Iraqisation of the employees of a foreign enterprise is required in the country's employment laws and regulations as in almost all sovereign countries. It should also be realized that to iraqise to the limit of 95% would still leave vital technical and managerial decisions in the hand of the 5% foreign management. I had seen it being done during the concession era by the IPC and Associated Companies of MPC and BPC.

- Above all, KRG agreements are incompatible with the Constitution and do not conform to and lack Federal parliamentary approval.

3.2 Baghdad Service Contracts

The Central Government has adopted a Service Contract model applicable to exploration and/or development of oil and gas as follows:

- Producing Field Technical Service Contract (PFTSC) applied to oil producing fields such as Rumaila and Zuber, which have been producing for a few decades, under Round 1 & 2, with a view to further production capacity development and to improve and enhance recovery.

- Oilfield Service Development and Production Contract (OSDPC) applicable to discovered fields, which are partially or not yet developed.

- Gas Field Service Development and Production Contract (GSDPC) applicable to developed gas-producing fields, which granted 4 gas fields.

- Service Exploration and Production Contract (SEPC) applicable to new exploration areas, mainly for gas development, of which 2 contracts have been enacted.

KRG took the initiative to a unilateral decision to manage oil and gas resource within the Region and beyond into the contested areas without reference to the Central government, National Parliament, or the MoO, forcing the government to execute its own speeded oil development policy at unprecedented high production target, as if in a racing exercise with total disregard to Law 84 of 1985, 'The Hydrocarbon Preservation Law', and contributes to inefficiency and lack of transparency. The law requires economic and technical feasibility of planned projects prior to their tendering and execution. It is indeed strange to see that market studies has recently been done, and seemingly at the initiative of Cabinet's advisory team.

- In conformity with the constitution and the MoO's own draft Petroleum Law, it started negotiating a Technical Support contract with IOCs only to abandon it after many months of negotiations, when it reached finalisation. It turned to a foreign consulting firm (believed to be owned by an American service contractor with interests in Iraq) on the basis of the MoO's own internal research and discussions and not on a competitive tendering basis. A Technical Support model contract for producing oil or gas fields was prepared, one assumes by the consulting firm, to meet the MoO's objectives.

- The government has already enacted 14 PFTSC and OSDPC, of which 12 contracts committed some 82 Bb of oil reserves to develop production capacity of 12-13.5

mbpd, under a competitive and credible tendering process but which have not been published in full.

- The service contract model is unique, in the sense that it is a long-term contract (20-25 years) and calls on the contractor to provide the capital investment, while service contracts traditionally are for a short-term duration (few years, 1-5) and are financed by the government (in cash or loans).

Among the shortcomings of the service contracts' terms and condition are:

- The model contract turns out to be a hybrid model of service and production sharing principles. It adopts a PSA decision-making process, which is the very principle that differentiates the PSA agreement from the Service contract! The latter contract model preserves the sovereignty of the State by retaining decision-making power, while the former shares decision-making with the contractor (in joint committees of government and the company). In this Iraqi case, the contractor is in the meantime the investor, as in the case of the PSA, and hence the company becomes entitled to share in the decision-making process.

- The grant of right has been given to the cheapest proposed offer at or near a magical figure of/or in the region of $2. This is not to say that $2 remuneration per barrel built capacity is not adequate or too high or too low. A $2 remuneration in the case of the Rumaila field, in accordance to our in-house economic feasibility calculations, provides the company some 30% discounted rate of return (IRR) on their investment, on account of the 50% front loading of the company's low capital expenses (around $2 per barrel) and a 2-year payout (the period during which the company returns its capital investment). This means that the company's future capital investment would be paid back the same year, as if it were operating costs.

- It is for these reasons, one wonders why the government had not adopted what it had initially intended, the traditional technical support contract, and retained the decision-

making as the sovereign. After all the government (in accordance to the 50% loading of cost) had to pay the investment yearly, and not over stretched years. It may sound unbelievable that the traditional concession agreement pays the capital investment back in 10-20 years and some PSA models still pay back similarly through a system of amortization and depreciation. One wonders why when the investment per barrel is of such low percentage (order of 1-2%) of the return of some $100 crude oil price which may never fall below $50 price at a time when the government had readily legislated to pay (with no criticism in this respect) up to $4 per barrel produced to the producing province!

- The government encouraged the development of high oil plateau levels, which are not necessarily consistent with optimum recovery or lowest unit costs, which is most likely beyond the market required demand

- The contracts provide high 50% front-loading expenses, which has the disadvantages explained above. It also pays remuneration per barrel, which increases as cost rises, encouraging gold plating procurement; a practice, which encourages purchasing the most expensive, instead of the right quality for the right price. It can be averted in the present negotiation with the IOC by setting a proviso, to the above high expensing percentage, such as: not to exceed the contract profit return element of some 5-10%, to be decided from trials on the economic feasibility calculation.

- The grant of right is given to the bidder of the lowest remuneration at/or around $2 without prior assessment of the proposed oil field development plan to ensure that the plan achieves optimum oil recovery at the least unit cost, which the tender specification and process should seek to have.

- The contracts provide long (20-25 years) durations for a service contract. As mentioned above, this is unusual practice particularly for fields where the services are confined to the further development of these producing fields, which the Iraqis have been managing for many years. In such case, technical support contracts over a few

years would have been a better choice to provide the transfer of the latest state of the art technology and management know-how, which Iraqi fields and Iraqi management need.

- These Central Government service contracts share with KRG agreements serious drawback of not having a Local Content clause, nor the approval of the national Parliament, which is the only and ultimate authorized representative of the nation.

- The Central Government contracts, however, have planned ambitious though vital role of placing Iraq and its oil on the wide path of meeting almost half of the total global increased annual oil demand. However, this vital role for the nation and the world, would regretfully require political stability in addition to a further cost beyond the readily apparent remuneration, capital and operating expenses and it may well prove to be beyond the present government embryonic institutions and human resources to cope with, manage, supervise and audit efficiently.

- **Is It Wise?**
- Iraq is a founding member of OPEC and rightly adopts a policy of crude oil price stabilization and conservation. The present open exploration and production policy under contracts employing IOCs' investment, technical and management support on fee basis per barrel produced would create the problem of having to pay IOCs fees if and when production is capped below the incremental built production capacity. Iraq would have to pay penalties to IOCs for their unproduced capacity to live under OPEC policy of market stabilisation policy and quota system. No doubt, Iraq quota in OPEC cannot under any circumstances accommodate such ambitious export rate even under the most bullish future market. As such it is unwise policy, unless Iraq is catering for future global emergency of catastrophic dimension and/or planning to play the role of a swinger competing with Saudi Arabia on the wrong assumption that Iraq economy can accommodate such role.
- Planning oil field development for production capacity growth ought to be carried out on a composite master plan, which sets uniform development specifications and

examines the capacities of the discovered and producing fields (including each and every producing formation within each field) from a technical and economic feasibility point of view. In the mean time, it should take into consideration Iraq's economic development needs and accordingly plans. This necessitates centralization of policy and planning. The Iraq constitution, despite its weakness did state the requirement for common oil and gas strategic plans and policy and optimum return to the nation of this generation and the many generations to come for this undivided common oil and gas asset.

- In this light, the existing Service Contracts and PSAs ought to be put to a rigorous examination to ensure conformity with these criteria.

This will bring us to the conclusion

4. Conclusion

Whereas the objective of the first draft Petroleum Law by the MoO was to optimise the oil and gas exploration and development, maximize return and unite the country and nation through uniform plans and policy, its modification by the Ministerial committee under conditions of failed state, dominated by ethno-sectarian interests, and under pressures within and without, de-railed the Law from those of its principal objectives and removed its checks and balances controls.

Whereas the constitution makes the oil and gas the property of the whole nation, neither the PSAs nor the Service Contracts have the approval of the only representative of the nation, the Federal Parliament.

Whereas the constitution requires the application of uniformity of plans and policy and optimum return to the nation, the two-track development by the KRG and Central government, violates article 112 Second in the new Constitution, and Law 84 of 1985, 'The Hydrocarbon Preservation Law', and contributes to inefficiency and lack of transparency. Had this law been respected the nation would not have had to face the present review, renegotiation and accompanied waste in time and assets.

Whereas the constitution demands a government in the service of the whole nation, there is still a lack of provision of the very basic services and a deadlock on many draft laws and regulations, including the most vital, the Constitutional Review and the Petroleum Law. These are symptomatic of the divisive and destructive elements, which characterize Iraq's failed state condition today.

Whereas the Constitution demands that management of the oil and gas assets produce the optimum return to the nation for this generation of citizens as well as for future generations. Never in the history of the global oil industry have so many reserves been committed to IOCs in such a short duration. The planned capacity of 13+ mbpd is beyond Iraq and IOCs to achieve by 2017. While the global market demand calls for around 6 mbpd by 2020 and 8 mbpd by 2035 Iraqi production, according to the IEA's 2012 study, the Iraqi government seems to insist on its own plans for a marginal insufficient reduction, which is likely to result in having to freeze valuable high investment and despite incurring potential payment of penalties of remuneration to IOCs for the full built production capacity regardless of being produced or not.

The present re-negotiation to lower the target plateaus is a step in the right direction. However, recent announcements indicate that the modified target plateaus remain beyond the likely global market demand and that the nation is bound to suffer the cost, for mistakes not of his making, of upward adjustment of the remuneration and/or extension of their contracts' duration in compensation to IOCs.

Can we trust that the KRG and other players return to the principles of a united nation, governed in peace and stability, adopting a Federal model which enjoys the advantages of decentralization without the disadvantages of divisive ethno-sectarian politics?

Can we Iraqis contemplate returning to a healthy state where the government is capable of managing the affairs of the country in the best interests of all its people?

Only then, a sound Petroleum Law would have the chance of a healthy revival and non-politicised professionally informed amendments made within the framework of enlightened Constitutional reform. Otherwise, we are continuing to surrender the nation's assets to the benefits of the major consumers, their IOCs and government powers. And government transparency, true democracy and human rights, which are essential to promote dialogue with and between decision makers and the nation's technocrats, call for government stability free from ethno-sectarian practices, "*Muhasasa*", and corruption.

Oil and gas are Iraq's most valuable assets. Its is for us, Iraqis, to decide our own plans and policies, to protect our best interests in a turbulent new world order where protective boundaries are removed and life is for the strongest and the fittest.

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