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Michael A.G. Bunter and B and R Co

December 2004

A must-have for anyone serious-minded  
about doing future business in Iraq

# IRAQ:

the petroleum exploration and production handbook  
Second Edition (December 2004)

by  
**Michael A.G. Bunter**

with a foreword by  
Professor Thomas W. Wälde

**This book provides an authoritative evaluation of Iraq as an E and P petroleum investment opportunity. It describes for the International Oil Companies the attractiveness to inwards investment of Iraq in terms of its technical, legal/contractual, fiscal and geopolitical prospectivity.**



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## Introduction

### Michael Bunter

*This book has been written by an ex-oil company petroleum geologist with over thirty years oilfields experience.*

*Michael Bunter has been involved in exploration and production in the Arabian Gulf and has written a book on petroleum licensing. He addresses the technical and commercial issues of the Iraq petroleum sector in language familiar to oil company management and to technical specialists.*

### Thomas W. Wälde

*Professor & Jean-Monnet Chair  
CEPMLP/Dundee and Principal,  
Thomas Wälde & Associates*

### Introduction

This handbook is directed towards the International Oil Companies, IOCs, who are contemplating investment in a future Iraq, post-Saddam. The approach is to describe the investment opportunities likely to become available in the upstream in the quite near future as a renewed Iraq gets back on its feet. It will describe the downstream work which will be needed before the upstream sector will be able to take advantage of the available opportunities. This downstream work will include the rehabilitation needed on pipelines particularly but also on export terminals. Much engineering work will also be needed on tank farms, refineries etc. so that the Iraqi market can be supplied with much-needed petrol, diesel and paraffin for local domestic use. Oil well fires will need to be extinguished.

Despite the opportunities described here the oil companies should be aware that the primary task for the Iraqis will be to get their country working again after the present conflict. Their attention will be focussed on the relief of distress and the provision of food and water for their people. They will be less concerned initially with talking to foreign oil men who come seeking deals. Clumsy approaches to the wrong people will cause resentment for years to come. It will not be the swiftest who win the race but the most patient.

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What direction, events will take? What is to be the role of the Iraq National Oil Corporation? What form of federalism, if any, might develop in the new Iraqi state? What control might the various sub-federal institutions have on their own petroleum resources. What of any future influence of the Islamic (Sharia) Law on petroleum policy and legislation? All these matters are dealt with in this authoritative handbook.

The attractions of Iraq to the modern petroleum explorer are multi-fold provided that the sensitivities of the Iraq people can be accommodated. This will mean that any potential foreign investor in such a strategic industry as the upstream oil sector will have to tread carefully and be prepared to expend time on building personal relationships with Iraqis in the existing oil sector. Any attempts at heavy-handed domination by outsiders will jeopardise the elevated expectations of the International Oil Companies.

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## Second Edition

### Second Edition

It may seem premature to comment on any new developments in the Iraqi petroleum sector since security has by no means been restored to the country. However recent press reports suggest that the International Oil Companies, the IOCs, do not take an exclusively negative view of future Iraqi oil developments and have been prepared to plan for the future. Not a few companies are now involved in discussions with the Iraqi authorities about full-cycle E and P projects and also about production and rehabilitation deals. For this reason Alexander's Gas and Oil Connections ([www.gasandoil.com](http://www.gasandoil.com)) and Oil, Gas, Energy Law, OGEL in association with Michael A G Bunter and B and R Co have pleasure in announcing that the Second Edition of "Iraq: the Petroleum Exploration and Production Handbook" is now available for subscribers. This new and enlarged edition is offered to new subscribers at a reduced price and is provided free-of-charge to existing subscribers.

Mr Bunter did anticipate, in the First Edition of his Handbook, a degree of lawlessness to be expected in Iraq after "mission accomplished" although he did not predict with any certainty (but then nor did anyone else) the present level of insurgency. Not only that, his views on a likely tripartite federal status for Iraq now seem likely to be fulfilled. The latter, if the various functions of the Iraq National Oil Company, INOC, are devolved from Baghdad, could come to have a profound effect on the Iraqi petroleum sector and on future plans to license acreage to the IOCs. Mr Bunter discusses this in detail in his Chapter Six, the Geopolitics of Iraq and the Middle East and in this new edition.

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Mr Bunter's Handbook now includes a completely new Chapter Nine, nearly fifty pages long, which was written in November 2004 well over a year after "mission accomplished". It incorporates a good deal of information, newly obtained, on the upstream, midstream and downstream of the Iraqi gas sector. One topic covered in some detail is the plan for the export of Iraqi gas to Turkey. Also provided is post-war material on the rehabilitation and upgrading of the midstream and downstream oil sector, on some full-cycle E and P projects and also new material on the legal situation of the petroleum upstream. The latter includes Iraqi government opinion on the ownership of petroleum reserves. There is also an up-to-date legal discussion on the pre-war petroleum transactions and some information about post-war petroleum operations including the post-war activities of foreign oil companies in Iraq. Much information has also been gleaned on the likely direction of future Iraqi oil policy including its upstream petroleum licensing plans. Last but very definitely not least is a long discussion on the security situation that now confronts the country and its implications for future foreign investment.

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*In this petroleum exploration and production handbook Mike Bunter provides an insight in and a background to the opportunities arising in Iraq. His experience in the matter and his succinct, concise and reader-friendly style of writing guarantees for interesting reading and will very much increase the chances for those approaching this highly promising but also sensitive situation.*

### **Executive Summary**

- ◆ about the author

### **Introduction**

#### **Chapter One, broad regional history of the Arabian Gulf basins**

- ◆ the Arabian Plate ◆ the Arabian Gulf Mega-Basin ◆ the tectono-stratigraphic evolution of the Arabian Gulf petroleum systems ◆ Mega-sequence One, the Proterozoic ◆ Mega-sequence Two, the Cambrian through the Silurian ◆ Mega-sequence Three, the Permo-Carboniferous ◆ Mega-sequence Four, the Mesozoic ◆ Mega-sequence Five, the Cenozoic

#### **Chapter Two, Exploration History of Iraq**

- ◆ the discovery of oil at Chia Surkh and at Masjid-i-Suleiman in the early years of the twentieth century ◆ the pre- First World War efforts of the Turks, British and the Germans ◆ Deutsche Bank and the Anglo-Persian ◆ the Ottoman Firman of 1914 ◆ the events of the First World War ◆ the Treaties of Versailles and of Sevres ◆ the creation of modern Iraq ◆ the negotiations between the Iraq government and the Anglo-Persian ◆ the incorporation of the Iraq Petroleum Corporation and its shareholding ◆ discovery of oil at Kirkuk ◆ further exploration by the IPC ◆ the world politics of the fifties and the nationalisation of 1972 ◆ the National Iraqi Oil Corporation and the involvement of the International Oil Companies, the IOCs ◆ the years of isolation and the Iran-Iraq War ◆ the French, the Russians and the Chinese step in ◆ the First and Second Gulf Battles ◆ today's world

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◆ the Iraqi petroleum systems ◆ Mega-sequence One, the Proterozoic ◆ the petroleum potential of Mega-sequence One in Iraq ◆ Mega-sequence Two, the Cambrian through Silurian ◆ the petroleum potential of Mega-sequence Two in Iraq ◆ Mega-sequence Three in Iraq, the Permo-Carboniferous ◆ the petroleum potential of Mega-sequence Three in Iraq ◆ Mega-sequence Four, the Mesozoic ◆ the petroleum potential of Mega-sequence Four in Iraq ◆ Mega-sequence Five, the Cainozoic ◆ the discovery of Kirkuk field and the petroleum potential of Mega-sequence Five

### **Chapter Four, Reserves and Production History**

◆ field names and productive horizons, markets ◆ exports

### **Chapter Five, Petroleum and other infrastructure**

◆ pipelines ◆ refineries ◆ tank farms ◆ export terminals ◆ war damage ◆ reconstruction needed ◆ future rehabilitation contracts

### **Chapter Six, The Geopolitics of Iraq and the Middle East**

◆ the oldest civilisation in the world ◆ the Caliphate and the importance of Iraq in Islam ◆ Mesopotamia and its place in the modern Middle East ◆ the creation of modern Iraq and its governance ◆ the conflicts during and between the First and the Second World Wars ◆ the Iraqi population: Arabs and Kurds, Sunni and Shia ◆ the national minorities: the Turkmen, the Assyrians, the Chaldeans ◆ future federal developments in Iraq ◆ the geopolitics of Iraqi oil

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### **Chapter Seven, Petroleum Legislation and Agreements in Iraq**

◆ including prior contracts ◆ constitutional developments and Sharia Law ◆ the early Iraq-APOC- IPC agreements ◆ renegotiation and relinquishment ◆ nationalisation and the role of the Iraq National Oil Corporation ◆ modern agreements ◆ a draft model agreement

### **Chapter Eight, the future petroleum prospectivity of Iraq**

A look into the future ◆ Sovereignty over and ownership of petroleum and minerals in Sharia law ◆ Some mining agreements in the first years of Islam ◆ Famous Middle Eastern petroleum concessions ◆ Islamic view of petroleum depletion ◆ Petroleum licensing in the Islamic state ◆ A new market for Iraq: the European Union and the Mediterranean Basin ◆ Energy developments after the Second World War ◆ Events of the 1970s and the 1980s ◆ 1990s and onwards ◆ Importance of Turkey to Europe ◆ Conclusions ◆ References

### **Chapter Nine, Iraq after the January 2005 elections**

**[new chapter, added December 2004]**

Recent developments in the Iraqi petroleum sector ◆ An up-date on Iraq's gas sector ◆ Some new data on Iraq gas production and transportation ◆ Future developments in Iraqi gas ◆ The security situation in Iraq and in its neighbours ◆ Future rehabilitation contracts in Iraq ◆ The legal status of the petroleum negotiations conducted by the Saddam regime ◆ Future political developments in the country ◆ A future Iraqi upstream petroleum licensing policy ◆ References

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## Quick facts

### Order this handbook!

*Make sure you get the best chance to do the right thing at the right time in the right way.*

*Be well-informed about the enormous opportunities arising in this country with its abundant resources but battered infrastructure.*

*Be also well-informed about the sensitivities involved and increase your chances by knowing about them and acting accordingly*

### The obvious advantages of Iraq to the IOCs are.....

- its favourable situation within the Arabian Mega-Basin, the world's most prolific petroleum province
- its long history of successful exploration and production from the very earliest days of the international oil industry.
- its very great level of low cost reserves at the Proven and Probable level. Reserves at this level may be booked by the International Oil Companies, IOCs to the advantage of their share price *provided that they can establish title to them*
- its low cost of production, probably only a dollar or two per barrel
- the high flow rates of its wells, several thousand barrels per day, compare Kuwait
- a pipeline infrastructure particularly to the Mediterranean coast via Syria that may be available in the near future to a foreign upstream oil company
- the availability of much attractive acreage which has not since the nineteen seventies been subjected to modern exploration technology

There is also a well-trained resident work force of skilled petroleum professionals trained in European and North American universities. The State Oil Company, the Iraq National Oil Company is staffed by well-qualified and dedicated petroleum professionals.

**Order the Handbook now!**

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