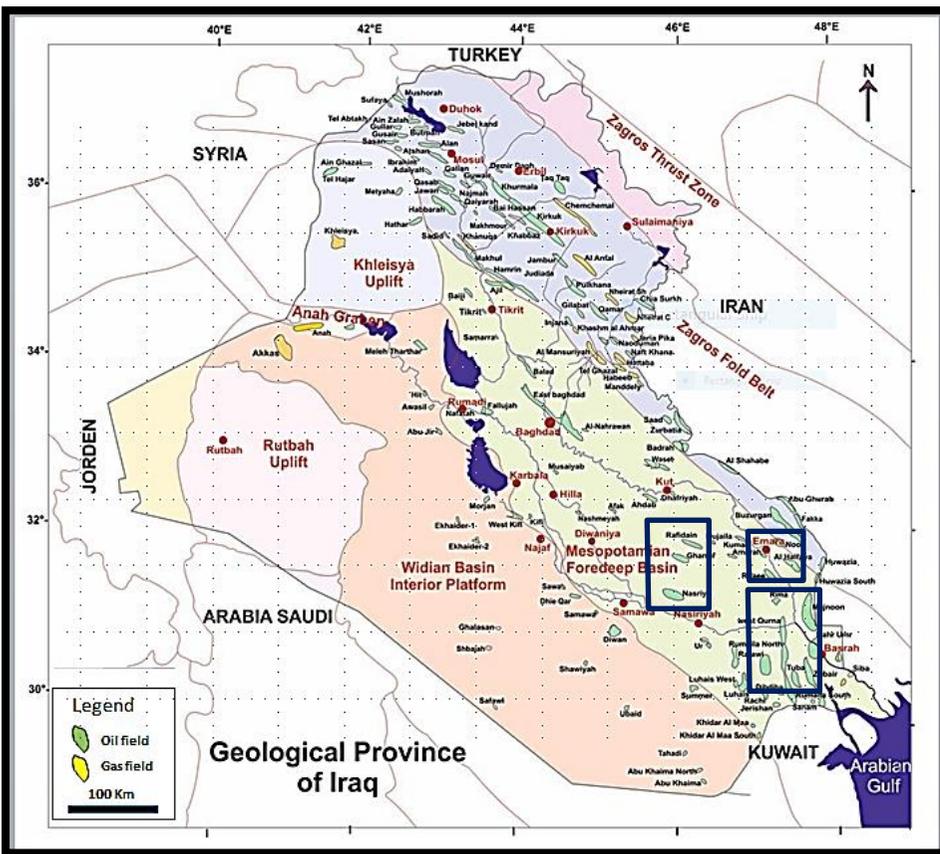


# Target Exploration

Energy Geosciences Research & Development



## Typical Giant Oil Fields of Southern

# IRAQ

Target Exploration Report Tar19

## Summary

The subjects of this report are eleven "appraised" giant and supergiant oil and gas fields of [southern Iraq](#), they are: they are grouped into [three clusters of appraised fields](#); **Southern:** (Majnoon, Nahr Umr, Ratawi, Tuba and West Qurna fields), **Eastern:** (Amara, Halfaya and Noor (Nur) fields) and **Western:** Gharaf, Nasiriya, Rafidain (Abu Amoud) fields.

No	Field	Reservoir	Res. Depth (Meters)	Res. Lithology	Res. Thickness (Meters)	Res. Porosity	Res. Permeability	Gross Pay (Meters)	Net Pay (Meters)	Res. Pres. (PSI)	Res. Temp (°C)	Min °API	Max °API	GOR (M3/STBO)	Free Gas/Cond	Assoc Gas/Cond	Water Cut (%)	Drive Mech.	Reserves (MMSTBOIIP)	
1	Majnoon																			
2	N. Umr																			
3	W. Qurna																			
4	Tuba																			
5	Nasiriya																			
6	Rafidain																			
7	Ratawi																			
8	Halfaya																			
9	Noor																			
10	Amara																			
11	Gharraf																			
Total																				

## The Report

The goals of the study were to:

1. Develop an understanding of production and exploration potentials of the listed fields.
2. Estimate their economic significance.
3. Identify their production and development problems.
4. Provide a structural contour and facies maps of the primary reservoirs-seals formations.
5. Compile all available reservoir data in Excel sheets, including the data in the above datasheet.

The fields are subsurface anticlinal traps with variable times of structural growth. They are grouped into three areas, and ranked according to the volume of proven reserves, production capacity and likelihood of discoveries within the field's boundaries and surrounding areas.

Forty proven producible reservoirs encountered in the 11 fields, from the Yamama to the Ghar. The Field sizes were calculated according to trapezoidal volume estimation of proven STOIP reserves.

### **The Southern Fields' Cluster Area:**

This area (between Longitudes. 47.00-48.00 E. and Latitudes. 30.00-31.30 N.) encompasses the Ratawi, Tuba, Nahr Umr, West Qurna and Majnoon oil fields is economically attractive production/exploration area. The area has proven but partially explored deep potential, several shallow un-appraised or poorly developed reservoirs and few seismic anomalies.

### **The Western Fields' Cluster Area:**

This area (between Longitudes. 45.30-46.30 E. and Latitudes. 31.00-32.00 N.) includes Rafidain (Abu Amoud), Gharaf and Nasiriya oil fields. It is ranked as economically attractive production/exploration area among the three areas under consideration. The Western area has deep and shallow potentials.

### **The Eastern Fields' Cluster Area:**

This area (between Longitudes. 46.30-47.30 E. and Latitudes. 31.30-32.00 N.) includes Noor (Nur), Halfaya and Amara oil fields. The Eastern area has deep potential, shallow potential and undrilled seismic anomaly.

## **Report Chapters**

1. Summary
2. Lists of Figures and Enclosures
3. Introduction
4. Spreadsheet of Field Data.

5. Reservoir Geology of Southern Fields (Ratawi, Tuba, Nahr Umr, West Qurna and Majnoon)
6. Reservoir Geology of Western Fields (Rafidain, Gharaf and Nasiriya)
7. Reservoir Geology of Eastern Fields (Noor, Amara and Halfaya)
8. Conclusions and Recommendations
9. References
10. Enclosures

## Maps, Sections and Figures

Figure 1: Location map of studied fields

Figure 2: Typical stratigraphic column and proven hydrocarbon reservoirs of the studied fields in Southern Mesopotamia.

Figure 3: Structural cross-section of Ratawi-Tuba-Nahr Umr-West Qurna-Majnoon Fields.

Figure 4: Lap-out and structural contour map of top of Mishrif Formation.

Figure 5: Isopach-facies map of Mishrif Formation.

Figure 6: Lap-out and structural contour map of top of Nahr Umr Formation.

Figure 7: Isopach-facies map of Nahr Umr Formation.

Figure 8: Lap-out and structural contour map of top of Zubair Formation.

Figure 9: Isopach-facies map of Zubair Formation.

Figure 10: Lap-out and structural contour map of top of Yamama Formation.

Figure 11: Isopach-facies map of Yamama Formation.

Figure 12: Composite cross-section of reservoir and fluid parameters of Southern Fields.

Figure 13: Structural cross-section of Nasiriya-Gharaf Rafidain Fields.

Figure 14: Lap-out and structural contour map of top of Mishrif Formation.

Figure 15: Isopach-facies map of Mishrif Formation.

Figure 16: Lap-out and structural contour map of top of Nahr Umr Formation.

Figure 17: Isopach-facies map of Nahr Umr Formation.

Figure 18: Lap-out and structural contour map of top of Zubair Formation.  
Figure 19: Isopach-facies map of Zubair Formation.  
Figure 20: Lap-out and structural contour map of top of Yamama Formation.  
Figure 21: Isopach-facies map of Yamama Formation.  
Figure 22: Composite cross-section of reservoir and fluids parameters of Western Fields.  
Figure 23: Structural cross-section of Amara-Noor- Halfaya Fields.  
Figure 24: Lap-out and structural contour map of top of Mishrif Formation.  
Figure 25: Isopach-facies map of Mishrif Formation.  
Figure 26: Lap-out and structural contour map of top of Nahr Umr Formation.  
Figure 27: Isopach-facies map of Nahr Umr Formation.  
Figure 28: Lap-out and structural contour map of top of Zubair Formation.  
Figure 29: Isopach-facies map of Zubair Formation.  
Figure 30: Lap-out and structural contour map of top of Yamama Formation.  
Figure 31: Isopach-facies map of Yamama Formation.  
Figure 32: Composite cross-section of reservoir and fluid parameters of Eastern Fields.  
Figure 33: Prospectivity map of Southern Fields area.  
Figure 34: Prospectivity map of Eastern Fields area.  
Figure 35: Prospectivity map of Western Fields area.

## Enclosures

Enclosure 1: Location map of studied fields  
Enclosure 2: Typical stratigraphic columns of the studied areas.  
Enclosure 3: Structural cross-section of Ratawi-Tuba-Nahr Umr-West Qurna-Majnoon Fields.  
Enclosure 4: Lap-out and structural contour map of top of Mishrif Formation.  
Enclosure 5: Isopach-facies map of Mishrif Formation.

Enclosure 6: Lap-out and structural contour map of top of Nahr Umr Formation.  
Enclosure 7: Isopach-facies map of Nahr Umr Formation.  
Enclosure 8: Lap-out and structural contour map of top of Zubair Formation.  
Enclosure 9: Isopach-facies map of Zubair Formation.  
Enclosure 10: Lap-out and structural contour map of top of Yamama Formation.  
Enclosure 11: Isopach-facies map of Yamama Formation.  
Enclosure 12: Composite cross-section of reservoir and fluid parameters of Southern fields.  
Enclosure 13: Structural cross-section of Amara-Noor-Halfaya Fields.  
Enclosure 14: Lap-out and structural contour map of top of Mishrif Formation.  
Enclosure 15: Isopach-facies map of Mishrif Formation.  
Enclosure 16: Lap-out and structural contour map of top of Nahr Umr Formation.  
Enclosure 17: Isopach-facies map of Nahr Umr Formation.  
Enclosure 18: Lap-out and structural contour map of top of Zubair Formation.  
Enclosure 19: Isopach-facies map of Zubair Formation.  
Enclosure 20: Lap-out and structural contour map of top of Yamama Formation.  
Enclosure 21: Isopach-facies map of Yamama Formation.  
Enclosure 22: Composite cross-section of reservoir and fluid parameters of Eastern fields.  
Enclosure 23: Structural cross-section of Nasiriya-Gharaf Rafidain Fields.  
Enclosure 24: Lap-out and structural contour map of top of Mishrif Formation.  
Enclosure 25: Isopach-facies map of Mishrif Formation.  
Enclosure 26: Lap-out and structural contour map of top of Nahr Umr Formation.  
Enclosure 27: Isopach-facies map of Nahr Umr Formation.  
Enclosure 28: Lap-out and structural contour map of top of Zubair Formation.  
Enclosure 29: Isopach-facies map of Zubair Formation.  
Enclosure 30: Lap-out and structural contour map of top of Yamama Formation.  
Enclosure 31: Isopach-facies map of Yamama Formation.

- Enclosure 32: Composite cross-section of reservoir and fluids parameters of Western fields.
- Enclosure 33: Prospectivity map of Southern Fields area.
- Enclosure 34: Prospectivity map of Western Fields area.
- Enclosure 35: Prospectivity map of Eastern Fields area.



**This report is immediately available from**

# *Target Exploration*

**[Click here to order your copy](#)**

**For further information, contact:**

***M. Casey, Target Exploration Consultants, 65 Kenton Court, London W14 8NW, UK. Tel.:***

**(+44) (0) 207 371 2240**

**[target@targetexploration.com](mailto:target@targetexploration.com)**

**[www.targetexploration.com](http://www.targetexploration.com)**

[Home](#)

[About Us](#)

[Experience](#)

[Services](#)

[Training](#)

[Conferences](#)

[Publications](#)

[Order Form](#)

[News](#)

[Careers](#)

[Contracts](#)

[Downloads](#)

[Uploads](#)

[Links](#)

[Rep/Software](#)

[Contact Us](#)



22-02-2022