

## **GENEL ENERJI ACTIVITIES IN IRAQ**

Genel Enerji is a registered Turkish company as an affiliate of Cukurova Holding Group. Cukurova Group is among Turkey's largest industrial and commercial conglomerates with numerous investments ranging from telecommunications, energy, media, automotive, textiles, transportation and information technology services.

Genel Energy is a signatory to a Production Sharing Agreement with the Interim Joint Regional Administration of KRG represented by Regional Governorate (Sulaimaniyah) for the exploration and development of the Taq Taq Oil Field. The field was handed over to Genel Enerji on February 2003. On January 20, 2004; the Agreement signed between the KRG and Genel.

Genel Enerji signed a joint venture agreement with Addax Petroleum International Ltd (Addax International) on July 2005 to conduct exploration and development activities in Taq Taq project.

Genel Enerji and Addax formed Taq Taq Operating Company Ltd (TTOPCO) in March 2006 to conduct all petroleum operations under Taq Taq PSC on none profit basis. In TTOPCO, Genel Enerji has 55%, Addax Petroleum has 45% shares. Following the KRG Oil Law enacted on 8 August 2007, the final adaptations and amendments were made in the Agreement and the new Production Sharing Contract (PSC) was signed between Genel Energy International/Addax Petroleum and KRG on 26 February 2008. In the revised and amended PSC, the license area was extended to include the Kewa Chirmila exploration block.

Since February 2003, 8 appraisal and development wells were successfully drilled and completed. The new processing facilities have been established. The site activities continued without break even during the second gulf war.

In March 2009, Genel Enerji has been assigned 25% interest in the Tawke PSC, 25% interest in the Miran PSC, 40% interest in the Dohuk PSC, 20% interest in the Chia Shurkh PSC and 40% in the Barbahar PSC and received the rights in the PSCs with the above stated interests.

Genel Energy established wholly owned subsidiary, Taq Taq Petroleum Refinery Limited (TTPRC). TTPRC has obtained all necessary permissions and related documents to built and operate daily 60.000 barrel oil capacity refinery in compliance with the Petroleum Operations Agreement signed on 26 February 2008.

## **Comparison Oil Potential between Turkey, Iraq and KRG**

### **Turkey**

- Daily oil production : 42.000 bbl/d
- Daily oil consumption : 500.000 – 550.000 bbl/d
- The production/consumption ratio : %7
- Possible recoverable reserves : 260 -270 million barrels
- Total number of production wells : Approx. 750
- The oil gravity : between 12 to 34 API gravity

### **Iraq**

- Daily Oil Production in average : 2,2 million Barrels/day
- Number of Discovered Fields : 78 (6 Super Giant, 17 Giant, 20 major )
- Number of Developed Fields : 15 (40% of the proven fields)
- Proved Reserves : 115 Billion Barrels
- Possible Reserves : 200 Billion Barrels
- Probable Reserves : 250 - 300 Billion Barrels
- API Gravity range : 25-50 API degree

### **KRG**

- Oil Reserves : 40 – 45 Billion Barrels
- Gas Reserves : 100 -200 Trillion Cubic feet

### **Brief Info on Genel Enerji's Licenses:**

#### **Taq Taq Oil Field:**

- Oil in Place : 2.0 Billion Barrels
- Recoverable Reserve (3P) : 750 – 1.000 Million Barrels
- Estimated Peak Production : 180.000 Barrels/day
- Number of wells : 8 New + 3 old (drilled by NOC-Iraq)
- Flow Rates in wells : 17.000 – 44.240 barrels/day/well
- API Gravity : 46-48 API degree
- Distance to Kerkük Pipeline : 65 km
- Distance to Khurmala Facilities: : 80 km

- Distance to Turkish Border : 255 km
- Operator : TTOPCO
- Net profit oil to foreign contractor after Royalty,  
Government back in rights and Contractor's cost recovery : 12 %
- Aggregate Government take of profit from the project : 88 %

### **Kewa Chirmila Block**

- Oil in place : 300 Million Barrels
- Number of wells : 1 (under drilling)
- Operator : TTOPCO
- Net profit oil to foreign contractor after Royalty,  
Government back in rights and Contractor's cost recovery : 12 %
- Aggregate Government take of profit from the project : 88 %

### **Tawke Oil Field:**

- Oil in Place : 1.9 Billion Barrels
- Recoverable Reserve (3P) : 400-800 Million Barrels
- Daily Production : 60.000 barrels/day
- Number of wells : 14
- API Gravity : 23 – 27 API degree
- Distance to ITP : 50 km (tie-in pipeline is completed)
- West Dohuk Oil Structure is an additional potential to Tawke Oil Field (1.5 Billion Barrels Oil in place)
- Operator : DNO
- Net profit oil to foreign contractor after Royalty,  
Government back in rights and Contractor's cost recovery : 12 %
- Aggregate Government take of profit from the project : 88 %

### **Dohuk Exploration Block:**

- Oil in Place : 2.2 Billion Barrels
- Number of Wells : 0
- Operator : DNO
- Net profit oil to foreign contractor after Royalty,  
Government back in rights and Contractor's cost recovery : 11 %
- Aggregate Government take of profit from the project : 89 %

### **Miran Exploration Block** (\* this part is taken from the Press Release of Heritage Oil Ltd)

- Oil in Place : 2.3 – 4.2 Billion Barrels
- Recovery Factor : approx 50 % of the total in place
- Number of wells : 1
- Estimated Flow Rates : 10.000 – 15.000 barrels / day
- API Gravity : 27 API degree
- Operator : Heritage
- Net profit oil to foreign contractor after Royalty,  
Government back in rights and Contractor's cost recovery : 10 %

- Aggregate Government take of profit from the project : 90%

#### **Barbahar Exploration Block:**

- Oil in Place : 1.9 Billion Barrels
- Number of wells : 0
- Operator : Genel Energy
- Net profit oil to foreign contractor after Royalty,  
Government back in rights and Contractor's cost recovery : 10 %
- Aggregate Government take of profit from the project : 90 %

#### **Chia Surkh Exploration Block:**

- Oil in Place : 3.1 Billion Barrels
- Number of Wells : 7
- Operator : "Joint Operating Company" will be  
Established
- Net profit oil to foreign contractor after Royalty,  
Government back in rights and Contractor's cost recovery : 10 %
- Aggregate Government take of profit from the project : 90 %

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## **Glossory**

**API Gravity:** A measure of the weight of hydrocarbons according to a scale established by the American Petroleum Institute. Crude oils with higher values are lighter and tend to produce larger volumes of high-value lighter products in atmospheric distillation, which makes them relatively more valuable. Crude oil grades that are lower on the API scale tend conversely to be less highly valued because they produce smaller yields of lighter products.

**Barrel:** The volume of a barrel is equivalent to 42 US gallons or 159 liters

**Oil in Place:** Estimation of real amount of oil in a reservoir.

**Recovery Factor:** Ratio of recoverable oil and / or gas to estimated oil and / or gas in place in reservoir.