MINISTRY OF NATURAL RESOURCES | KURDISTAN REGIONAL GOVERNMENT

وەزارەتی سامانە سروشتیەکان | حکومەتی هەرێمی کوردستان

Monthly Report

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Issue 3
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2013

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Section 1

Crude Oil: Production & Refining

Crude Oil Production, Export & Refined Quantities

IOCs	Beginning Stock Tank (BOE)	Stock Tank Production (BOE)	Export via SOMO (BOE)	*Export via Trucking (BOE)	**Export via KRG Pipeline (BOE)	Local Sales (BOE)	Supplied to Main Refineries (BOE)	Use in the Field (BOE)	End Stock Tank (BOE)
DNO	295,997	1,644,268	0	0	0	1,452,110	162,427	0	325,728
HKN	317	0	0	0	0	317	0	0	0
Genel Energy	496	17,877	0	0	0	16,040	0	0	2,333
Gulf Keystone	30,295	215,322	0	184,365	0	47,147	0	0	14,105
Exxon Mobil	0	0	0	0	0	0	0	0	0
Taqa	0	0	0	0	0	0	0	0	0
Hunt Oil	0	0	0	0	0	0	0	0	0
Hess	0	0	0	0	0	0	0	0	0
Kalegran Ltd	0	0	0	0	0	0	0	0	0
Chevron	0	0	0	0	0	0	0	0	0
Afren	10,181	32,586	0	0	0	27,909	0	0	14,858
Oryx	0	0	0	0	0	0	0	0	0
Marathon Oil	0	0	0	0	0	0	0	0	0
OMV	388	0	0	0	0	0	0	0	388
Repsol	0	0	0	0	0	0	0	0	0
Gas Plus Khalakan	0	0	0	0	0	0	0	0	0
TTOPCO	115,476	1,492.385	0	283,325	89,188	69,519	1,062,966	0	102,863
KNOC	0	0	0	0	0	0	0	0	0
Talisman	0	0	0	0	0	0	0	0	0
Oil Search	0	0	0	0	0	0	0	0	0
Western Zagros	3,940	0	0	0	0	0	0	0	3,940
Gazprom	0	0	0	0	0	0	0	0	0
Dana Gas	26,498	614,380	0	459,168	0	156,848	0	0	24,862
Khurmala	44,042	2,176,307	0	0	0	472,886	1,703,001	0	44,462
Total SA	0	0	0	0	0	0	0	0	0
Komet Group	0	0	0	0	0	0	0	0	0
Total	**527,630**	**6,193,125**	**0**	**926,858**	**89,188**	**2,242,776**	**2,928,394**	**0**	**533,539**
Average Daily Rate	**NA**	**199,778**	**0**	**29,898**	**2,877**	**72,347**	**94,464**	**0**	**NA**

Table 1: See explainer on page 4 for definitions.

***Figures include Contractor share and Government share used for product swaps or product financing.**
****Currently in pipeline and storage (not sold).**

Crude Oil Production, Export & Refined Quantities Explainer

IOCs	**International Oil Company** (IOC) is the industry standard term used to describe foreign exploration and production companies. National Oil Companies (NOCs) also exist, such as Saudi Aramco (the NOC of Saudi Arabia). In general NOCs tend to only operate in their home country, however it is not unusual to see NOCs operating out of their home country.
Beginning Stock Tank (BOE)	Measured in Barrels of Oil Equivalent (BOE), the **Beginning Stock Tank** refers to the quantity in storage at the beginning of the month.
Stock Tank Production (BOE)	Measured in Barrels of Oil Equivalent (BOE), the **Stock Tank Production** refers to the quantity of oil or gas produced according to the stock tank meter.
Export Via SOMO (BOE)	Measured in Barrels of Oil Equivalent (BOE), **Export via SOMO** refers to the quantity of oil or gas exported through the **State Organisation for Marketing of Oil (SOMO)**. SOMO is part of the Iraqi Federal Ministry of Oil and manages all petroleum exports out of Southern Iraq.
Export Via Trucking (BOE)	Measured in Barrels of Oil Equivalent (BOE), **Export via Trucking** refers to oil exports out of the Kurdistan Region through trucks, under the current crude oil for products swaps arrangement through Turkey.
Export Via KRG Pipeline (BOE)	Measured in Barrels of Oil Equivalent (BOE), **Export via KRG Pipeline** refers to exports through the newly commissioned KRG pipeline to Turkey.
Local Sales (BOE)	Measured in Barrels of Oil Equivalent (BOE), **Local Sales** refers to the quantity of oil and gas sold domestically to local buyers. Locally purchased crude oil is processed in country at Topping Plants, and the majority of the refined products are consumed locally (except for Naphtha and Fuel Oil which are sometimes exported through Iran).
Supplied to Main Refineries (BOE)	Measured in Barrels of Oil Equivalent (BOE), **Supplied to Main Refineries** refers to the quantity of oil and gas supplied to the MNR monitored refineries; Kalak (operated by Kar Group), Bazian (operated by Bezhan Pet) and Tawke (operated by DNO). Almost all of the refined products from the main refineries are consumed locally, except for Naphtha and Fuel Oil which are sometimes exported through Iran to the international market.
Operational Use in the Field (BOE)	Measured in Barrels of Oil Equivalent (BOE), **Operational use in the field** refers to the quantity of oil or gas used by the operator to feed their energy requirements in order to conduct their operations.
End Stock Tank (BOE)	Measured in Barrels of Oil Equivalent (BOE), the **End Stock Tank** refers to the quantity in storage at the end of the month.

What do we mean by Swaps?

This is where the Government share of oil exported via trucks is used for product swaps or product financing.

Refined Products Figures with Explainer

	Processed by Refineries (m3)
Crude Oil	467,648

Table 2 (a): Crude Oil processed by Refineries in m3

Product	Refined (m3)	Sold (m3)	Stored (m3)	Re-processed (m3)
Naphtha	146,041	48,947	14,338	112,924
Kerosene	25,039	25,843	5,281	0
Diesel	73,995	72,354	5,720	0
Fuel Oil	198,584	198,120	24,624	0

Table 2 (b): Refined Products from processing Crude Oil (see table 2a)

$$Refining\ Losses\ (\%) = \frac{Refined\ Naphtha\ (m3) + Refined\ Kerosene\ (m3) + Refined\ Diesel\ (m3) + Refined\ Fuel\ Oil\ (m3)}{Total\ processed\ by\ Refineries\ (m3)} =$$

$$\frac{443{,}659}{467{,}648} = 5.1\%$$ **(Losses incurred due to operational use, evaporation, and residue losses)**

	Re-processed (m3)
Naphtha	112,924

Table 2 (c): Refined Products from re-processing Naphtha in m3

Product	Refined (m3)	Sold (m3)	Stored (m3)	Re-processed (m3)
Gasoline	91,433	100,159	9,645	0
Liquid Gas	4,240	3,645	33	0
Sweet Naphtha	3,001	1,289	1,172	0

Table 2 (d): Derived products from the reforming process of Naphtha (see table 2c)

$$Re-processing\ of\ Naphtha\ Losses\ (\%) = \frac{Refined\ Gasoline\ (m3) + Refined\ Liquid\ Gas\ (m3) + Refined\ Sweet\ Naphtha\ (m3)}{Re-processed\ Naphtha\ (m3)} =$$

$$\frac{98{,}674}{112{,}924} = 12.6\%$$ **(Losses incurred due to operational use, evaporation, and residue losses)**

Product	**Refined petroleum products** are derived from crude oils through processes such as catalytic cracking and fractional distillation. These products have physical and chemical characteristics that differ according to the type of crude oil and subsequent refining processes. Refined petroleum products in the Kurdistan Region include, but are not limited to: Naphtha, Kerosene, Diesel, Fuel Oil, Gasoline, Liquid Gas, Sweet Naphtha and Benzene.
Refined	Measured in cubic metres (m^3), this is the **quantity of product produced** as a result of refining crude oil; also known as refinery output.
Sold	Measured in cubic metres (m^3), this is the **quantity of product sold**. All refined products are sold locally through the MNR. Almost all refined products are consumed locally except for Naphtha and Fuel Oil, which is occasionally exported to neighbouring countries.
Stored	Measured in cubic metres (m^3), this is the **quantity of product in storage** at the refineries at the time the data was captured.
Re-processed	Measured in cubic metres (m^3), this is the **quantity of product re-processed** at the refineries. This is typically Naphtha that is re-processed to produce Benzene.
Processed by Refineries	Measured in cubic metres (m^3), this is the **quantity of crude oil processed** by the refineries to produce petroleum products.

Overview: From Production to Consumption

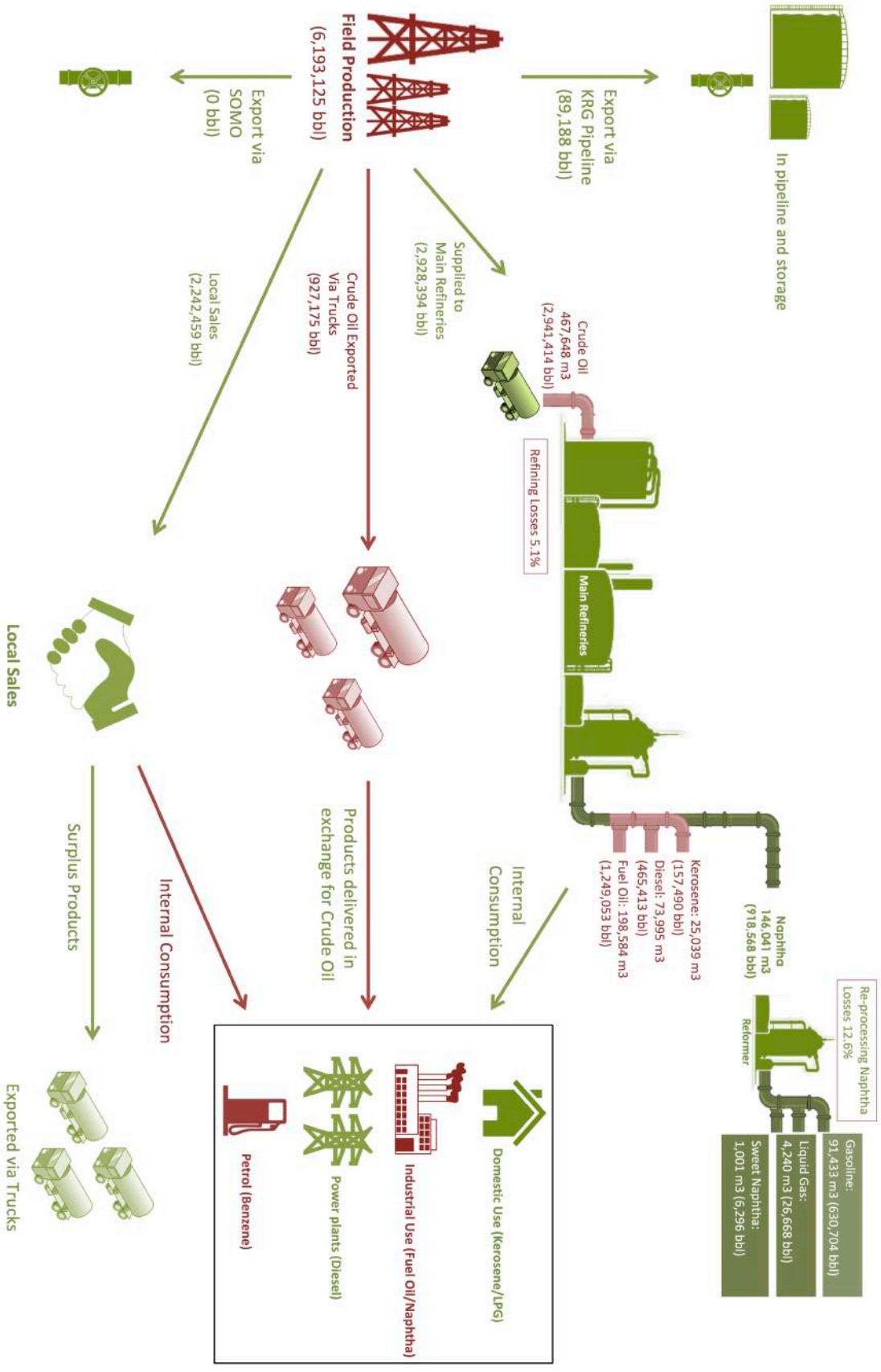
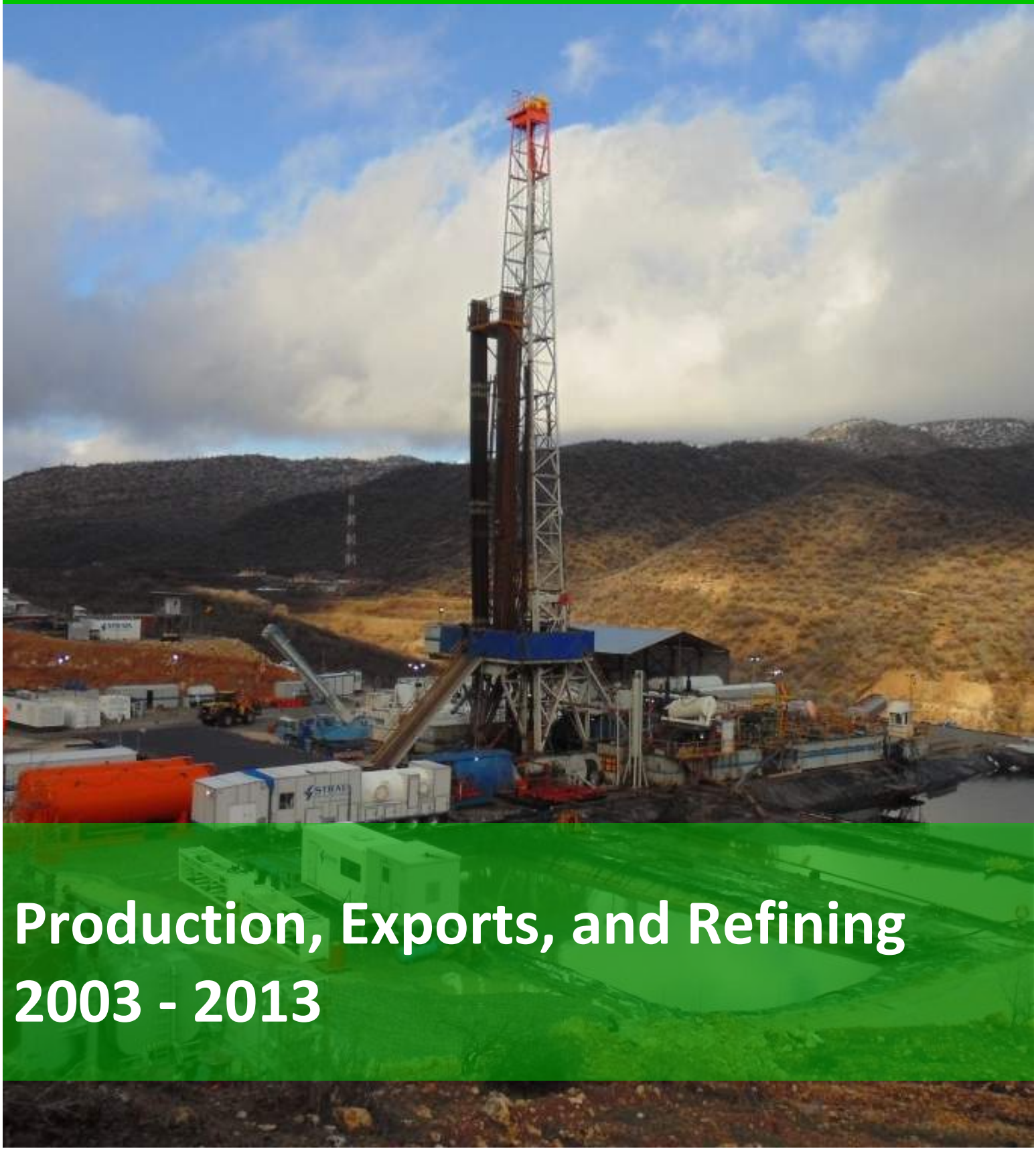


Diagram 1: Distribution of Crude Oil (bbl) from production to consumption.

Section 2

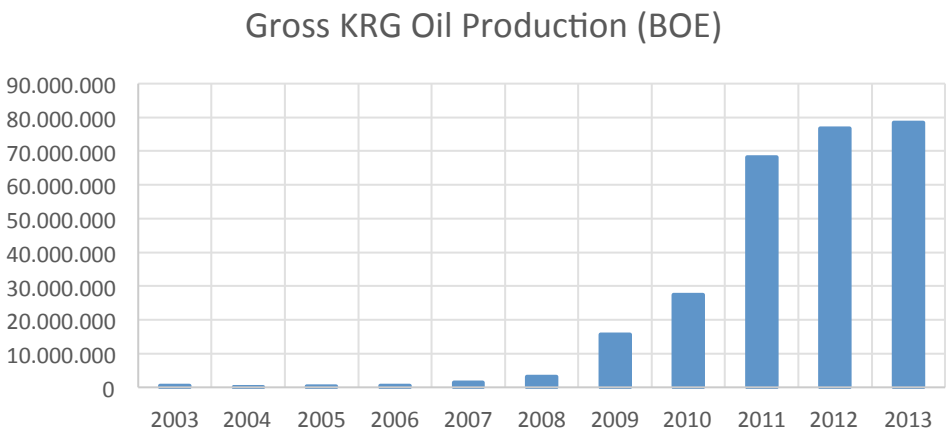


Production, Exports, and Refining 2003 - 2013

Production, Exports, and Refining 2003 – 2013

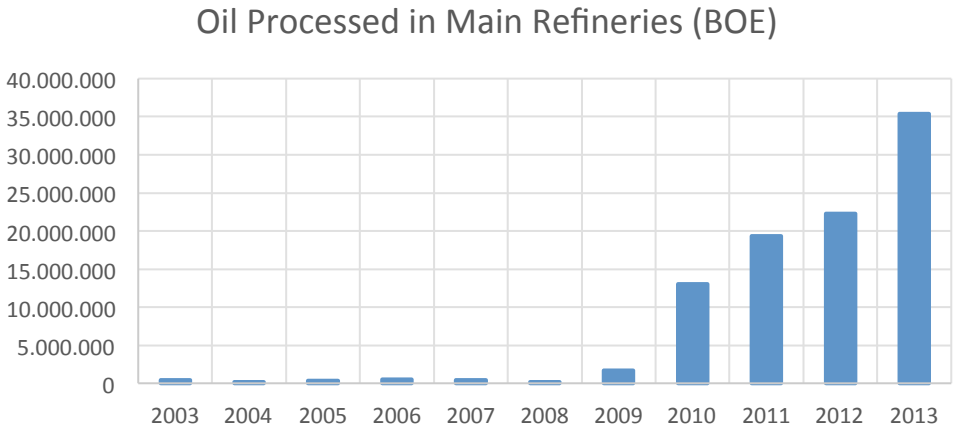
Gross KRG Oil Production (BOE)	
2003	395,945
2004	160,599
2005	367,738
2006	506,269
2007	1,524,211
2008	3,117,172
2009	15,689,046
2010	27,483,775
2011	68,231,486
2012	76,706,152
2013	78,463,518
Grand Total	272,645,911

Table 3 (a): Gross KRG Oil Production in BOE



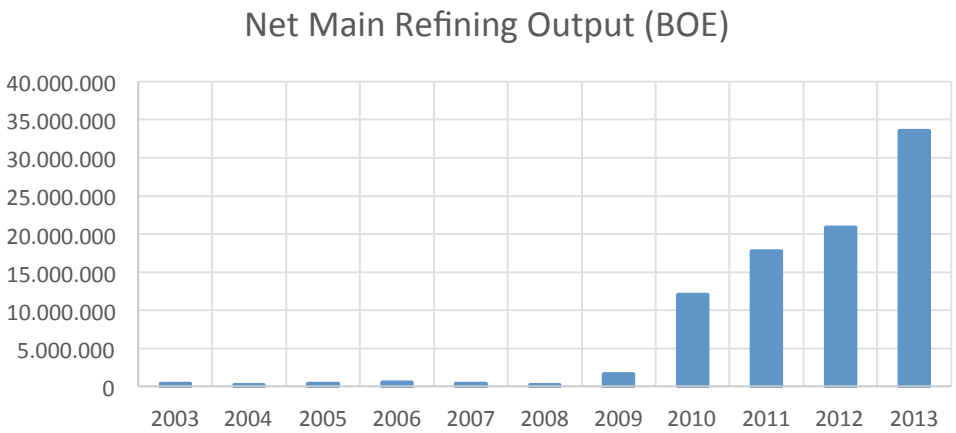
Oil Processed in Main Refineries (BOE)	
2003	395,117
2004	160,599
2005	367,738
2006	505,780
2007	391,617
2008	178,429
2009	1,716,206
2010	13,039,469
2011	19,357,929
2012	22,295,663
2013	35,382,470
Grand Total	93,791,016

Table 3 (b): Oil Processed in Main Refineries in BOE



Net Main Refining Output (BOE)	
2003	362,480
2004	147,334
2005	337,363
2006	464,003
2007	359,269
2008	165,080
2009	1,636,549
2010	12,030,419
2011	17,744,154
2012	20,836,929
2013	33,586,332
Grand Total	87,669,911

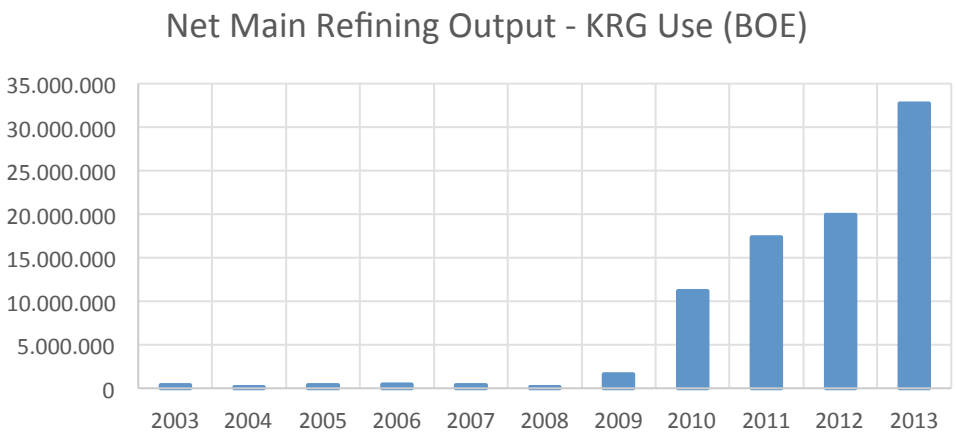
Table 3 (c): Net Main Refining Output in BOE



Production, Exports, and Refining 2003 – 2013

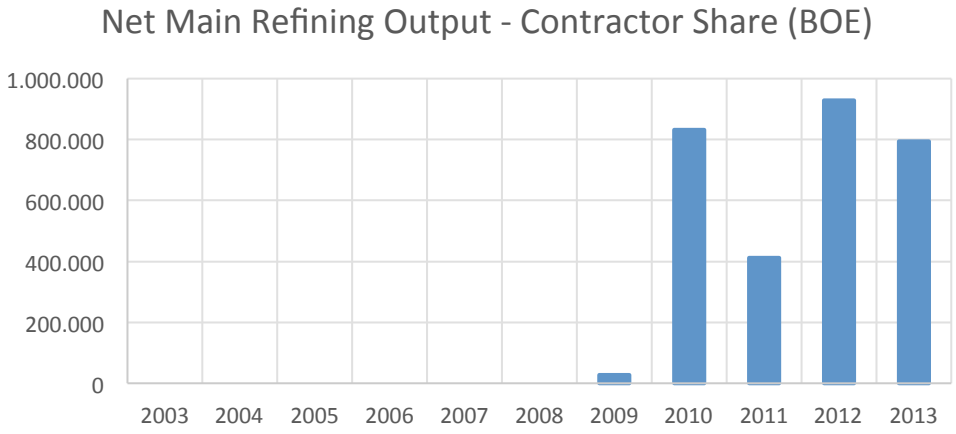
Net Main Refining Output - KRG Share (BOE)	
2003	362,480
2004	147,334
2005	337,363
2006	464,003
2007	359,269
2008	165,080
2009	1,608,232
2010	11,199,320
2011	17,331,504
2012	19,908,562
2013	32,791,843
Grand Total	84,674,990

Table 4 (a): Net Main Refining Output – KRG Use in BOE



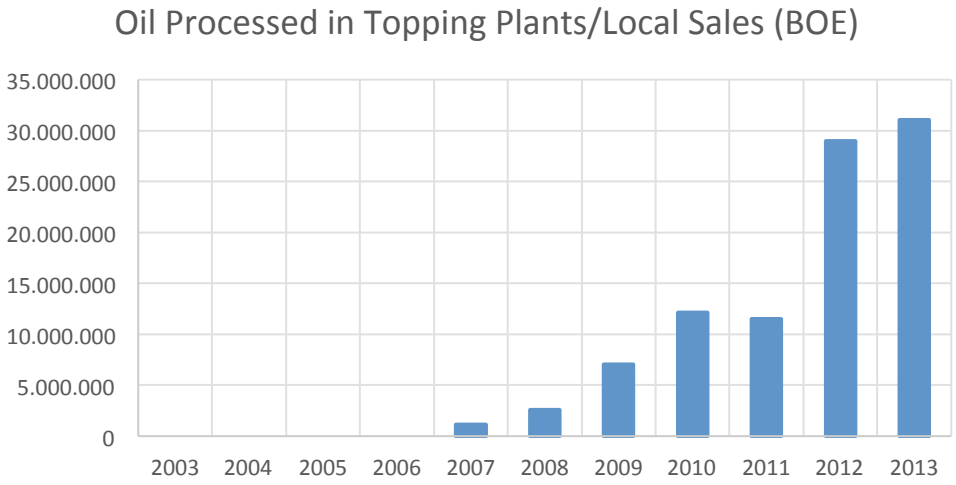
Net Main Refining Output - Contractor Share (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	0
2008	0
2009	28,317
2010	831,099
2011	412,649
2012	928,367
2013	794,488
Grand Total	2,994,921

Table 4 (b): Net Main Refining Output – Contractor Share in BOE



Oil Processed in Topping Plants/Local Sales (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	1,118,191
2008	2,594,596
2009	7,065,234
2010	12,152,594
2011	11,512,599
2012	28,953,021
2013	31,053,639
Grand Total	94,449,874

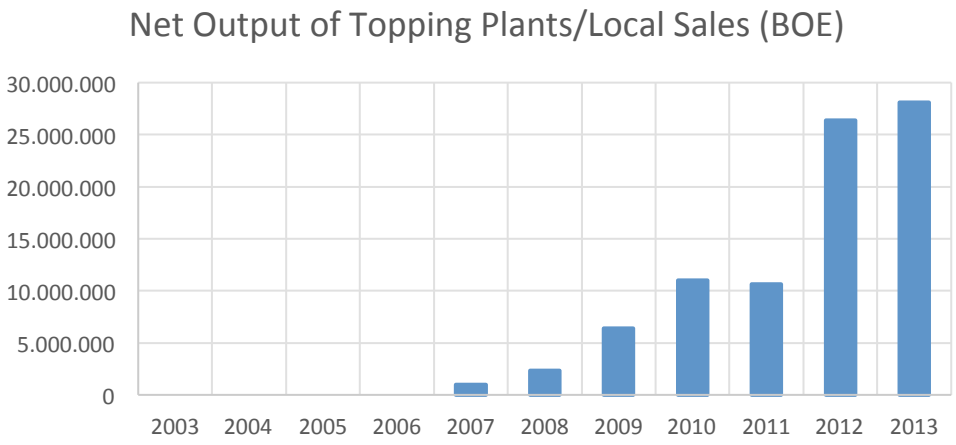
Table 4 (c): Oil Processed in Topping Plants/Local Sales in BOE



Production, Exports, and Refining 2003 – 2013

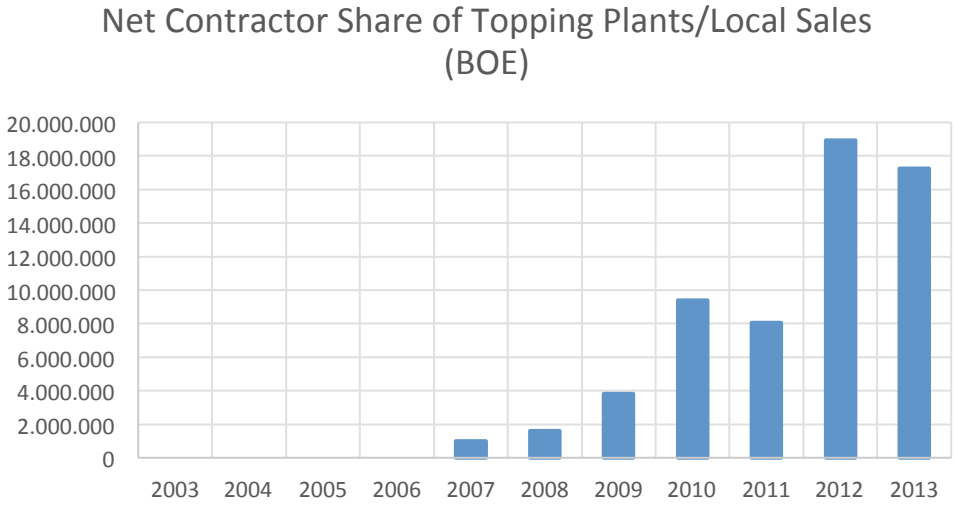
Net Output of Topping Plants/Local Sales (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	1.006,372
2008	2,335,136
2009	6,358,711
2010	10,993,464
2011	10,610,821
2012	26,387,563
2013	28,108,131
Grand Total	85,800,198

Table 5 (a): Net Output of Topping Plants/Local Sales (in BOE)



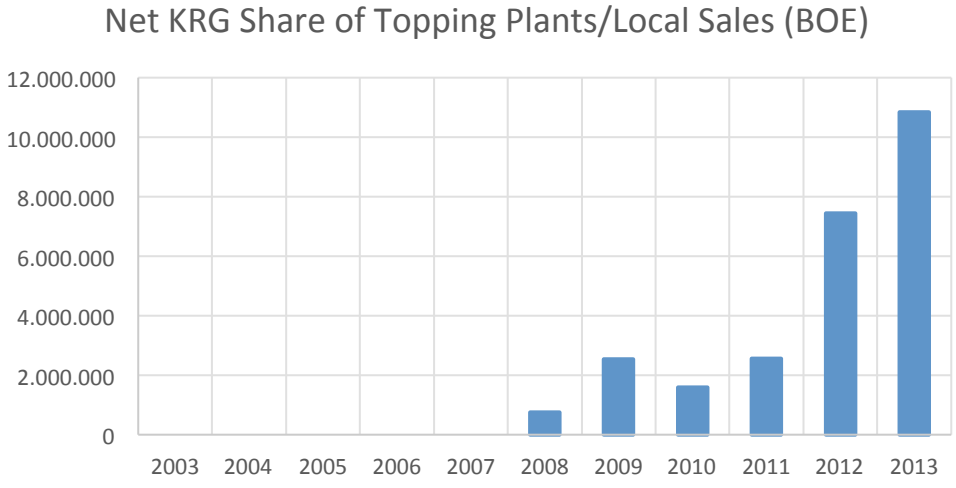
Net Contractor Share of Topping Plants/Local Sales (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	1,006,372
2008	1,594,464
2009	3,815,227
2010	9,403,861
2011	8,063,548
2012	18,942,262
2013	17,269,658
Grand Total	60,095,392

Table 5 (b): Net Contractor Share of Topping Plants/Local Sales in BOE



Net KRG Share of Topping Plants/Local Sales (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	0
2008	740,672
2009	2,543,484
2010	1,589,604
2011	2,547,272
2012	7,445,301
2013	10,838,473
Grand Total	25,704,806

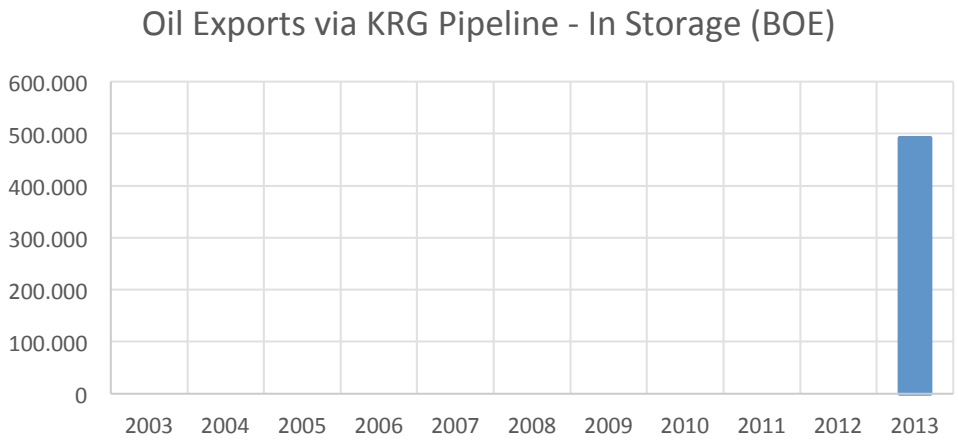
Table 5 (c): Net KRG Share of Topping Plants/ Local Sales in BOE



Production, Exports, and Refining 2003 – 2013

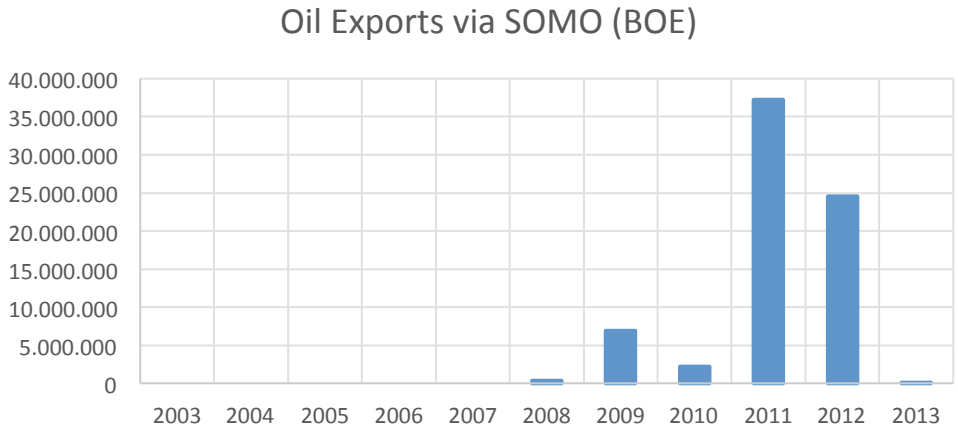
Oil Exports via KRG Pipeline - In Storage (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	0
2008	0
2009	0
2010	0
2011	0
2012	0
2013	491,121
Grand Total	491,121

Table 6 (a): Oil Exports via KRG Pipeline – in Storage (In BOE)



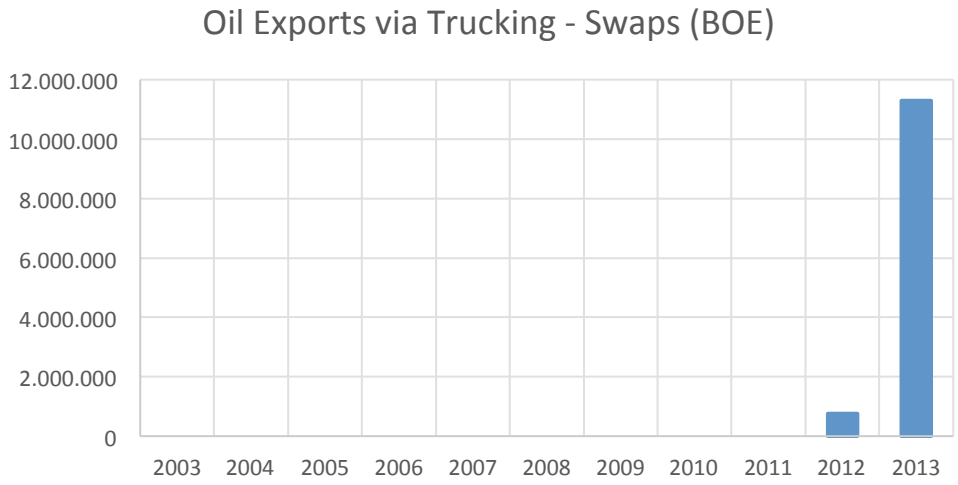
Oil Exports via SOMO (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	0
2008	328,708
2009	6,870,351
2010	2,176,791
2011	37,242,281
2012	24,507,213
2013	8,602
Grand Total	71,133,945

Table 6 (b): Oil Exports via SOMO in BOE



Oil Exports via Trucking - Swaps (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	0
2008	0
2009	0
2010	0
2011	0
2012	749,567
2013	11,282,860
Grand Total	12,032,427

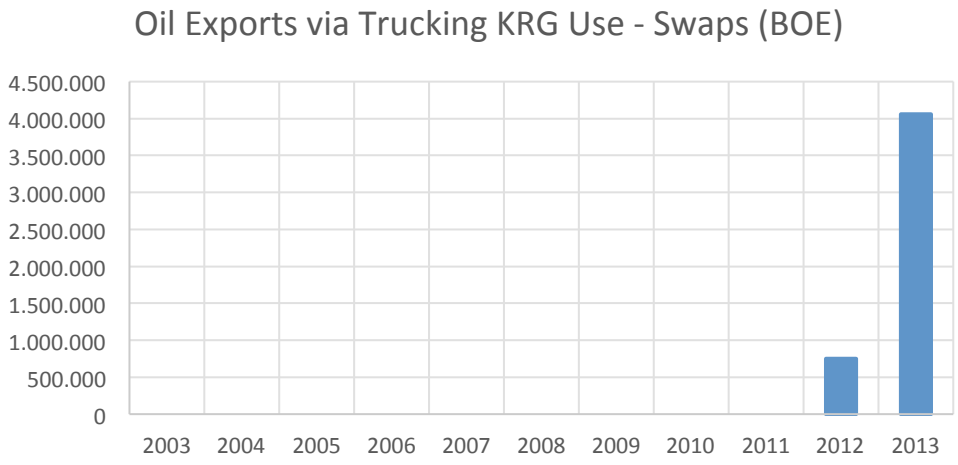
Table 6 (c): Oil Exports via Trucking – Swaps in BOE



Production, Exports, and Refining 2003 - 2013

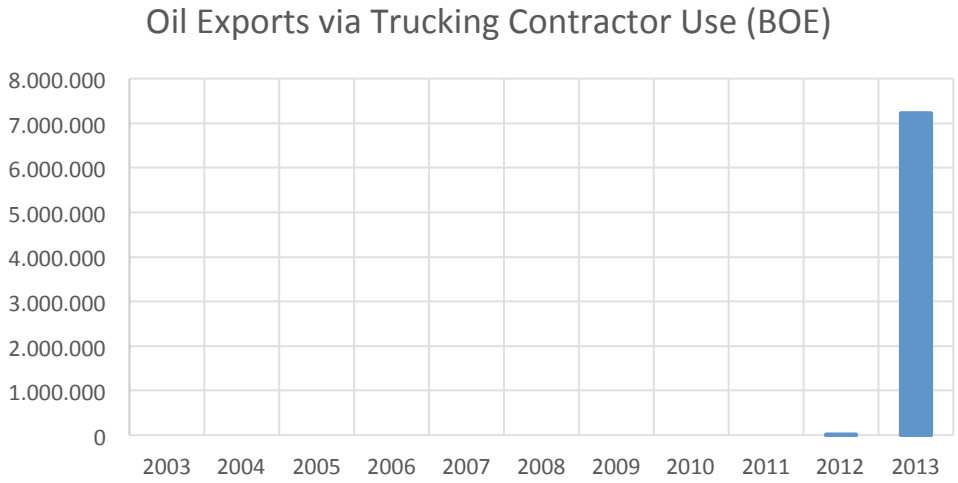
Oil Exports via Trucking KRG Use - Swaps (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	0
2008	0
2009	0
2010	0
2011	0
2012	748,910
2013	4,056,793
Grand Total	4,805,703

Table 7 (a): Oil Exports via Trucking KRG Use – Swaps In BOE



Oil Exports via Trucking Contractor Use (BOE)	
2003	0
2004	0
2005	0
2006	0
2007	0
2008	0
2009	0
2010	0
2011	0
2012	657
2013	7,226,067
Grand Total	7,226,724

Table 7 (b): Oil Exports via Trucking Contractor Use in BOE



Section 3

Iraq Domestic Consumption versus KRG Domestic Consumption

Iraq Domestic Consumption versus KRG Domestic Consumption Summary

Since 2004, in total Iraq has consumed 1,986,968,445 barrels of which 239,441,195 barrels have been consumed by the KRG, which is 12% of Iraq's total domestic consumption as opposed to the 17% entitlement of the KRG. Therefore the KRG has consumed 98,343,442 barrels of oil less than its entitlement.

Even when including the contractor's share of oil (for costs recovered according to the PSCs) as part of the KRG's consumption, the KRG would have consumed 309,758,231 barrels compared to a total domestic consumption of 2,057,285,486 barrels, which is 15% of Iraq's total domestic consumption as opposed to the 17% entitlement of the KRG. Therefore the KRG would have still consumed 39,980,301 barrels less than its entitlement.

Furthermore, due to weather and other economic and special conditions in the Kurdistan Region, the KRG believes its entitlement should be 20% of total domestic consumption in Iraq, as opposed to 17%. In which case the KRG would have consumed 157,952,495 barrels less than its entitlement, or 101,698,866 barrels less than its entitlement even when including the contractor's share.

PART 1: Iraq Domestic Consumption versus KRG Domestic Consumption – EXCLUDING CONTRACTOR'S SHARE

KRG DAILY LOCAL REFINING FIGURES

Year	Net Refining Output - KRG Use (B/D)	Net Topping Plant Output (Local Sales) - KRG Use (B/D)	Exports via Trucking KRG Use - Swaps (B/D)	Exports via KRG Pipeline (B/D)	Total KRG Refined & Used Excluding Supplied by MoO (B/D)
2004	404	0	0	0	404
2005	924	0	0	0	924
2006	1.271	0	0	0	1.271
2007	984	0	0	0	984
2008	452	2.029	0	0	2.482
2009	4.406	6.968	0	0	11.375
2010	30.683	4.355	0	0	35.038
2011	47.484	6.979	0	0	54.462
2012	54.544	20.398	2.052	0	76.994
2013	89.841	29.694	11.115	1.346	131.995

Table 8(a): KRG daily oil consumption excluding contractor share of processing in topping plants/local sales, exports via trucking (swaps)

IRAQ DAILY REFINING AND USAGE FIGURES

Year	MoO Supplied to Power Plants (B/D)	MoO Refined Products Consumed (B/D)	Total MoO Refined & Used (B/D)
2004	0	383.000	383.000
2005	30.000	352.000	382.000
2006	40.000	377.000	417.000
2007	45.000	295.000	340.000
2008	51.000	480.000	531.000
2009	70.000	445.000	515.000
2010	65.000	522.000	587.000
2011	67.000	567.000	634.000
2012	59.978	585.348	645.326
2013	92.665	600.829	693.494

Table 8(b): Iraq daily oil consumption

TOTAL IRAQ DAILY CONSUMPTION FIGURES

Year	Total Consumed Iraq including KRG (B/D)
2004	383.404
2005	382.924
2006	418.271
2007	340.984
2008	533.482
2009	526.375
2010	622.038
2011	688.462
2012	722.320
2013	825.489

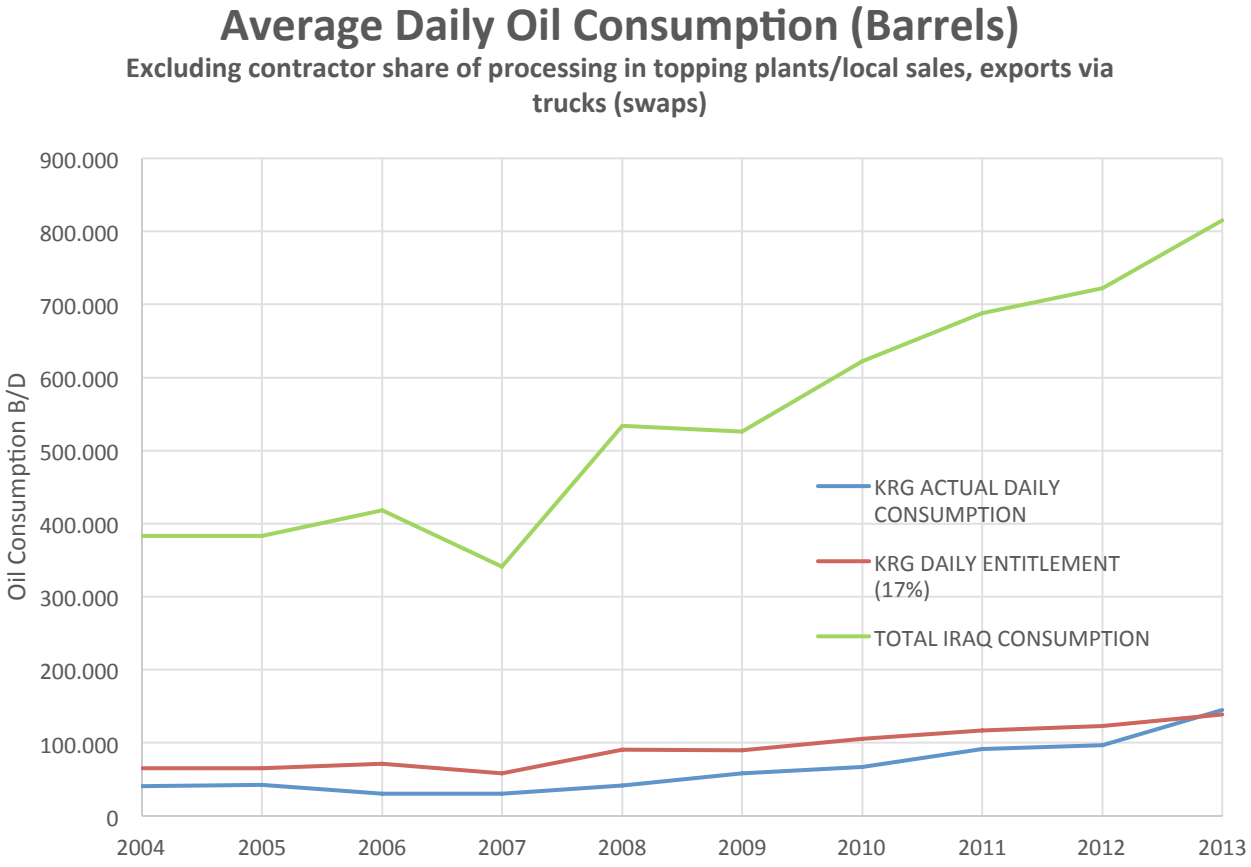
Table 8 (c): Total Iraq daily oil consumption including KRG

PART 1: Iraq Domestic Consumption versus KRG Domestic Consumption – EXCLUDING CONTRACTOR'S SHARE

KRG OVERALL DAILY CONSUMPTION FIGURES

Year	MoO Products Supplied to the KRG (B/D)	Total KRG Consumption (B/D)	KRG 17% Entitlement (B/D)	Difference Between Consumed & Entitled (B/D)
2004	40.500	40.904	65.179	-24.275
2005	42.000	42.924	65.097	-22.173
2006	29.400	30.671	71.106	-40.435
2007	29.500	30.484	57.967	-27.483
2008	39.000	41.482	90.692	-49.210
2009	47.000	58.375	89.484	-31.109
2010	32.000	67.038	105.746	-38.708
2011	37.000	91.462	117.039	-25.576
2012	20.000	96.994	122.794	-25.800
2013	23.674	155.669	140.333	15.336

Table 8(d): KRG daily oil consumption excluding contractor share of processing in topping plants/local sales, exports via trucking (swaps)



PART 1: Iraq Domestic Consumption versus KRG Domestic Consumption – EXCLUDING CONTRACTOR'S SHARE

KRG OVERALL CUMULATIVE CONSUMPTION FIGURES

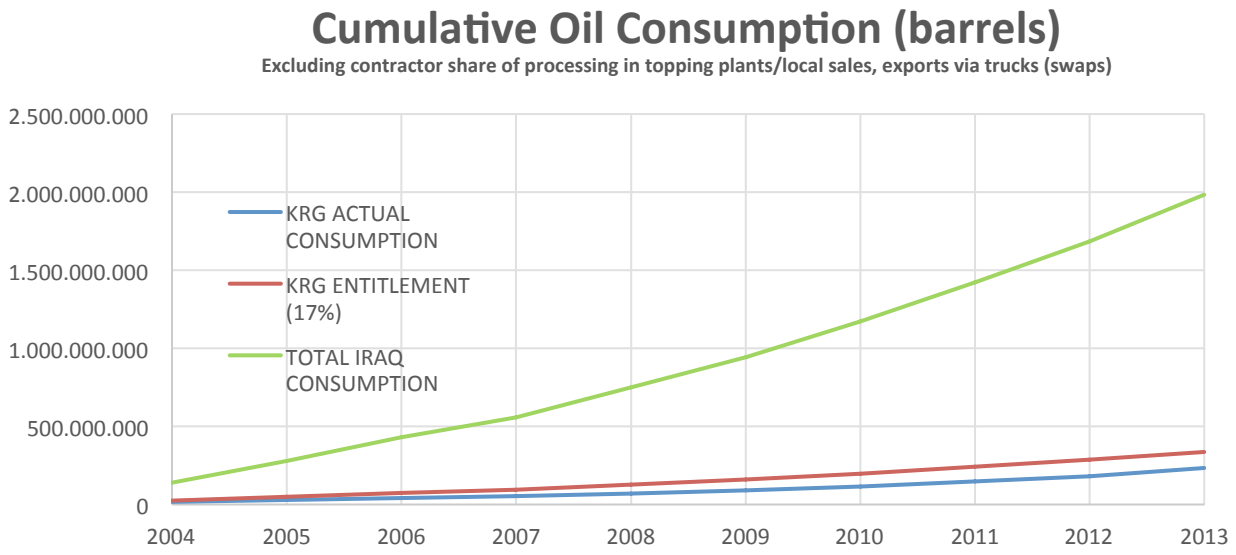
YEAR	KRG Cumulative Consumption Including Products Supplied by MoO (BOE)	17% KRG Cumulative Entitlement (BOE)	Cumulative Surplus/Defecit (BOE)
2004	14.929.834	23.790.197	-8.860.363
2005	30.597.196	47.550.648	-16.953.452
2006	41.792.199	73.504.379	-31.712.180
2007	52.918.968	94.662.455	-41.743.486
2008	68.059.720	127.764.982	-59.705.262
2009	89.366.436	160.426.524	-71.060.088
2010	113.835.360	199.023.991	-85.188.631
2011	147.219.136	241.743.083	-94.523.947
2012	182.621.909	286.563.035	-103.941.126
2013	239.441.195	337.784.636	-98.343.442

Table 9(a): KRG annual cumulative oil consumption excluding contractor share of processing in topping plants/local sales, exports via trucking (swaps)

TOTAL IRAQ CUMULATIVE CONSUMPTION FIGURES

YEAR	Cumulative KRG Refined & Used Excluding Supplied by MoO (BOE)	Cumulative MoO Refined & Used (BOE)	Total Iraq Cumulative Consumption incl. KRG (BOE)
2004	147.334	139.795.000	139.942.334
2005	484.696	279.225.000	279.709.696
2006	948.699	431.430.000	432.378.699
2007	1.307.968	555.530.000	556.837.968
2008	2.213.720	749.345.000	751.558.720
2009	6.365.436	937.320.000	943.685.436
2010	19.154.360	1.151.575.000	1.170.729.360
2011	39.033.136	1.382.985.000	1.422.018.136
2012	67.135.909	1.618.529.000	1.685.664.909
2013	115.314.139	1.871.654.310	1.986.968.449

Table 9(b): Iraq annual cumulative oil consumption excluding contractor share of processing in topping plants/local sales, exports via trucking (swaps)

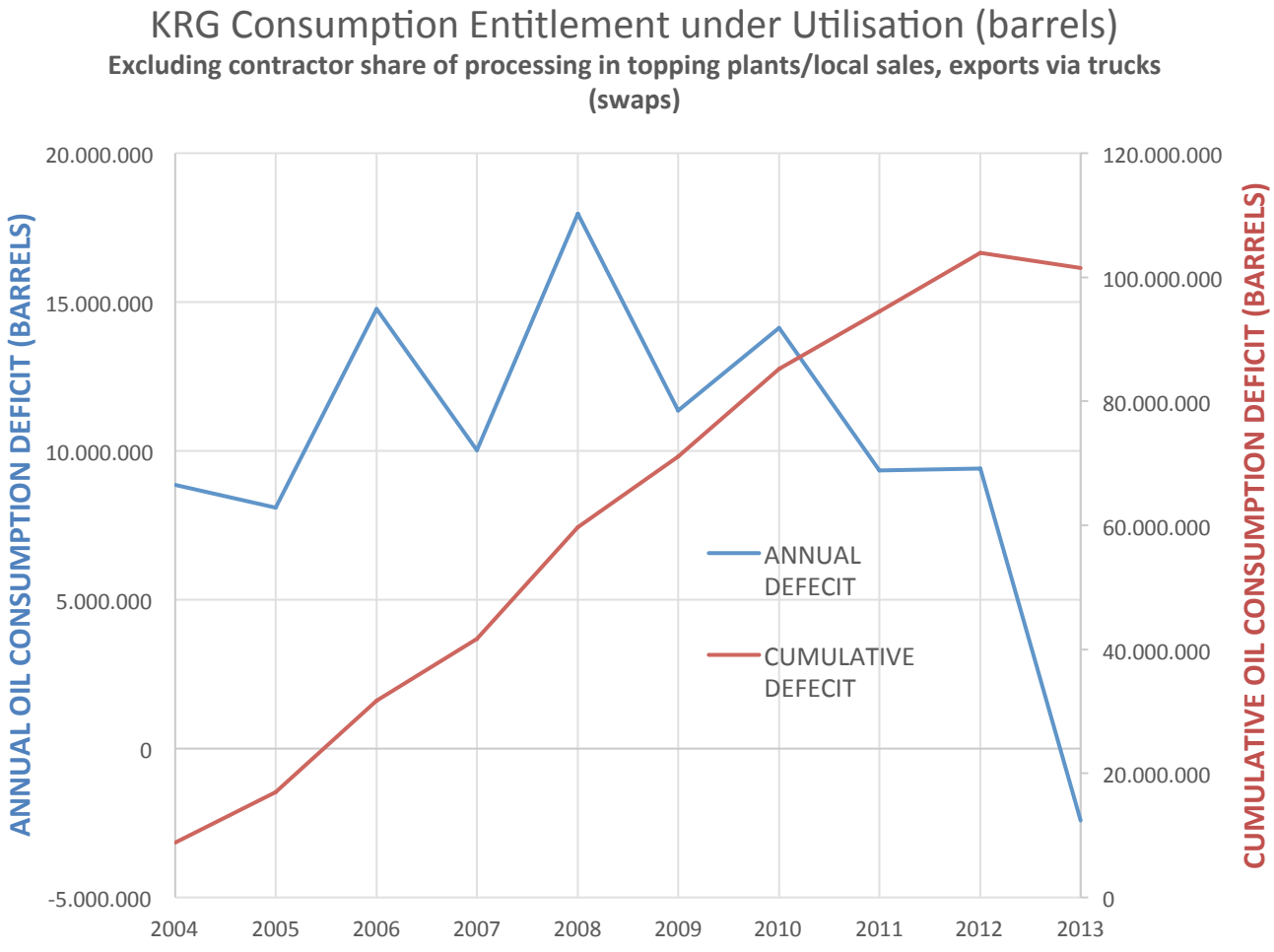


PART 1: Iraq Domestic Consumption versus KRG Domestic Consumption – EXCLUDING CONTRACTOR'S SHARE

KRG ANNUAL AND CUMULATIVE CONSUMPTION ENTITLEMENT UNDER UTILISATION

YEAR	Annual Surplus/Defecit (BOE)	Cumulative Surplus/Defecit (BOE)
2004	-8.860.363	-8.860.363
2005	-8.093.089	-16.953.452
2006	-14.758.728	-31.712.180
2007	-10.031.306	-41.743.486
2008	-17.961.776	-59.705.262
2009	-11.354.825	-71.060.088
2010	-14.128.544	-85.188.631
2011	-9.335.315	-94.523.947
2012	-9.417.179	-103.941.126
2013	5.597.684	-98.343.442

Table 10: KRG consumption entitlement under utilisation excluding contractor share of processing in topping plants/local sales, exports via trucking (swaps)



PART 2: Iraq Domestic Consumption versus KRG Domestic Consumption – INCLUDING CONTRACTOR'S SHARE

KRG DAILY LOCAL REFINING FIGURES

Year	Net Refining Output (B/D)	Net Topping Plant Output (Local Sales) (B/D)	Exports via Trucking Swaps (B/D)	Exports via KRG Pipeline (B/D)	Total KRG Refined & Used Excluding Supplied by MoO (B/D)
2003	993	0	0	0	993
2004	404	0	0	0	404
2005	924	0	0	0	924
2006	1.271	0	0	0	1.271
2007	984	2.757	0	0	3.741
2008	452	6.398	0	0	6.850
2009	4.484	17.421	0	0	21.905
2010	32.960	30.119	0	0	63.079
2011	48.614	29.071	0	0	77.685
2012	57.087	72.295	2.054	0	131.436
2013	92.017	77.009	30.912	1.346	201.283

Table 11(a): KRG daily oil consumption including contractor share of processing in topping plants/local sales, exports via trucking (swaps)

IRAQ DAILY REFINING AND USAGE FIGURES

Year	MoO Supplied to Power Plants (B/D)	MoO Refined Products Consumed (B/D)	Total MoO Refined & Used (B/D)
2003	0	0	0
2004	0	383.000	383.000
2005	30.000	352.000	382.000
2006	40.000	377.000	417.000
2007	45.000	295.000	340.000
2008	51.000	480.000	531.000
2009	70.000	445.000	515.000
2010	65.000	522.000	587.000
2011	67.000	567.000	634.000
2012	59.978	585.348	645.326
2013	92.665	600.829	693.494

Table 11 (b): Iraq daily oil consumption

TOTAL IRAQ DAILY CONSUMPTION FIGURES

Year	Total Consumed Iraq including KRG (B/D)
2003	993
2004	383.404
2005	382.924
2006	418.271
2007	343.741
2008	537.850
2009	536.905
2010	650.079
2011	711.685
2012	776.762
2013	894.777

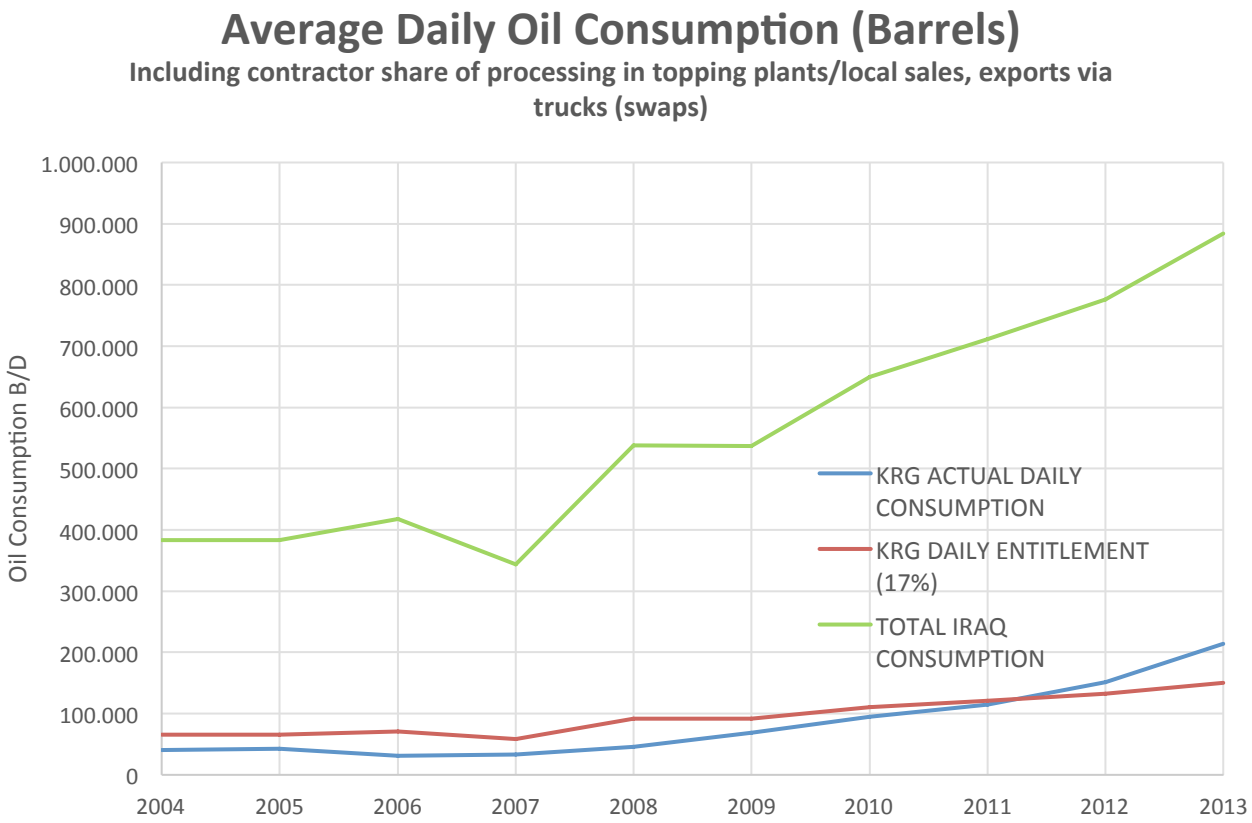
Table 11 (c): Total Iraq daily consumption figures

PART 2: Iraq Domestic Consumption versus KRG Domestic Consumption – INCLUDING CONTRACTOR'S SHARE

KRG OVERALL DAILY CONSUMPTION FIGURES

Year	MoO Products Supplied to the KRG (B/D)	Total KRG Consumption (B/D)	KRG 17% Entitlement (B/D)	Difference Between Consumed & Entitled (B/D)
2003	0	993	169	824
2004	40.500	40.904	65.179	-24.275
2005	42.000	42.924	65.097	-22.173
2006	29.400	30.671	71.106	-40.435
2007	29.500	33.241	58.436	-25.195
2008	39.000	45.850	91.434	-45.585
2009	47.000	68.905	91.274	-22.369
2010	32.000	95.079	110.513	-15.434
2011	37.000	114.685	120.986	-6.302
2012	20.000	151.436	132.050	19.386
2013	23.674	224.958	152.112	72.845

Table 11 (d): KRG daily oil consumption including contractor share of processing in topping plants/local sales, exports via trucking (swaps)



PART 2: Iraq Domestic Consumption versus KRG Domestic Consumption – INCLUDING CONTRACTOR'S SHARE

KRG OVERALL CUMULATIVE CONSUMPTION FIGURES

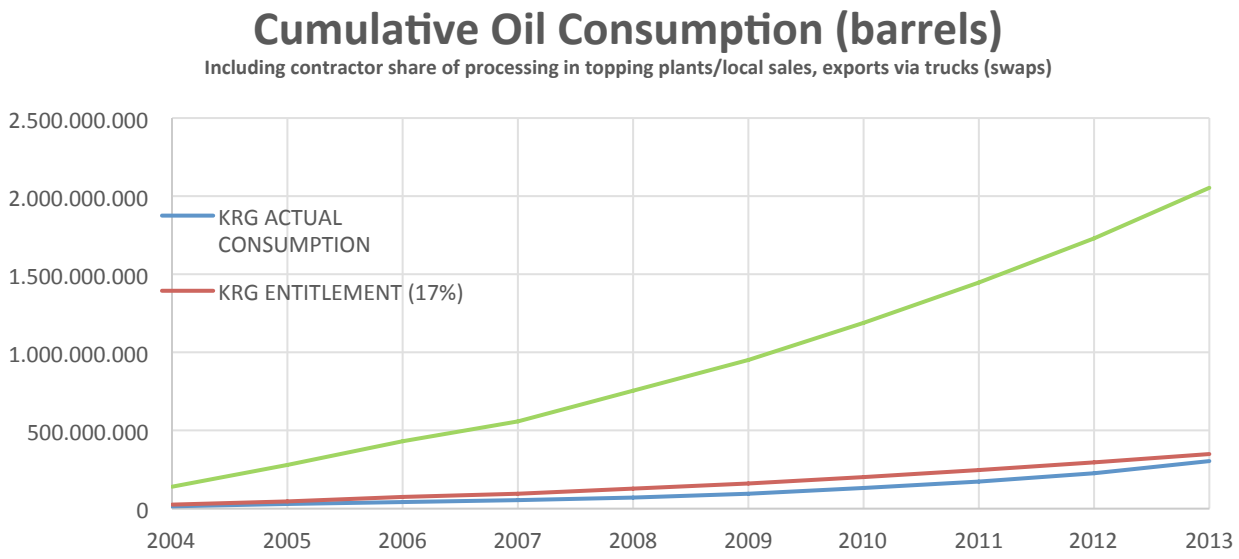
YEAR	KRG Cumulative Consumption Including Products Supplied by MoO (BOE)	17% KRG Cumulative Entitlement (BOE)	Cumulative Surplus/Defecit (BOE)
2004	14.929.834	23.790.197	-8.860.363
2005	30.597.196	47.550.648	-16.953.452
2006	41.792.199	73.504.379	-31.712.180
2007	53.925.340	94.833.538	-40.908.198
2008	70.660.556	128.207.124	-57.546.569
2009	95.810.816	161.522.069	-65.711.253
2010	130.514.699	201.859.479	-71.344.780
2011	172.374.673	246.019.524	-73.644.851
2012	227.648.732	294.217.594	-66.568.862
2013	309.758.231	349.738.533	-39.980.301

Table 12 (a): KRG annual cumulative oil consumption including contractor share of processing in topping plants/local sales, exports via trucking (swaps)

TOTAL IRAQ CUMULATIVE CONSUMPTION FIGURES

YEAR	Cumulative KRG Refined & Used Excluding Supplied by MoO (BOE)	Cumulative MoO Refined & Used (BOE)	Total Iraq Cumulative Consumption incl. KRG (BOE)
2004	147.334	139.795.000	139.942.334
2005	484.696	279.225.000	279.709.696
2006	948.699	431.430.000	432.378.699
2007	2.314.340	555.530.000	557.844.340
2008	4.814.556	749.345.000	754.159.556
2009	12.809.816	937.320.000	950.129.816
2010	35.833.699	1.151.575.000	1.187.408.699
2011	64.188.673	1.382.985.000	1.447.173.673
2012	112.162.732	1.618.529.000	1.730.691.732
2013	185.631.176	1.871.654.310	2.057.285.486

Table 12 (b): Iraq annual cumulative oil consumption including contractor share of processing in topping plants/local sales, exports via trucking (swaps)

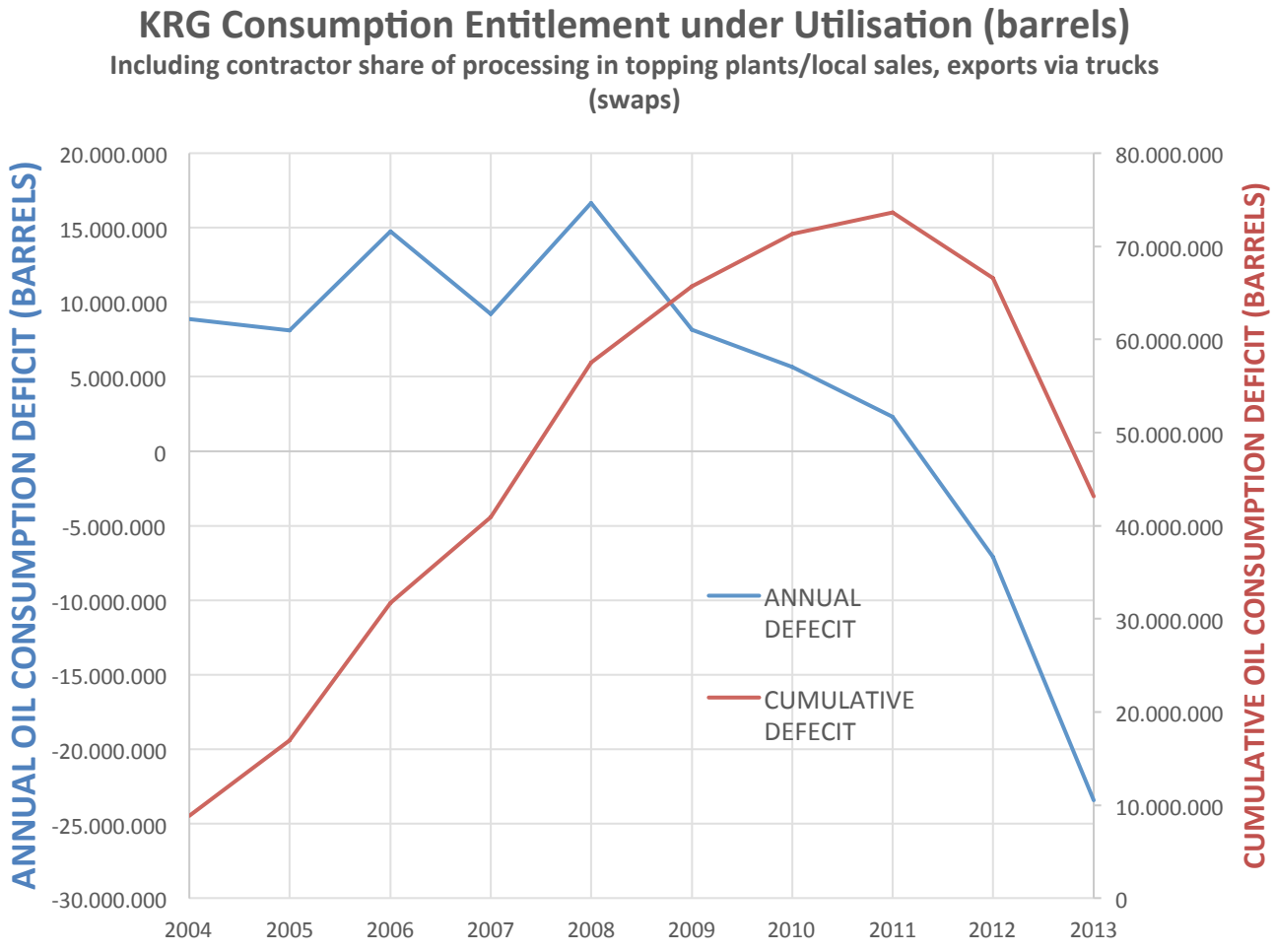


PART 2: Iraq Domestic Consumption versus KRG Domestic Consumption – INCLUDING CONTRACTOR'S SHARE

KRG ANNUAL AND CUMULATIVE CONSUMPTION ENTITLEMENT UNDER UTILISATION

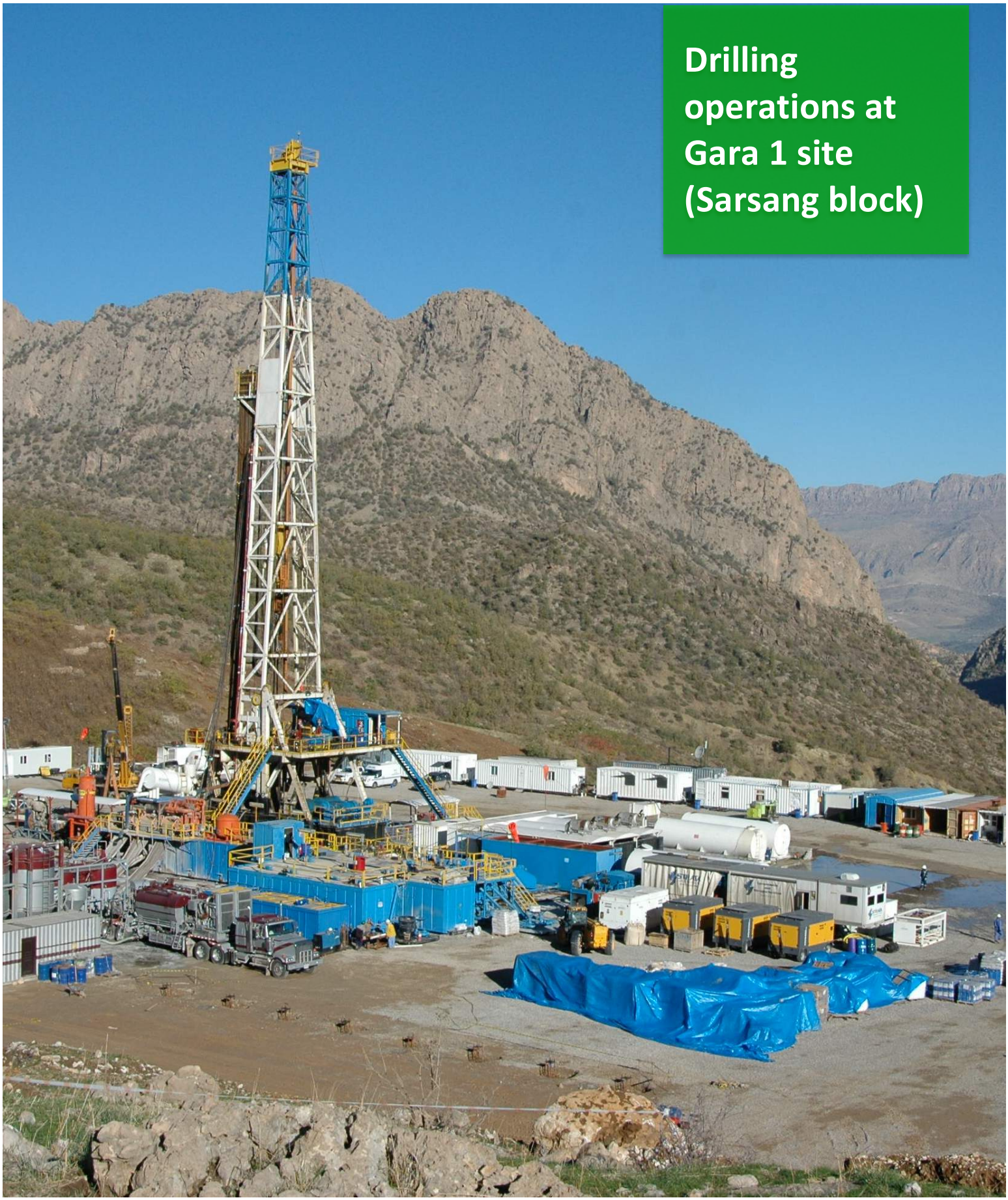
YEAR	Annual Surplus/Defecit (BOE)	Cumulative Surplus/Defecit (BOE)
2004	-8.860.363	-8.860.363
2005	-8.093.089	-16.953.452
2006	-14.758.728	-31.712.180
2007	-9.196.018	-40.908.198
2008	-16.638.371	-57.546.569
2009	-8.164.684	-65.711.253
2010	-5.633.527	-71.344.780
2011	-2.300.071	-73.644.851
2012	7.075.989	-66.568.862
2013	26.588.561	-39.980.301

Table 13: KRG consumption entitlement under utilisation including contractor share of processing in topping plants/local sales, exports via trucking (swaps)



Iraq Domestic Consumption versus KRG Domestic Consumption Explainer

Net Refining Output (B/D)	Measured in Barrels of Oil Equivalent per day (B/D), Net Refining Output refers to the net output of refined products from the main refineries (Sulaimaniyah – no longer in operation, Kalak, Tawke and Bazian).
Net Topping Plant Output (B/D)	Measured in Barrels of Oil Equivalent per day (B/D), **Net Topping Plant Output** refers to the output of refined products from local topping plants after losses.
Exports via Trucking (B/D)	Measured in Barrels of Oil Equivalent per day (B/D), **Export via Trucking** refers to oil and gas exports out of the Kurdistan Region through trucks, used for product swaps or product financing.
Exports via KRG Pipeline (B/D)	Measured in Barrels of Oil Equivalent per day (B/D), **Export via KRG Pipeline** refers to oil and gas exports out of the Kurdistan Region through the KRG pipeline. Crude oil exported through this pipeline is currently in storage at the border.
Total KRG Refined & Used Excluding Supplied by MoO (B/D)	This is the sum of Net Refining Output, Net Topping Plant Output, Exports via Trucking and Exports via KRG Pipeline
MoO Supplied to Power Plants (B/D)	Measured in Barrels of Oil Equivalent per day (B/D), **MoO Supplied to Power Plants** refers to crude oil supplied by the MoO to power plants in the south of Iraq.
MoO Refined Products Consumed (B/D)	Measured in Barrels of Oil Equivalent per day (B/D), **MoO Refined Products Consumed** refers to refined products consumed in the south of Iraq.
Total MoO Refined & Used (B/D)	This is the sum of MoO Supplied to Power Plants and Total MoO Refined & Used
Total Consumed Iraq including KRG (B/D)	This is the sum of Total KRG Refined and Used Excluding Supplied by MoO and Total MoO Refined & Used
MoO Products Supplied to the KRG (B/D)	Measured in Barrels of Oil Equivalent per day (B/D), **MoO Products Suppled to the KRG** refers to products delivered to the KRG by MoO (benzene, kerosene and diesel).
Total KRG Consumption (B/D)	This is the sum of Total KRG Refined and Used Excluding Supplied by MoO and Total KRG Consumption
KRG 17% Entitlement (B/D)	Measured in Barrels of Oil Equivalent per day (B/D), **KRG 17% Enetitlement** refers to the 17% share of total domestic consumption in Iraq that the KRG is entitled to.
Difference Between Consumed & Entitlement (B/D)	This is equal to KRG 17% Entitlement minus Total KRG Consumption



Drilling operations at Gara 1 site (Sarsang block)

Section 4

Local Workforce Development

Employment Statistics

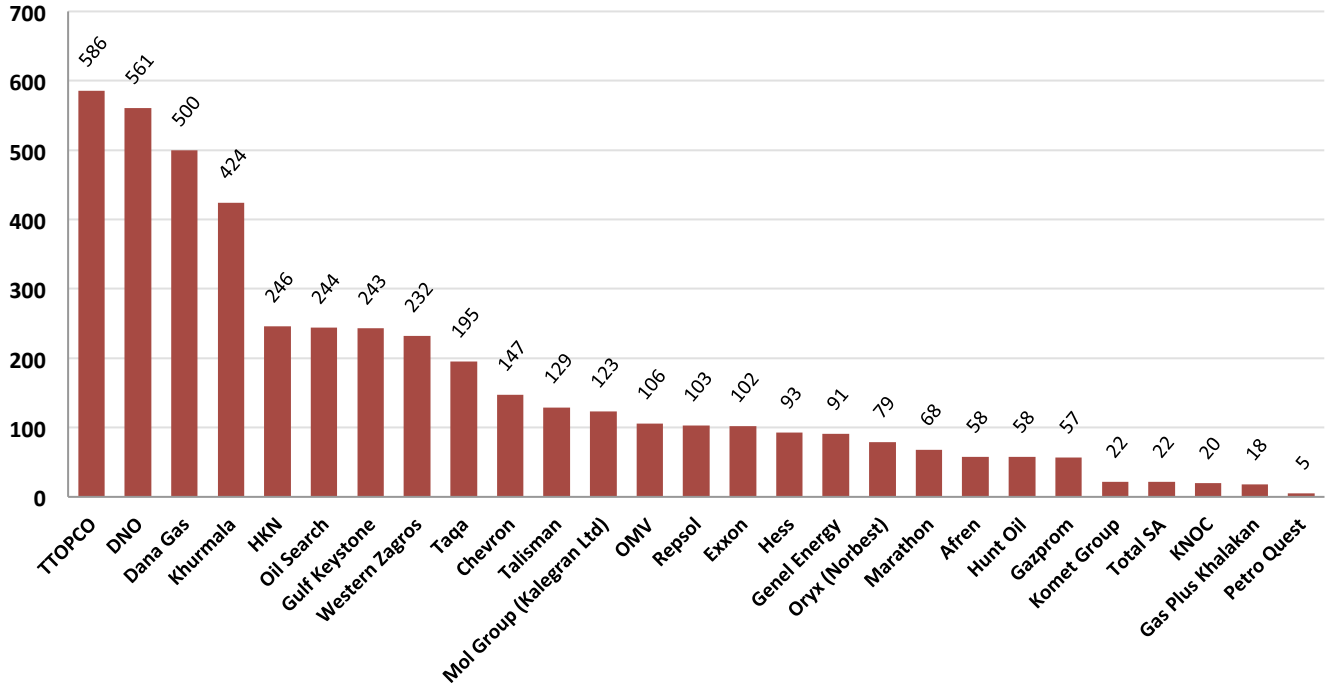
IOC	Total Staff	Total Locals	Percentage Locals
Khurmala	424	418	99%
HKN	246	208	85%
Dana Gas	500	392	78%
DNO	561	418	75%
Gas Plus Khalakan	18	13	72%
TTOPCO	586	411	70%
Gulf Keystone	243	168	69%
Western Zagros	232	144	62%
OMV	106	65	61%
Petro Quest	5	3	60%
Repsol	103	56	54%
Mol Group (Kalegran Ltd)	123	62	50%
Taqa	195	96	49%
Hess	93	43	46%
Oil Search	244	105	43%
Hunt Oil	58	25	43%
Genel Energy	91	36	40%
KNOC	20	8	40%
Marathon	68	26	38%
Total SA	22	8	36%
Exxon	102	35	34%
Talisman	129	43	34%
Komet Group	22	7	32%
Oryx	79	23	29%
Chevron	147	41	28%
Afren	58	14	24%
Gazprom	57	9	16%
Total	4532	2877	63%

Table 14: Total Staff and Total Local Staff Employment Statistics by IOC.

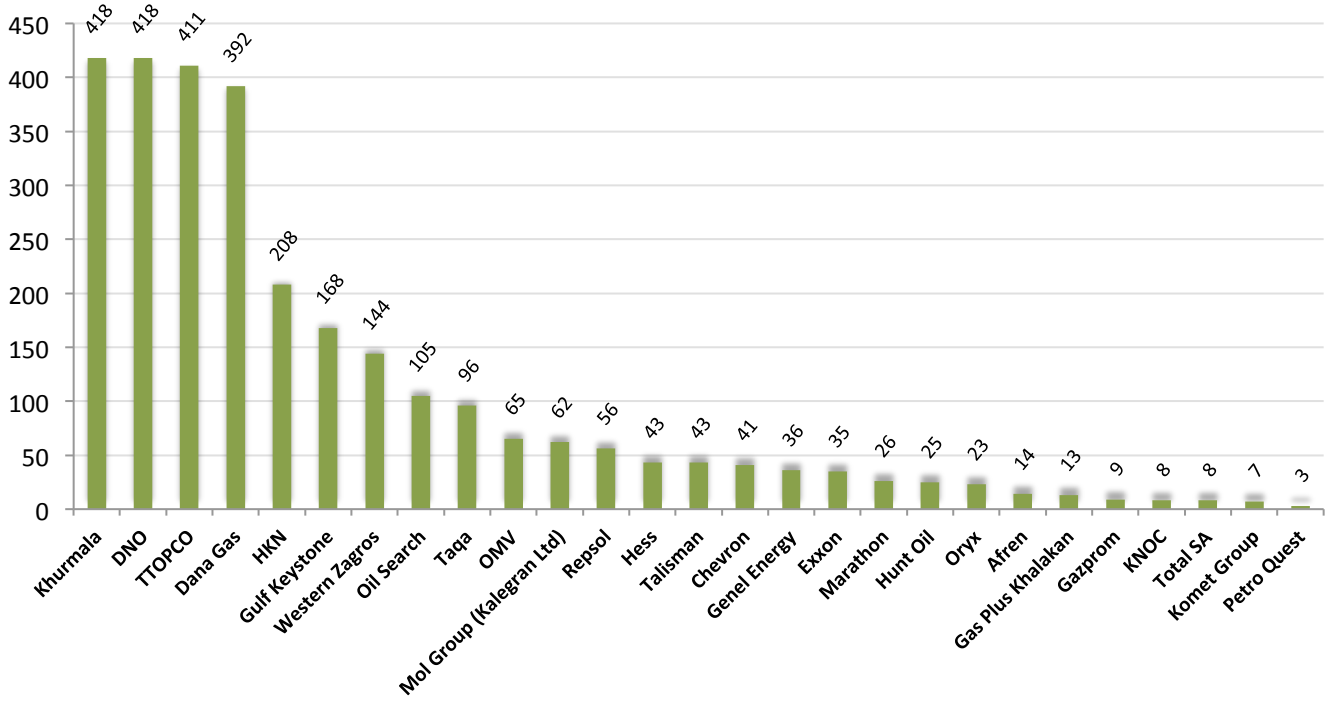
IOC	**International Oil Company** (IOC) is the industry standard term used to describe foreign exploration and production companies. National Oil Companies (NOCs) also exist, such as Saudi Aramco (the NOC of Saudi Arabia). In general NOCs tend to only operate in their home country, however it is not unusual to see NOCs operating out of their home country.
Total Employees	**Total Employees** refers to the total number of employees working directly for the IOC, including both foreign and local personnel.
Total Locals	**Total Locals** refers to the total number of local employees working directly for the IOC.
Percentage Locals	**Percentage Locals** refers to the percentage of local personnel of the total number of employees.

Employment Statistics - Tables

Total Staff



Total Locals



Employment Level Breakdown

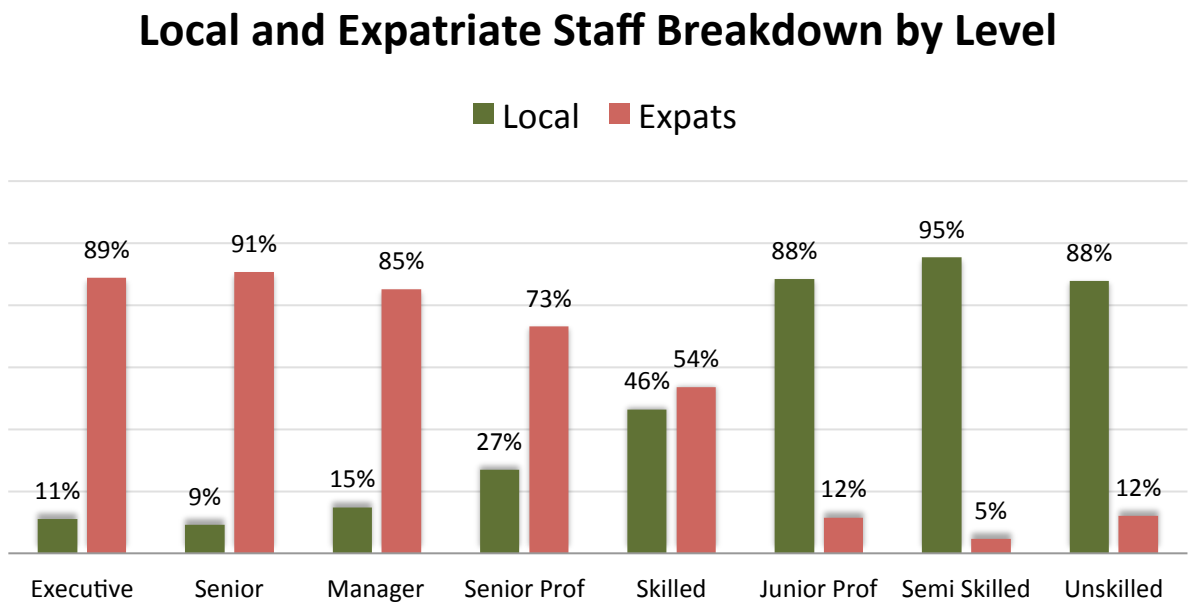


Figure 1: Local and Expatriate Staff Breakdown by Level. Note that the breakdown does not include numbers from KAR and Petro Quest.

Level:	Local Staff	Expatriates	Total
Executive	1	8	9
Senior Manager (GM, Country Manager, Deputy GM)	5	49	54
Functional Manager / Superintendent (Drilling, Production, Finance etc.)	53	304	357
Senior Professional (5+ years)	225	611	836
Skilled (Defined skill-set such as Drillers, Drilling Supervisors, Production Supervisors, Technicians)	425	491	916
Junior Professional (Graduate less than 5 years experience)	451	59	510
Semi Skilled - includes those in training (Drilling crews, production helpers etc.)	600	29	629
Unskilled (roustabouts, casual labour, camp labour, no prior experience needed)	696	96	792
Total	2456	1647	4103

Table 15: Local and Expatriate Breakdown by Level. Note that the breakdown does not include numbers from KAR and Petro Quest

As the Kurdistan Region's production capacity grows, the workforce is expanding. The recently established Production Operations Training Board forecasts the production workforce alone will increase (from around 1000 currently) by 200 new positions for every 100.000 barrels per day of capacity added.

Section 5

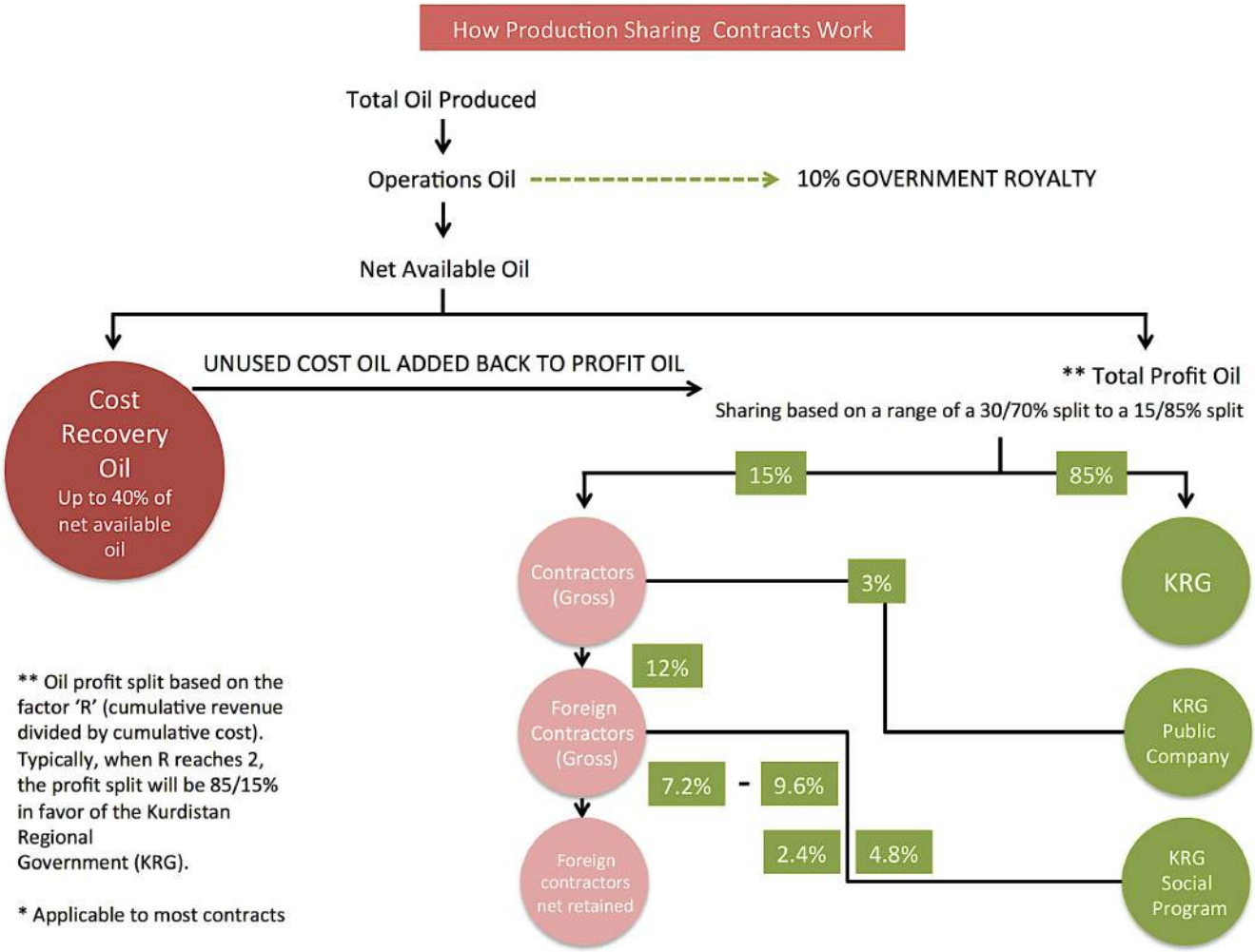
Production Sharing Contracts

Picture: Release of the Production Sharing Contracts online (September 2011).

Production Sharing Contracts - Explained

What is a Production Sharing Contract (PSC)?
In oil and gas, PSCs are a common type of contract signed between a government and an Exploration and Production (E&P) company to define how much of the production each party will receive. PSCs were first used in Bolivia in the 1950s, however were relatively uncommon until recent times, where they now dominate oil and gas agreements, especially in the Middle East and Central Asia.

Under PSC arrangements, the E&P company bears the financial risk until such time a discovery is made. If a discovery is not made, no cost is recovered by the E&P company. However if a discovery is made and the field begins to produce, the company is permitted to use the money from produced oil to recover capital and operational expenditures, known as "cost oil". The remaining money is known as "profit oil", and is split between the government and the company, typically at a rate of about 80% for the government, 20% for the company. Although in the Kurdistan region, that rate is typically closer to 90% for government.



Production Sharing Contracts - PSCs

Current Operator	PSC (Block)	PSC Signing Date
Chevron	Rovi	22/12/2006
Chevron	Sarta	22/12/2006
Hunt Oil	Ain Sifni	08/09/2007
Genel Energy	Miran	01/10/2007
Mol Group (Kalegran Ltd)	Akri Bijeel	06/11/2007
HKN	Sarsang	06/11/2007
GKPI	Shaikan	06/11/2007
Taqa	Atrush	10/11/2007
KNOC	Bazian	10/11/2007
Oryx	Hawler	10/11/2007
TTOPCO	Taq Taq - Kewa Chirmila	26/02/2008
Talisman	Kurdamir	28/02/2008
OMV	Bina Bawi	06/03/2008
DNO	Dohuk	13/03/2008
DNO	Erbil	13/03/2008
DNO	Tawke	13/03/2008
Afren	Barda Rash	20/06/2008
KNOC	Sangaw South	21/06/2008
Genel Energy	Ber Bahr	31/03/2009
Genel Energy	Chia Surkh	11/06/2009
Gas Plus Khalakan	Khalakan	11/06/2009
GKPI	Sheikh Adi	16/07/2009
Marathon	Harir	20/10/2010
Total SA	Safen	20/10/2010
Hess	Dinarta	26/07/2011
Western Zagros	Garmian	25/07/2011
Repsol	Piramagrun	26/07/2011
Repsol	Qala Dze	26/07/2011
Hess	Shakrok	26/07/2011
Oil Search	Taza	27/07/2011
Talisman	Topkhana	19/08/2011
Exxon Mobil	Al Qush	18/10/2011
Exxon Mobil	Baeshiqa	18/10/2011
Exxon Mobil	Betwata	18/10/2011
Exxon Mobil	East Arbat	18/10/2011
Exxon Mobil	East Arbat	18/10/2011
Exxon Mobil	Pirmam	18/10/2011
Exxon Mobil	Qara Hanjeer	18/10/2011
Turkish Entity	Arbat - 2nd PSC	01/05/2012
Turkish Entity	Choman	01/05/2012
Turkish Entity	Hindren	01/05/2012
Turkish Entity	Jebel Kand	01/05/2012

Table 16 (a): See explainer on page 32 for definitions

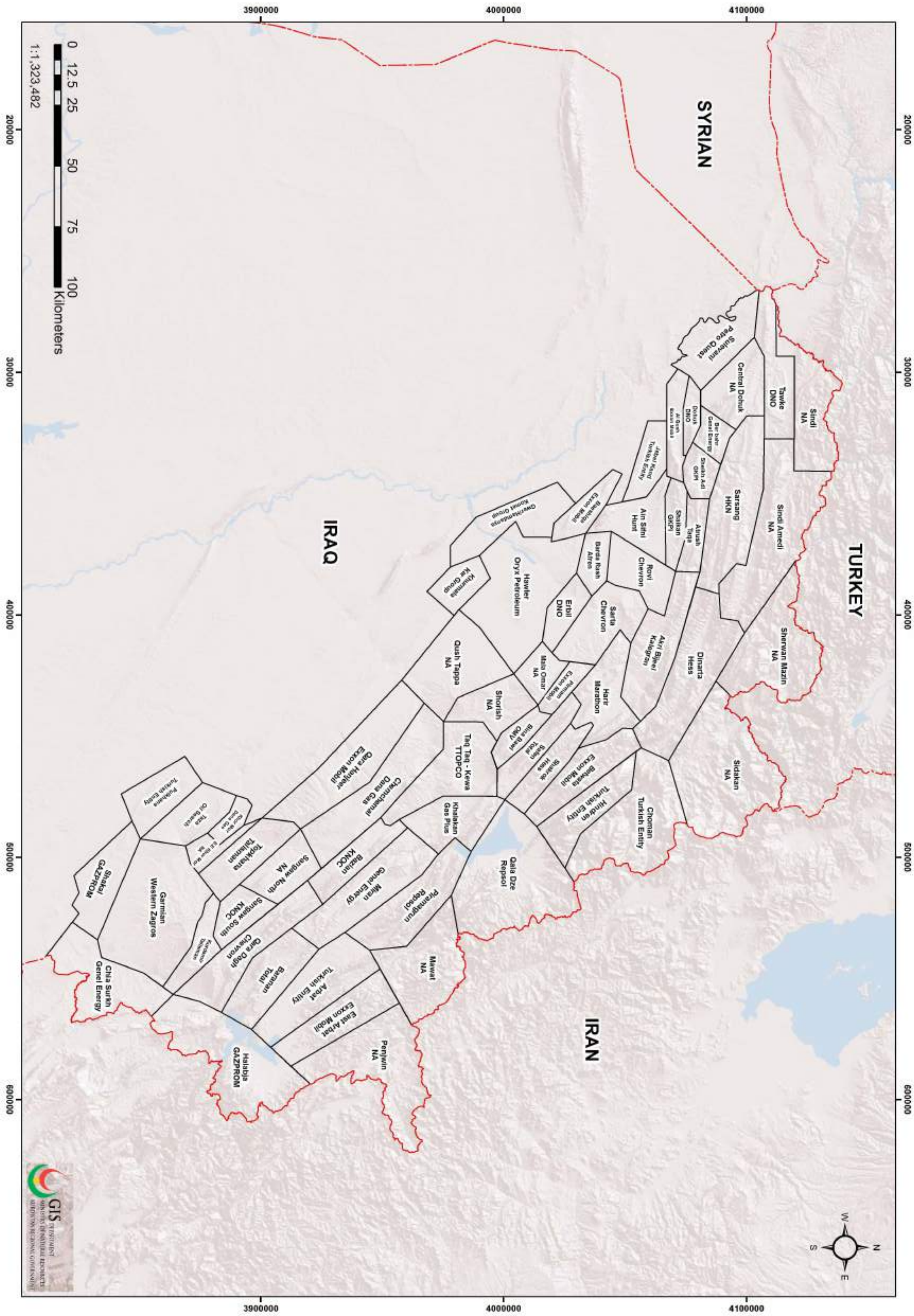
Production Sharing Contracts - PSCs

IOC	Block	Signing Date
Turkish Entity	Pulkhana - 2nd PSC	01/05/2012
Gazprom	Shakal - 2nd PSC	31/07/2012
Gazprom	Halabja	18/02/2013
Total	Baranan - 2nd PSC	25/04/2013
Komet Group	Gwer/Hamdanya	06/06/2013
Chevron	Qara Dagh - 2nd PSC	11/06/2013

Table 16 (b): See below explainer for definitions

IOC	**International Oil Company** (IOC) which is the industry standard term used to describe foreign exploration and production companies. National Oil Companies (NOCs) also exist, such as Saudi Aramco (the NOC of Saudi Arabia). In general NOCs tend to only operate in their home country, however it is not unusual to see NOCs operating out of their home country.
Block	**Block** describes the territory assigned to the IOC for petroleum operations according to the Production Sharing Contract (PSC) between the IOC and the KRG. Block is termed as Contract Area in the contract.
Signing Date	**Signing Date** refers to the date that the Production Sharing Contract (PSC) was signed (may also be described as the Exploration start date).

Blocks Map


SYRIAN
IRAQ
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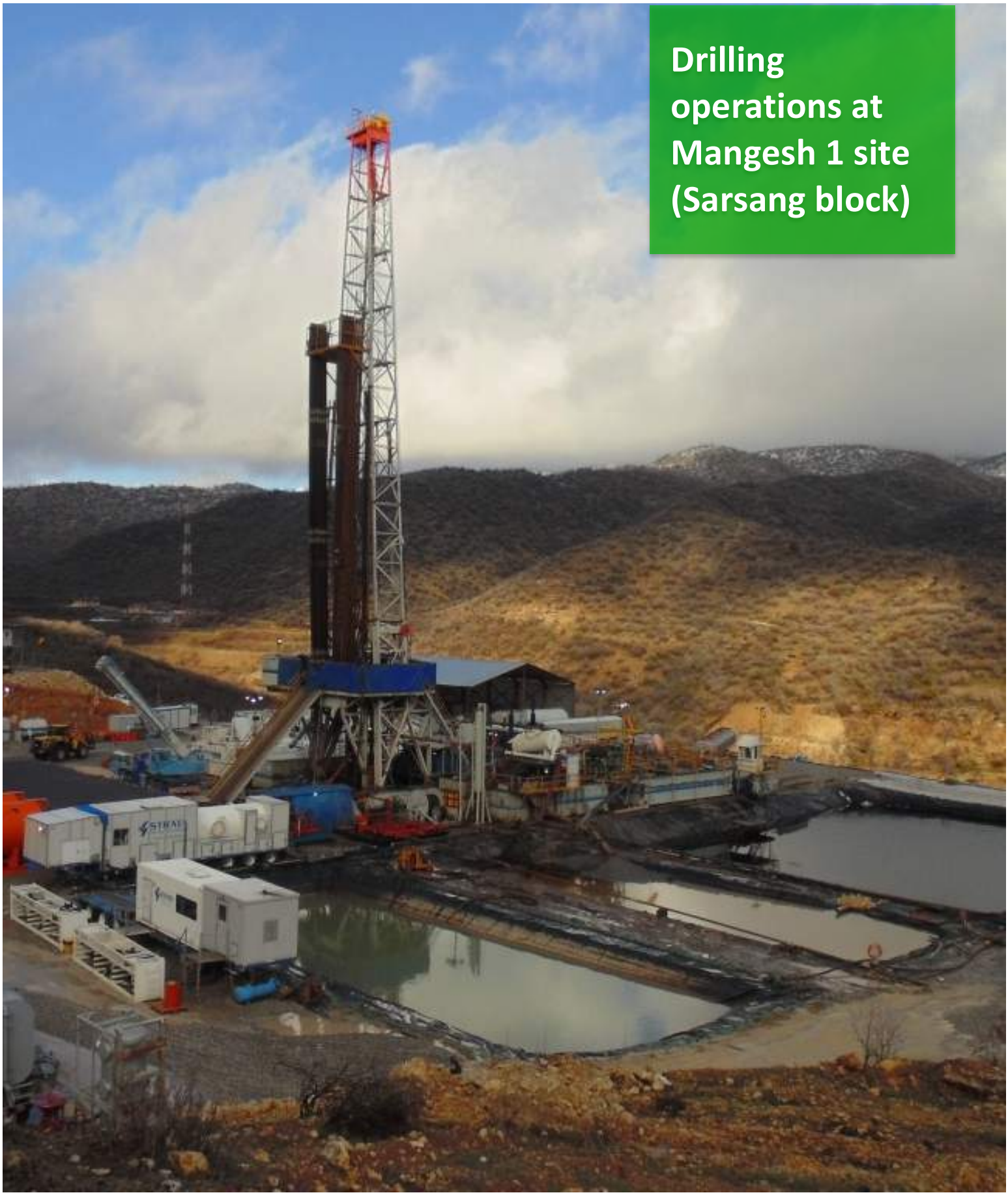


Drilling operations at Mangesh 1 site (Sarsang block)

Section 6

Rig Count & Activity

Rig Count & Activity

No.	Drilling Contractor	Rig Name	Arrival into Kurdistan	No. of wells drilled in Kurdistan previously
1	EDC Romfor	EDC Romfor Rig 22	2006	10
2	EDC Romfor	EDC Romfor Rig 23	2008	6
3	EDC Romfor	EDC Romfor Rig 24	2009	6
4	EDC Romfor	EDC Romfor Rig 25	2013	1
5	Rotary Drilling	R-67	10/01/2011	3
6	Rotary Drilling	R-68	02/03/2012	1
7	Guney Yildizi Petrol	RIG-8	01/08/2012	1
8	Weatherford Drilling	319	2009	3
9	Weatherford Drilling	842	2009	7
10	Weatherford Drilling	829	2010	3
11	Weatherford Drilling	887	2013	NA
12	Weatherford Drilling	888	2013	NA
13	DQE	DQ030	01/03/2013	2
14	DQE	DQ031	01/02/2011	5
15	DQE	DQ032	01/08/2012	2
16	DQE	DQ036	01/06/2013	1
17	DQE	DQ037	01/08/2011	4
18	DQE	DQ038	01/03/2012	2
19	DQE	DQ039	01/10/2005	17
20	DQE	DQ040	01/06/2006	16
21	DQE	DQ051	01/03/2012	4
22	Nabors	103	01/03/2013	0
23	Nabors	104	01/06/2013	0
24	Parker Drilling	247	15/08/2013	0
25	Parker Drilling	269	20/07/2013	0
26	Stone Energy	S101	NA	4
27	Stone Energy	PR 3	2010	6
28	Stone Energy	PR 4	2009	6
29	Performance Drilling	T-63	01/10/2011	3
30	Performance Drilling	T-80	2010	4
31	Performance Drilling	T-221	2011	2
32	KS Drilling	Discoverer-1	2008	7
33	KS Drilling	Di scovere-4	2011	2
34	GW Drilling	GW Drilling R83	10/05/2013	0
35	GW Drilling	GW Drilling R604	01/07/2013	0
36	Sakson Egypt	SK-601	2010	3
37	Sakson Egypt	SK-801	2012	0
38	CAT GmbH	Cardwell KB200C	2012	0
39	Ensign	Rig-941	01/06/2013	1
40	Viking	Rig 21	2013	0
41	Viking	Rig 11	2011	3
42	Viking	Rig 10	2010	2
43	Viking	Rig 7	2012	1
44	Tehnotop	IC 5	2012	NA
45	Tehnotop	T50	2012	NA
46	Tehnotop	Cardwell KB200C	2013	NA

Table 17: See explainer on page 37 for definitions

Rig Count & Activity - Explainer

Drilling Contractor	**Drilling Contractor** refers to the company whom operate and in most cases own the Drilling Rig.
Rig Name	**Rig Name** refers to the unique identification of the equipment (Drilling Rig) used to drill the well.
Arrival into Kurdistan	**Arrival in Kurdistan** refers to when the Rig arrived into Kurdistan.
No. of Wells Drilled in Kurdistan Previously	**No, of wells drilled in Kurdistan Previously** describes the number of wells previously drilled by that rig within the Kurdistan Region.

Rig Count & Activity

No.	Current location of rig (block name if drilling)	Well Name (if drilling)	Currently Drilling (yes/no)	Top Drive or Kelly Drive
1	Hawler	Zeg 1	Yes	TESCO TDS 250 HMI
2	Barda Rash	Barda Rash - 5	Yes	TESCO HS 650
3	Binari Serwan	BS-1	No	NOV TDS 11 SA
4	Yard, Gazna Road, Erbil	NA	No	NOV TDS 11 SA
5	Akri Bijeel	Bijell-4	Yes	Top Drive
6	Akri Bijeel	Bijell-1B	Yes	Top Drive
7	Sarsang	Mangesh-1	No	Top drive
8	Shaikan	SH-07C	Yes	Top Drive
9	Sheikh Adi	SA – 3A	Yes	Top Drive
10	Sarsang	EST-01	No	Top Drive
11	Pirman	Pirman – 1	No	Top Drive
12	Al Qosh	NA	No	Top Drive
13	KDM	KDM # 6	Yes	Kelly Drive
14	Atrush	Atrush-4	Yes	Top Drive
15	Tawke	Tawke-21	Yes	Top Drive
16	Bazian	BN-2	Yes	Top Drive
17	Yard, Erbil	NA	No	Top Drive
18	Yard, Erbil	NA	No	Top Drive
19	Benenan	Benenan-4	Yes	Top Drive
20	Tawke	Tawke-22	Yes	Top Drive
21	Shewashan	Shewashan-1	Yes	Top Drive
22	Sarta	Sarta 2	Yes	Top Drive
23	Rovi	Rovi 2	Yes	Top Drive
24	Dinarta	Kanibot #1	Mobilising	Varco TDS-11 SA
25	Piramagrun	Zewe-1	Yes	Varco TDS-11 SA
26	NA	NA	No	TDS11
27	NA	NA	Mobilising	TDS-11SA
28	NA	NA	No	TDS-11SA
29	Minar	Minar 5	No	TDS 11
30	Topkhana	Topkhana-2	Yes	TDS 1
31	Harir	Jisik-1	Yes	BENTEC
32	Hawler	Banan-1	Yes	Top Drive Varco 11S
33	Taq Taq	TT-22	Yes	Top Drive Varco 11S
34	Garmian	Hasira 1	Yes	Top Drive TDS-11SA
35	Garmian	Baram 1	Yes	Top Drive TDS-11SA
36	Hawler	Demir Dagh - 3	Yes	VARCO TDS11SA
37	Akri Bijeel	Bijeel-2	Yes	TESCO-750- ESI-1350
38	Khurmala	Khurmala 117	Yes	NA
39	Shakrok	Shakrok 1	Yes	Top Drive
40	Maqlub	Maqlub 1	Yes	Top Drive
41	Simrit	Simrit 4	No	Top Drive
42	Barda Rash	BD 4	Yes	Top Drive
43	Bina Bawi	BB3	Yes	Swivel
44	Khurmala	K293	No	NA
45	Khurmala	K306	No	NA
46	Khurmala	K117	No	NA

Table 18: See explainer on page 39 for definitions

Rig Count & Activity – Explainer

Current Location of Rig	**Current Location of Rig** describes where the Rig is located within the Kurdistan Region.
Well Name	A **well** describes the vertical or horizontal hole drilled in order to discover and produce oil and gas.
Currently Drilling	**Currently Drilling** refers to whether the Rig is currently operating or not.
Top Drive or Kelly Drive	A **Top Drive** is a mechanical device on a drilling rig that provides clockwise torque to the drill string to facilitate the process of drilling a well. A **Kelly Drive** refers to a type of well drilling device on a drilling rig that employs a section of pipe with a polygonal outer surface which passes through the bushing and rotary table. This bushing is rotated via the rotary table and thus the pipe and the attached drill string turn while the polygonal pipe is free to slide vertically in the bushing as the bit digs the well deeper.

Rig Count & Activity

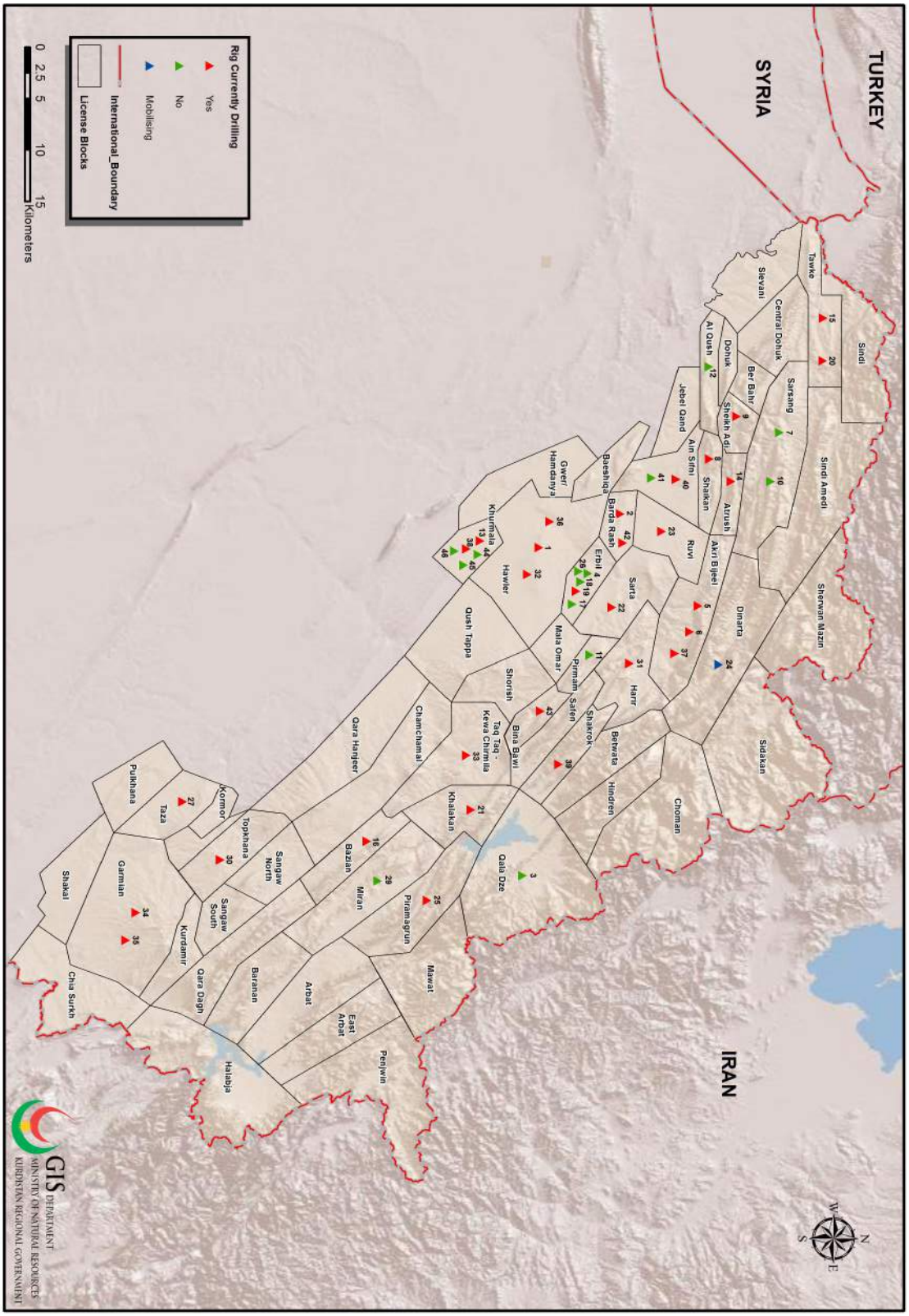
No.	HP	Date of manufacture	Manufacturer	Country of origin
1	1000	Rebuild 2013	Parco	USA
2	1500	NA	Parco	USA
3	1500	Rebuild 2013	Parco	USA
4	1500	2012	National Oilwell	USA
5	2000	2007	Nanyang RG Petro-Machinery (Group) Co. Ltd	China
6	1500	2007	Nanyang RG Petro-Machinery (Group) Co. Ltd	China
7	2000	1978	National	USA
8	3000	1999	Branham	USA
9	1500	2008	NOV	USA
10	2000	2009	Letouneau Industries	UAE/USA
11	2000	2013	Drillmec	Italy
12	2000	2013	Drillmec	Italy
13	750	01/02/2012	RG PETRO-MACHINERY (GROUP) CO.LTD	China
14	2000	01/07/2007	BaoJi Oilfield Machinery CO.LTD	China
15	2000	01/04/2012	BaoJi Oilfield Machinery CO.LTD	China
16	2000	01/05/2012	BaoJi Oilfield Machinery CO.LTD	China
17	2000	01/05/2011	BaoJi Oilfield Machinery CO.LTD	China
18	2000	01/11/2006	BaoJi Oilfield Machinery CO.LTD	China
19	1500	01/06/2005	BaoJi Oilfield Machinery CO.LTD	China
20	1500	01/03/2006	BaoJi Oilfield Machinery CO.LTD	China
21	1500	01/07/2010	BaoJi Oilfield Machinery CO.LTD	China
22	3000	2006 (Refurbished)	Lee C Moore	USA
23	3000	2013 (Refurbished)	Lee C Moore	USA
24	2000	2007	Bomco	China/USA
25	2000	Modified 2008	Loadmaster	USA
26	2000	2007	Bomco	China
27	2000	2008	Bomco	CHINA
28	2000	2008	Bomco	CHINA
29	2000	2011	Dreco	USA
30	2000	2009	Pyramid	USA
31	1500	2010	Bentec	Germany
32	1500	2007	Bomco	China
33	2000	2008	American Lock	America
34	2000	1981 (Refurbished 2013)	Lee-C-Moore	USA
35	2000	1978 (Refurbished 2013)	Dreco	USA
36	2000	2010	Bomco	CHINA
37	3000	2012	DRILLMEC	ITALY
38	460	1996	Cardwell	USA
39	2000	2001	IDM	USA
40	2000	2008	Bomco	China
41	2000	2008	Bomco	China
42	2000	2008	Bomco	China
43	650	2007	RJ	China
44	NA	NA	Upetrom	Romania
45	NA	NA	Upetrom	Romania
46	NA	NA	Cardwell	USA

Table 19: See explainer on page 41 for definitions

Rig Count & Activity - Explainer

HP	**Horsepower or HP** is the unit of measure of power of the Drilling Rig, where 1 HP is equal to 746 watts.
Date of Manufacture	**Date of Manufacture** refers to the date the Drilling Rig was manufacture.
Manufacturer	**Manufacturer** refers to the name of the manufacturing company.
Country of Origin	**Country of Origin** refers to where the Drilling Rig was manufacture.

Current Rig Locations



Section 7

Well Drilling Activity

Well Drilling Activity – General Information

No.	IOC	Block	Well Name	Rig Name	Drilling Contractor
1	Repsol	Piramagrum	Zewe-1	Parker 269	Parker
2	Chevron	Rovi	Rovi 2	104	Nabors
3	Chevron	Sarta	Sarta 2	103	Nabors
4	Talisman	Kurdamir	Kurdamir - 2	T-80	PDOS
5	Talisman	Kurdamir	Kurdamir - 3	T-80	PDOS
6	Talisman	Topkhana	Topkhana - 2	T - 80	PDOS
7	Taqa	Atrush	AT-4	DQE 031	DQE
8	Western Zagros	Garmian	Sarqala-1 RE	Rig 23	Romfor
9	Western Zagros	Kurdamir	Kurdamir-1	Rig 23	Romfor
10	Western Zagros	Garmian	Mil Qasim-1	Rig I-10	Viking
11	Western Zagros	Garmian	Hasira-1	Rig 83	Grey Wolf
12	Western Zagros	Garmian	Baram-1	Rig 604	Grey Wolf
13	OMV	Bina Bawi	Bina Bawi 3	Rig 8	GYP
14	OMV	Bina Bawi	Bina Bawi 4	T-63	PDOS
15	OMV	Bina Bawi	Bina Bawi 6	T-63	PDOS
16	EMKRIL	Pirmam	Pirmam - 1	887	Weatherford
17	EMKRIL	Alqosh	Alqosh - 1	888	Weatherford
18	Oil Search	Taza	Taza-2	PR 3	Sakson
19	Hess	Shakrok	Shakrok #1	Ensign 941	Ensign
20	TTOPCO	Taq Taq	TT-02	Ideco H-525	Unknown
21	TTOPCO	Taq Taq	TT-04	IRI-900	TTOPCO
22	TTOPCO	Taq Taq	TT-05	IRI-900	TTOPCO
23	TTOPCO	Taq Taq	TT-06	IRI-900	TTOPCO
24	TTOPCO	Taq Taq	TT-07	IRI-900	TTOPCO
25	TTOPCO	Taq Taq	TT-08	IRI-900	TTOPCO
26	TTOPCO	Taq Taq	TT-09	IRI-900	TTOPCO
27	TTOPCO	Taq Taq	TT-10	Kurdistan-1	TTOPCO
28	TTOPCO	Taq Taq	TT-11	IRI-900	TTOPCO
29	TTOPCO	Taq Taq	TT-12	IRI-900	TTOPCO
30	TTOPCO	Taq Taq	TT-13	IRI-900	TTOPCO
31	TTOPCO	Taq Taq	TT-14	IRI-900	TTOPCO
32	TTOPCO	Taq Taq	TT-15	IRI-900	TTOPCO
33	TTOPCO	Taq Taq	TT-16	IRI-900	TTOPCO
34	TTOPCO	Taq Taq	TT-17	IRI-900	TTOPCO
35	TTOPCO	Taq Taq	TT-18	IRI-900	TTOPCO
36	TTOPCO	Taq Taq	TT-19	IRI-900	TTOPCO
37	TTOPCO	Taq Taq	TT-20	IRI-900	TTOPCO

Table 20 (a): See explainer on page 47 for definitions

Well Drilling Activity – General Information

No.	IOC	Block	Well Name	Rig Name	Drilling Contractor
38	TTOPCO	Taq Taq	TT-21	IRI-900	TTOPCO
39	TTOPCO	Taq Taq	TT-22	Discoverer-4	AOS (KS Drilling)
40	TTOPCO	Tag Tag	TT-25	IRI-900	TTOPCO
41	TTOPCO	Tag Tag	TT-26	IRI-900	TTOPCO
42	GKPI	Shaikan	SH-1B	Dynamic 1	ARAR
43	GKPI	Shaikan	SH-2	WDI 842	Weatherford
44	GKPI	Shaikan	SH-3	Dynamic 1	ARAR
45	GKPI	Shaikan	SH-4	Rig 22	Romfor
46	GKPI	Shaikan	SH-4	Rig 3	HiTech
47	GKPI	Shaikan	SH-5B	Discoverer 1	AOS (KS Drilling)
48	GKPI	Shaikan	SH-6	WDI 842	Weatherford
49	GKPI	Shaikan	SH-7	WDI 319	Weatherford
50	GKPI	Shaikan	SH-8	WDI 842	Weatherford
51	GKPI	Shaikan	SH-10A	WDI 842	Weatherford
52	GKPI	Sheikh Adi	SA-3	WDI 842	Weatherford
53	Gas Plus	Khalakan	Shewahan-1A	Rig 051	DQE
54	Afren	Barda Rash	Barda Rash - 1	F - 320	CASCO Petroleum
55	Afren	Barda Rash	Barda Rash - 2	F - 200	CASCO Petroleum
56	Afren	Barda Rash	Barda Rash - 4	i10	Viking
57	Afren	Barda Rash	Barda Rash - 5	23	EDC Romfor
58	Afren	Barda Rash	Barda Rash - 1	23	Romfor
59	Afren	Barda Rash	Barda Rash - 2	23	Romfor
60	Genel Enerji	Ber Bahr	Ber Bahr -1	PR4	Sakson
61	Genel Enerji	Miran	Miran West – 1	RIG 10	Great Wall Drilling
62	Genel Enerji	Miran	Miran West – 5	T63	Performance
63	Hunt Oil	Ain Sifni	Simrit #2	Rig 11	Viking
64	Hunt Oil	Ain Sifni	Maqlub #1	Rig 21	Viking
65	Oryx	Hawler	Demir Dagh – 3	HL10	Sakson
66	Oryx	Hawler	Banan – 1	DS1	KS Drilling
67	Oryx	Hawler	Demir Dagh -2	R22	EDC Romfor
68	Oryx	Hawler	Demir Dagh – 2	DS1	KS Drilling
69	Oryx	Hawler	Zey Gwara – 1	DS1	KS Drilling
70	Oryx	Hawler	Demir Dagh – 4	R22	EDC Romfor
71	Marathon Oil	Harir	Mirawa #1	T-221	PDOS
72	Marathon Oil	Harir	Jisik – 1	T – 221	PDOS
73	KNOC	Bazian	Bn-2	DQ036	DQE
74	Kalegran	Akri-Bijeel	Bijell-2	S – 801	Sakson
75	Kalegran	Akri-Bijeel	Bijell-1B	R – 69	Rotary
76	Kalegran	Akri-Bijeel	Bijell-4	R- 67	Rotary
77	Khurmala	Khurmala	K-122 (KDS-22)	IC-5	Tehnotop
78	Khurmala	Khurmala	K-114 (KDM-14)	IC-5	Tehnotop
79	Khurmala	Khurmala	K-123 (KDS-23)	IC-5	Tehnotop

Table 20 (b): See explainer on page 47 for definitions

Well Drilling Activity – General Information

No.	IOC	Block	Well Name	Rig Name	Drilling Contractor
80	Khurmala	Khurmala	K-211 (KDS-24)	T 50	Tehnotop
81	Khurmala	Khurmala	K-212 (KDM-19)	IC-5	Tehnotop
82	Khurmala	Khurmala	K-113 (KDM-08)	IC-5	Tehnotop
83	Khurmala	Khurmala	K-153 (KDM-24)	T 50	Tehnotop
84	Khurmala	Khurmala	K-389 (KDS-17)	Sindy I	OilServ
85	Khurmala	Khurmala	K-277 (KDS-03)	Sindy I	OilServ
86	Khurmala	Khurmala	K-387 (KDS-16)	F 100-DH-T	OilServ
87	Khurmala	Khurmala	K-383 (KDS-13)	Cardwell 125	Tehnotop
88	Khurmala	Khurmala	K-398 (KDS-20)	T 50	Tehnotop
89	Khurmala	Khurmala	K-390 (KDS-18)	Cardwell 125	Tehnotop
90	Khurmala	Khurmala	K-295 (KDN-09)	IC-5	Tehnotop
91	Khurmala	Khurmala	K-117 (KDM-01)	Cardwell 125	Tehnotop
92	Khurmala	Khurmala	K-113 (KDM-08)	T 50	Tehnotop
93	Khurmala	Khurmala	K-293 (KDM-25)	IC-5	Tehnotop
94	Khurmala	Khurmala	K-397 (KDM-03)	Mena-3	NPS
95	DNO	Tawke	Tawke - 1	Rig 9	DQE
96	DNO	Tawke	Tawke - 1A	Rig 9	DQE
97	DNO	Tawke	Tawke - 2	Rig 9	DQE
98	DNO	Tawke	Tawke - 4	Rig 9	DQE
99	DNO	Tawke	Tawke - 3	Rig 10	DQE
100	DNO	Tawke	Tawke - 5	Rig 9	DQE
101	DNO	Tawke	Tawke - 8	Rig 9	DQE
102	DNO	Tawke	Tawke - 5A	Rig 10	DQE
103	DNO	Tawke	Tawke - 12	Rig 10/Sindy-1	DQE
104	DNO	Tawke	Tawke - 11	Rig 9/Sindy-1	DQE
105	DNO	Tawke	Tawke -15	Rig 9	DQE
106	DNO	Tawke	Tawke - 10	Sindy-1	DQE
107	DNO	Tawke	Tawke - 9	Sindy-1	DQE
108	DNO	Erbil	Bastora -1	Rig 9 NC	DQE
109	DNO	Dohuk	Summail - 1	Rig 10	DQE
110	DNO	Tawke	Tawke - 13	Rig 9 NC	DQE
111	DNO	Tawke	Tawke - 16	Rig 10	DQE
112	DNO	Tawke	Tawke - 14	Rig 10	DQE
113	DNO	Tawke	Tawke - 18	Rig 10	DQE
114	DNO	Erbil	Benenan - 3	Rig 9 NC	DQE
115	DNO	Tawke	Tawke - 19	Rig 10	DQE

Table 20 (c): See explainer on page 47 for definitions

Well Drilling Activity – General Information with Explainer

No.	IOC	Block	Well Name	Rig Name	Drilling Contractor
116	DNO	Tawke	Tawke - 14AST	Rig 51	DQE
117	DNO	Tawke	Tawke - 20	Rig 10	DQE
118	DNO	Erbil	Bastora - 2 Pilot	Rig 9 NC	DQE
119	DNO	Tawke	Tawke - 17	Rig 32	DQE
120	DNO	Tawke	Tawke - 23	Rig 10	DQE
121	DNO	Tawke	Tawke - 21	Rig 32	DQE
122	DNO	Erbil	Benanan - 4	Rig 9 NC	DQE
123	DNO	Tawke	Tawke - 22	Rig 10	DQE
124	Dana Gas	Kormor	KM-3	NA	NOC (Operator)
125	Dana Gas	Kormor	KM-4	Rig 24	Romfor
126	Dana Gas	Kormor	KM-5	NA	NOC (Operator)
127	Dana Gas	Kormor	KM-6	NA	NOC (Operator)
128	Dana Gas	Kormor	KM-7	NA	NOC (Operator)
129	Dana Gas	Kormor	KM-8	NA	NOC (Operator)

Table 20 (d): See below explainer for definitions

IOC	**International Oil Company** (IOC) is the industry standard term used to describe foreign exploration and production companies. National Oil Companies (NOCs) also exist, such as Saudi Aramco, the NOC of Saudi Arabia. In general NOCs tend to only operate in their home country, however it is not unusual to see NOCs operating out of their home country.
Block	**Block** describes the territory assigned to the IOC for petroleum operations according to the Production Sharing Contract (PSC) between the IOC and the KRG. Block is termed as Contract Area in the contract.
Well Name	A **well** describes the vertical or horizontal hole drilled in order to discover and produce oil and gas.
Rig Name	**Rig Name** refers to the unique identification of the equipment (Drilling Rig) used to drill the well.
Drilling Contractor	**Drilling Contractor** refers to the company whom operate and in most cases own the Drilling Rig.

Well Drilling Activity – Specific Information

No.	Spud Date	Current Status	Current Depth (m)	Target Depth (m)	Date TD was Reached (or Estimated)
1	05/11/2013	Drilling	2280	3500	30/03/2014
2	23/07/2013	Drilling	3975	4470	NA
3	25/06/2013	Drilling	3444	3657	NA
4	25/10/2011	Awaiting EWT	4000	4000	25/06/2012
5	22/02/2013	Completed	2895	2885	17/06/2013
6	06/12/2013	Drilling	1744	2757	20/03/2013
7	20/10/2013	Testing	1688	2459	21/01/2014
8	03/11/2011	Producing	3897	3818	06/07/2011
9	05/11/2009	Completion	4077	4000	22/12/2010
10	29/08/2011	Completion	2425	2400	24/11/2011
11	06/06/2013	Drilling	3992	4181	14/02/2014
12	13/08/2013	Drilling	3469	3732	02/01/2014
13	12/01/2011	Completed	3720	4121	20/09/2011
14	17/06/2012	Completed	4677	4220	06/07/2013
15	28/07/2013	Testing	2185	2454	31/12/2013
16	16/08/2013	Drilling	399	3435	01/06/2014
17	NA	Rigging Up	0	3600	01/10/2014
18	01/12/2014	Drilling	NA	4016	01/07/2014
19	30/08/2013	Drilling	1800	3000	30/03/2014
20	13/06/1978	Completion	663	663	01/07/1978
21	13/05/2006	Producing	2286	2286	26/08/2006
22	23/10/2006	Producing	2070	2070	20/12/2006
23	08/01/2007	Producing	2265	2265	06/04/2007
24	30/04/2007	Producing	2187	2187	03/07/2007
25	19/07/2007	Producing	2366	2366	12/12/2007
26	30/08/2007	Water Injection	2444	2444	02/11/2007
27	14/08/2008	Producing	2247	2247	13/12/2008
28	04/09/2008	Completion	1000	1000	30/09/2008
29	12/12/2010	Producing	2179	2179	21/04/2011
30	27/04/2011	Producing	2227	2227	11/07/2011
31	14/07/2011	Producing	2354	2354	26/08/2011
32	27/08/2011	Producing	2170	2170	25/10/2011
33	29/10/2011	Producing	2392	2392	07/01/2012
34	08/01/2012	Producing	2300	2300	28/03/2012
35	24/10/2012	Producing	2175	2175	05/01/2013
36	28/03/2012	Producing	2375	2375	30/06/2012
37	15/06/2013	Producing	2422	2422	17/08/2013

Table 21 (a): See explainer on page 51 for definitions

Well Drilling Activity – Specific Information

No.	Spud Date	Current Status	Current Depth (m)	Target Depth (m)	Date TD was Reached (or Estimated)
38	02/04/2013	Producing	2370	2370	30/05/2013
39	27/03/2013	Drilling	3978	5427	31/03/2014
40	06/10/2013	Drilling (Temporary Suspended)	520	579	09/01/2014
41	30/10/2013	Drilling	520	582	07/12/2013
42	17/07/2010	Producing	NA	NA	25/08/2010
43	12/01/2010	Completed/Tested	3300	3300	18/07/2011
44	09/02/2010	Producing	1518	1210	12/02/2010
45	28/12/2012	Completed/Tested	NA	NA	11/02/2013
46	01/12/2013	Ready for Production	NA	NA	27/12/2013
47	28/10/2011	Completed/Tested	3745	3745	05/10/2012
48	17/12/2011	Completed/Tested	3544	3544	29/04/2012
49	16/06/2013	Drilling	1351	4546	01/06/2014
50	30/12/2012	Completed/Tested	2178	2178	30/10/2012
51	07/05/2013	Completed/Tested	2255	2255	25/09/2013
52	02/12/2013	Mobilising	1376	3800	11/04/2014
53	NA	Drilling	1388	3672	05/01/2014
54	02/04/2009	Producing	3746	3300	06/11/2009
55	04/08/2010	Water Injection	3028	2750	22/12/2010
56	28/05/2013	Testing	4400	4400	16/10/2013
57	20/03/2013	Drilling	3329	4358	06/03/2014
58	12/06/2012	Producing	3746	3300	05/09/2012
59	29/12/2012	Water Injection	3122	2750	23/03/2013
60	Genel Enerji	Ber Bahr	Ber Bahr -1	PR4	Sakson
61	Genel Enerji	Miran	Miran West – 1	RIG 10	Great Wall Drilling
62	Genel Enerji	Miran	Miran West – 5	T63	Performance
63	29/10/2011	Testing	3800	3000	17/05/2012
64	15/06/2013	Drilling	3095	3224	06/01/2014
65	01/10/2013	Drilling	3846	4135	NA
66	01/08/2013	Testing	4000	4153	NA
67	01/11/2013	Completion	NA	NA	NA
68	01/07/2012	Completion	4020	4300	01/04/2013
69	01/03/2013	Completion	5298	4468	01/08/2013
70	01/12/2013	Drilling	1860	2130	10/02/2014
71	19/03/2013	Completion	4260	3895	02/07/2013
72	26/12/2013	Drilling	337	3900	19/03/2014
73	22/06/2013	Testing	4950	4800	24/12/2013
74	13/03/2013	Drilling	4394	5393	NA
75	17/11/2013	Drilling	3934	3945	NA
76	01/12/2013	Drilling	2352	4819	NA
77	02/02/2012	Producing	1083	1083	NA
78	13/03/2012	Producing	1005	1005	NA
79	30/03/2012	Observation Well	1233	1233	NA
80	17/04/2012	Observation Well	1024	1024	NA

Table 21 (b): See explainer on page 51 for definitions

Well Drilling Activity – Specific Information

No.	Spud Date	Current Status	Current Depth (m)	Target Depth (m)	Date TD was Reached (or Estimated)
81	05/02/2012	Observation Well	1100	1100	NA
82	29/05/2012	Producing	1028	1028	NA
83	15/07/2012	Producing	1004	1004	NA
84	17/07/2012	Producing	1030	1030	NA
85	10/09/2012	Producing	1035	1035	NA
86	17/08/2013	Completion	1025	1025	NA
87	03/09/2013	Producing	1034	1034	NA
88	05/03/2013	Producing	1035	1035	NA
89	06/11/2013	Producing	1024	1024	NA
90	18/02/2013	Producing	1021	1021	NA
91	23/09/2013	Completion	1018	2300	NA
92	28/08/2013	Completion	1045	1045	NA
93	24/08/2013	Completion	1030	1070	NA
94	14/09/2013	Completion	1047	1047	NA
95	28/11/2005	Producing	2400	NA	12/06/2006
96	24/06/2006	Producing	724	NA	14/09/2006
97	25/09/2006	Producing	712	NA	03/12/2006
98	14/12/2006	Producing	395	NA	14/01/2007
99	10/01/2007	Producing	2545	NA	21/05/2007
100	22/01/2007	Producing	580	NA	01/03/2007
101	27/04/2007	Producing	2650	NA	18/09/2007
102	31/05/2007	Producing	2425	NA	31/08/2007
103	11/09/2007	Producing	2753	NA	28/03/2008
104	29/09/2007	Producing	2622	NA	23/06/2008
105	21/05/2008	Producing	3160	NA	16/10/2008
106	04/07/2008	Producing	636	NA	16/08/2008
107	23/08/2008	Producing	730	NA	19/09/2008
108	07/09/2010	Producing	3536	NA	18/05/2011
109	19/04/2011	Future Producer	3639	NA	14/12/2011
110	25/06/2011	Producing	2486	NA	17/08/2011
111	29/12/2011	Producing	2369	NA	01/03/2012
112	13/03/2012	Producing	2234	NA	16/05/2012
113	28/05/2012	Producing	2600	NA	22/09/2012
114	23/07/2012	Producing	3178	NA	15/11/2012
115	10/06/2012	Producing	2477	NA	26/11/2012

Table 21 (c): See explainer on page 51 for definitions

Well Drilling Activity – Specific Info with Explainer

No.	Spud Date	Current Status	Current Depth (m)	Target Depth (m)	Date TD was Reached (or Estimated)
116	10/10/2012	Producing	2587	NA	18/11/2012
117	11/12/2012	Producing	2936	NA	24/04/2013
118	14/12/2012	Producing	3255	NA	25/07/2013
119	30/08/2012	Reservoir Assessment	4775	NA	05/07/2013
120	08/05/2013	Producing	2800	NA	21/08/2013
121	31/08/2013	Drilling	2875	2966	01/11/14
122	08/07/2013	Completion	3626	NA	11/09/2013
123	09/04/2013	Completion	2620	NA	15/11/2013
124	30/01/1980	Producing	1720	NA	01/08/1980
125	16/06/2010	Producing	1460	1460	09/11/2010
126	01/01/1989	Producing	1403	NA	01/01/1990
127	01/01/1990	Producing	1337	NA	01/01/1990
128	01/01/1990	Producing	1428	NA	01/01/1990
129	01/01/1990	Producing	1402	NA	01/01/1990

Table 21 (d): See below explainer for definitions

Spud Date	**Spud Date** refers to the first day of drilling.
Current Status	The **Current Status** describes the nature of the current operations taking place at the well. These typically include, but are not limited to: Drilling, Testing, Completion and Production.
Current Depth	Measure in meters (m), the **Current Depth** describes the depth reached by the drilling contractor.
Target Depth	Measure in meters (m), the **Target Depth** or **TD** describes the objective depth to be reached by the drilling contractor, as set by the IOC.
Date TD was Reached	**Date TD was Reached** refers to the day the target depth was reached, or if it has not yet been reached, the estimated date.

MINISTRY OF NATURAL RESOURCES | KURDISTAN REGIONAL GOVERNMENT

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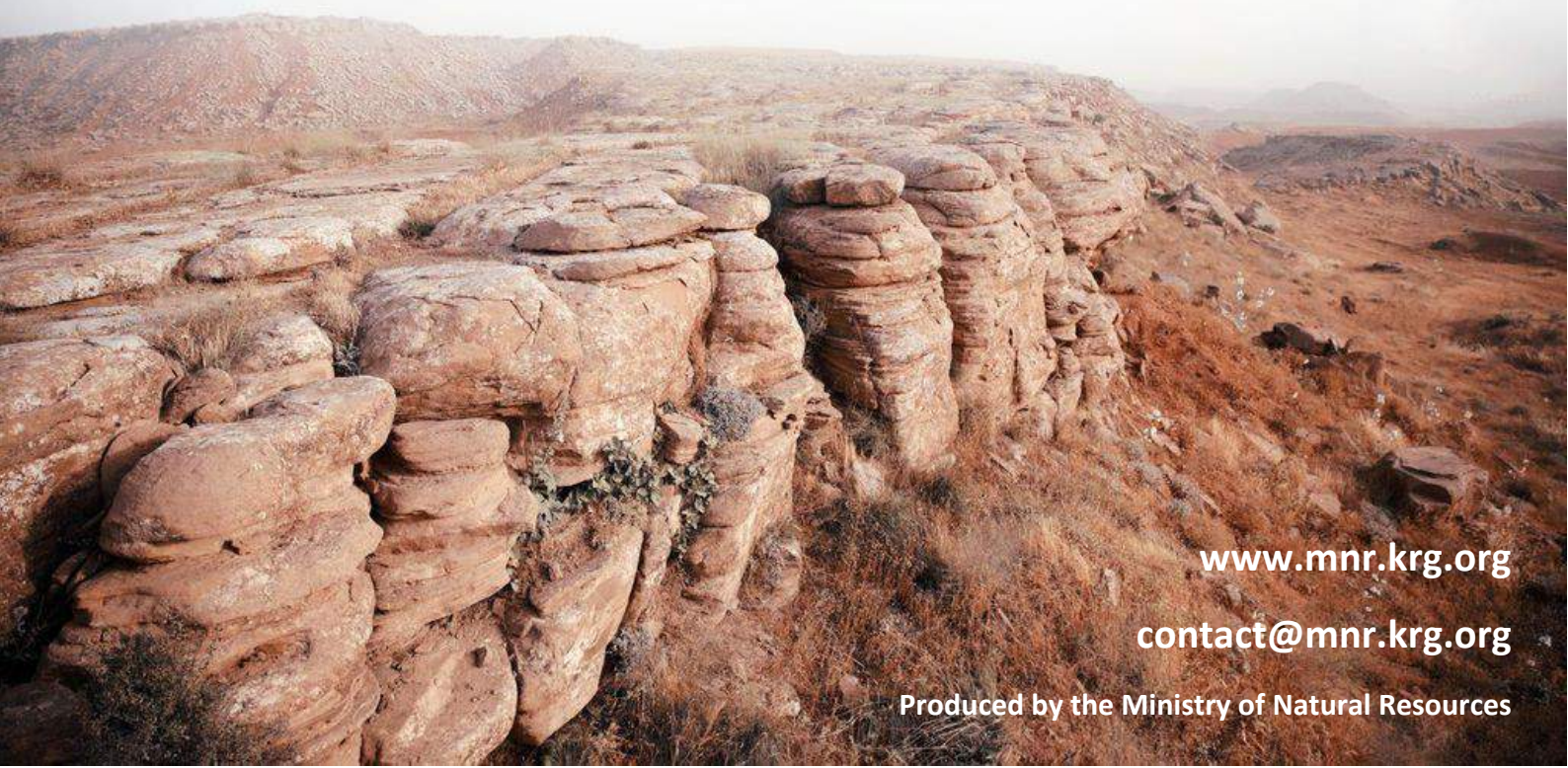

www.mnr.krg.org

contact@mnr.krg.org

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