

### **BUILDING AN ENERGY FUTURE**

This report provides a summary of crude oil production, refining, local consumption and export in the Kurdistan Region of Iraq in 2015. It also contains information on the Region's pipeline infrastructure, the status of exploration blocks, and the composition of the workforce in the Region's oil and gas sector.

Since June 24, the Kurdistan Regional Government (KRG) has resumed its policy of direct oil sales via the Turkish port of Ceyhan to compensate the Kurdistan Region for the significant revenue shortfalls due to budgetary non - compliance by the Iraqi federal government. Export of crude oil has risen throughout the year as upgrades to the pipeline network increased export capacity. In 2015, the KRG continued its cooperation with the North Oil Company in Kirkuk to facilitate the flow of oil from the previously stranded Kirkuk field, in line with the provisions of the 2015 federal budget.



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### **KEY EVENTS 2015**

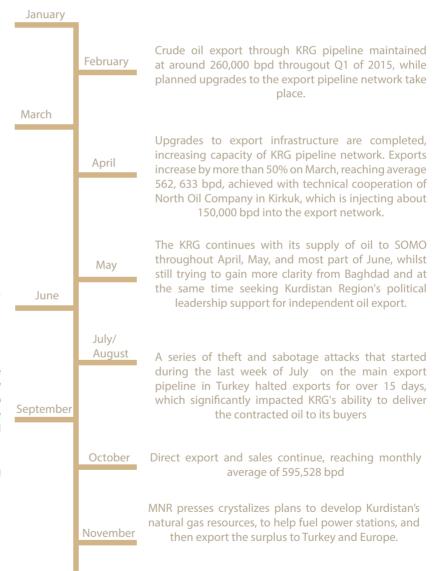
Export Agreement between the Kurdistan Regional Government and the Federal Government is enshrined in the 2015 Iraq budget. KRG to transfer to SOMO at port of Ceyhan 550,000 bpd as an annual average. Federal government to provide KRG with full 17% of its budgetary entitlement, agreed to be around US\$1 billion per month, plus a sum of money for the Peshmerga.

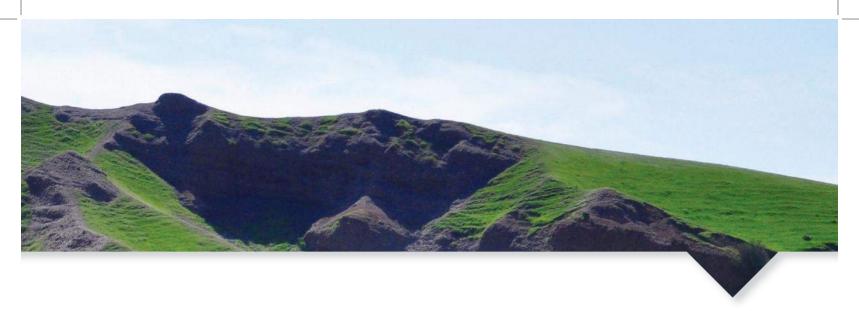
KRG receives much less than expected 17% of overall federal budget figure from Baghdad, which is unable to pay, so after several unsuccessful attempts to persuade Baghdad to pay, the KRG decides on a policy of direct oil sales to make up for shortfall. It asks Kurdistan Region's political leadership to support the policy.

Due to shortfalls caused by the Iraqi federal government in sending less than 40% of the KRG's budget entitlement, the KRG finally, by mid - June, gains political support from the political leadership of the coalition parties to restart independent direct oil sales. It signs pre-payment deals with a number of international oil trading houses to generate revenues to pay government salaries, fight terrorism and support 1.8 million refugees and IDPs.

Despite economic crisis affecting the Region, the KRG authorizes the first tranche of regular monthly payments to the exporting IOCs, enabling them to cover costs and maintain production, and at the same time continues to generate just enough additional revenues to meet the monthly payroll of the KRG.

KRG issues calls for expression of interest for building up to three new refineries in the Kurdistan Region.





### **GROSS PRODUCTION 2015**

**Monthly Outputs** 



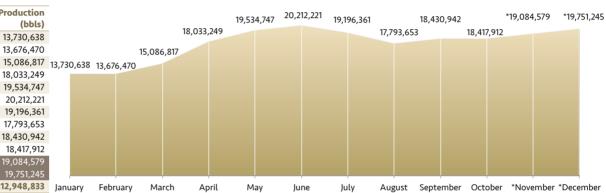


Table 1: Monthly Crude Oil Production in Barrels.

Graph 1: Monthly Crude Oil Production in Barrels.

Month	Average Monthly Production (in BPD)
January	442,924
February	488,445
March	486,672
April	601,108
May	630,153
June	673,741
July	619,237
August	573,989
September	614,365
October	594,126
*November	636,153
*December	637,137
Total	583,421

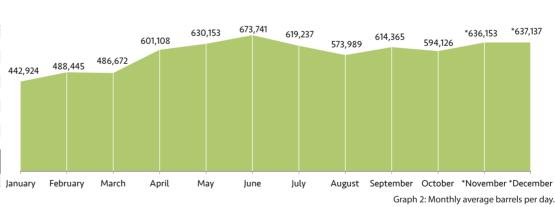
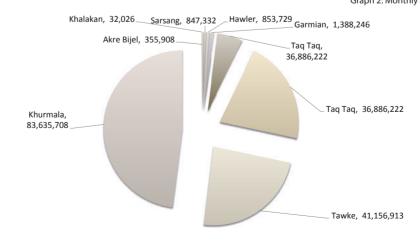


Table 2: Monthly average barrels per day.

Block	Annual Production
ВЮСК	(bbls)
Khalakan	32,026
Akre Bijel	355,908
Sarsang	847,332
Hawler	853,729
Garmian	1,388,246
Shaikhan	8,956,927
Taq Taq	36,886,222
Tawke	41,156,913
Khurmala	83,635,708
Total	174,113,009

Table 3: 2015 Production Output per Block (till October 2015).





**EXPORTS 2015** 

Via KRG - Turkey Pipeline

Exports via K	RG Pipeline per	month (bbls)	
Month	KRG Exports	NOC Contribution	Total
January	7,914,548	-	7,914,548
February	7,723,213	-	7,723,213
March	8,187,697	-	8,187,697
April	12,457,371	4,421,614	16,878,985
May	12,620,452	5,285,790	17,906,242
June	12,740,711	4,389,928	17,130,639
July	12,020,683	3,998,407	16,019,090
August	10,958,817	3,698,981	14,657,798
September	13,898,548	4,715,794	18,614,342
October	13,611,252	4,850,105	18,461,357
*November	14,449,274	4,900,070	19,349,344
*December	14,724,637	4,950,035	19,674,672
Total	141,307,204	41,210,724	182,517,928

Table 4: Monthly and Daily Exports via KRG Pipeline of KRG operated fields and NOC (North Oil Company operated fields.

\*November and December Export figures are based upon estimates.

\*\*During July and August the KRG pipeline underwent downtime, sabotage and theft inside Turkey resulting in the decline of Exports.

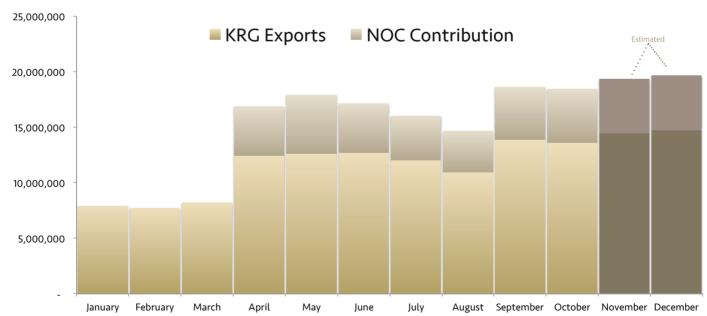
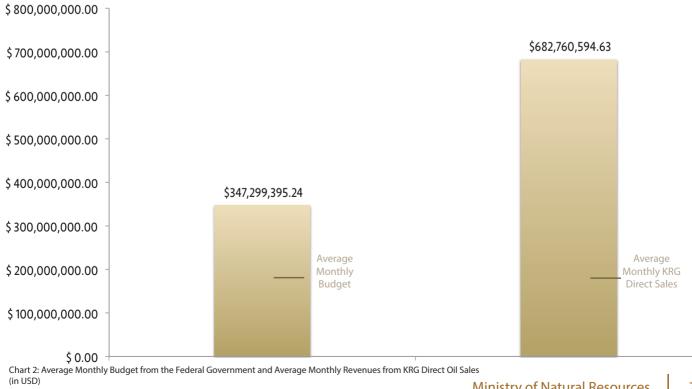


Chart 1: Exports via KRG Pipeline of KRG operated fields and fields operated by the North Oil Company (NOC) in bbls.



### KRG Revenues 2015

Month	01/01/2015 -22/06/2015	01/01/2015 -22/06/2015	23/06/2015 -16/11/2015
A4 Ab	Paid by Federal	Paid by Federal	Achieved through Direct
Month	Government (000 IQD)	Government (USD)	Export Sales (USD)
January	250,000,000	204,918,033	-
February	490,742,267	402,247,760	-
March	527,432,000	432,321,311	-
April	480,066,000	393,496,721	-
May	508,815,000	417,061,475	-
June	166,771,000	136,697,541	876,667,000
june-July	-	-	440,000,000
July-August	-	-	585,000,000
August-September	-	-	550,000,000
September-October	-	-	721,030,778
October-November *		-	127,000,000
Total	2,423,826,267	1,986,742,842	3,299,697,778
		-	
*Note: the figures are until mid November, more t	o come during the rest of the month	-	-
		-	
Number of Days	174	174	147
Effective Months	5.72	5.72	4.83
Average Revenue / Month	423,705,262	347,299,395	682,760,595
% increase from 23rd June			197%





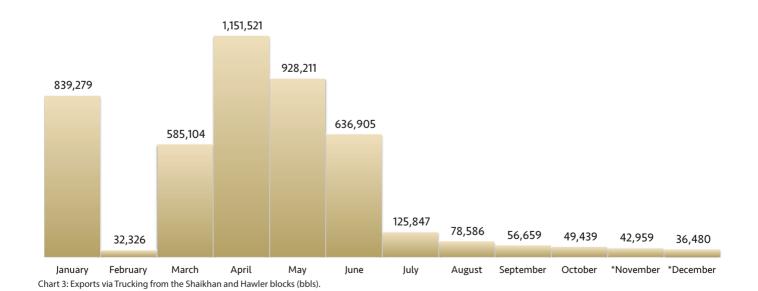
### **EXPORTS 2015**

Via Trucking

Month	Exports via Trucking (bbls)	Daily Exports via Trucking (bbls)	Month	Exports via Trucking (bbls)	Daily Exports via Trucking (bbls)
January	839,279	27,074	July	125,847	4,060
February	32,326	1,154	August	78,586	2,535
March	585,104	18,874	September	56,659	1,889
April	1,151,521	38,384	October	49,439	1,595
May	928,211	29,942	*November	42,959	1,432
June	636,905	21,230	*December	36,480	1,177
Sub total	4,173,347	136,659	Sub total	389,970	12,687

Table 5: Monthly Exports via Trucking from the Shaikhan and Hawler blocks.

Monthly Total (bbls)	4,563,316
Daily Average (bbls)	149,346

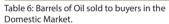


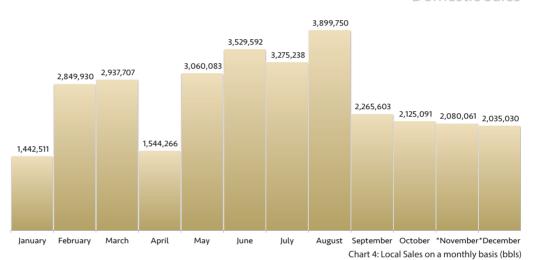


### LOCAL CONSUMPTION INCLUDING SWAPS 2015

**Domestic Sales** 

Month	Local Consumption
Month	(bbls)
January	1,442,511
February	2,849,930
March	2,937,707
April	1,544,266
May	3,060,083
June	3,529,592
July	3,275,238
August	3,899,750
September	2,265,603
October	2,125,091
*November	2,080,061
*December	2,035,030
Total	31,044,862





### **OPERATIONAL USE 2015**

Field Usage by Operators

Month	Operational Use
1-1011611	(bbls)
January	2,988
February	1,772
March	1,372
April	2,885
May	1,069
June	168
July	212
August	1,755
September	1,766
October	0
*November	0
*December	0
Total	13,988

Table 7: Usage of Crude Oil (in bbls) for field operations

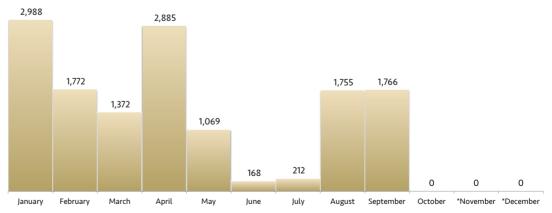


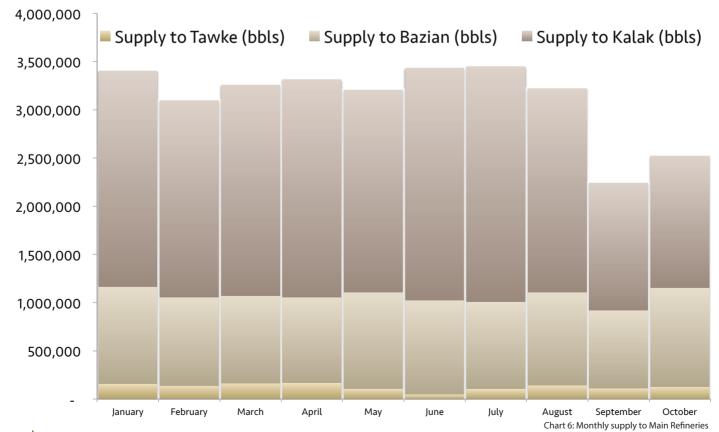
Chart 5: Operational Use by Operators (in bbls).



### **SUPPLIED TO MAIN REFINERIES 2015**

	1	<b>Monthly Supp</b>	ly		Daily S	upply		
Month	Supply to Tawke (bbls)	Supply to Bazian (bbls)	Supply to Kalak (bbls)	Total Supply (bbls)	Daily Supply to Tawke (bbls)	Daily Supply to Bazian (bbls)	Daily Supply to Kalak (bbls)	Average Daily Supply (bbls)
January	161,531	1,002,302	2,240,288	3,404,121	5,211	32,332	72,267	109,810
February	140,776	915,640	2,040,302	3,096,718	5,028	32,701	72,868	110,597
March	166,913	906,315	2,181,237	3,254,465	5,384	29,236	70,362	104,983
April	167,202	888,368	2,256,674	3,312,244	5,573	29,612	75,222	110,408
May	108,262	998,915	2,097,360	3,204,537	3,492	32,223	67,657	103,372
June	48,663	979,058	2,404,652	3,432,373	1,622	32,635	80,155	114,412
July	104,999	905,640	2,435,959	3,446,598	3,387	29,214	78,579	111,181
August	143,721	966,626	2,110,664	3,221,012	4,636	31,181	68,086	103,904
September	112,966	806,533	1,321,268	2,240,767	3,766	26,884	44,042	74,692
October	128,685	1,026,602	1,367,059	2,522,346	4,151	33,116	44,099	81,366
Total	1,283,719	9,395,999	20,455,463	31,135,180	4,225	30,914	67,334	102,473

Table 8: Monthly Crude Oil supply to Main Refineries





### **REFINED PRODUCTS 2015**

Refining Outputs by Refineries



Month	Naphtha (bbls)	Sweet Nap. (bbls)	Gasoline (bbls)	Kerosene (bbls)	Diesel (bbls)	Fuel Oil (bbls)	LPG (bbls)	Jet Fuel (bbls)	Total Products (bbls)
January	23,663	-	-	-	37,803	99,757	-	-	161,224
February	20,350	-	-	-	29,995	90,123	-	-	140,467
March	21,796	-	-	-	38,673	106,184	-	-	166,653
April	22,372	-	-	-	36,929	107,685	-	-	166,985
May	16,504	-	-	-	24,240	67,321	-	-	108,065
June	11,417	-	-	-	16,024	21,049	-	-	48,490
July	18,773	-	-	-	25,716	60,248	-	-	104,737
August	23,210	-	-	-	35,211	84,952	-	-	143,372
September	10,147	-	-	-	29,955	72,521	-	-	112,623
October	774	-	-	-	34,986	88,701	-	-	124,460
Total	169,005	-	-	-	309,532	798,539	-	-	1,277,076

0.52% loss occured at Tawke due to the refining process



Month	Naphtha (bbls)	Sweet Nap. (bbls)	Gasoline (bbls)	Kerosene (bbls)	Diesel (bbls)	Fuel Oil (bbls)	LPG (bbls)	Jet Fuel (bbls)	Total Products (bbls)
January	252,412	-	189,288	101,745	101,758	336,570	6,833	-	988,605
February	280,941	-	105,711	91,648	89,353	289,751	5,924	-	863,328
March	189,034	4,900	188,883	87,793	93,031	272,650	10,266	-	846,558
April	326,378	2,445	82,999	90,451	118,284	280,443	3,526	-	904,526
May	243,009	5,437	180,362	97,476	123,516	316,891	14,173	-	980,864
June	264,147	4,055	148,685	93,229	117,281	301,821	10,357	-	939,574
July	181,490	-	168,890	87,486	103,355	272,196	10,336	-	823,753
August	214,068	4,143	184,395	97,431	125,591	317,248	9,552	-	952,428
September	233,904	1,076	164,882	95,955	130,472	301,663	9,991	-	937,942
October	251,513	3,983	144,443	96,735	124,398	291,879	10,230	-	923,181
Total	2,436,896	26,039	1,558,538	939,949	1,127,039	2,981,112	91,187	-	9,160,760

2.5% loss occured at Bazian due to the refining process



Month	Naptha (bbls)	Sweet Nap. (bbls)	Gasolene (bbls)	Kerosene (bbls)	Diesel (bbls)	Fuel Oil (bbls)	LPG (bbls)	Jet Fuel (bbls)	Total Products (bbls)
January	596,005	-	418,066	42,789	377,418	1,102,293	37,139	38,074	2,015,779
February	575,282	3,656	375,844	45,842	354,553	1,060,637	33,983	31,428	1,905,943
March	589,806	9,463	390,380	25,084	369,126	1,131,246	34,750	44,231	2,004,279
April	578,081	-	408,055	25,088	378,805	1,131,233	31,265	46,330	2,020,776
May	586,251	-	420,886	27,196	367,428	1,131,637	34,738	43,369	2,025,255
June	617,609	-	401,716	28,636	358,577	1,175,226	29,578	57,346	2,051,080
July	621,648	-	412,552	46,486	362,804	1,242,176	23,685	56,830	2,144,533
August	550,238	589	370,188	58,987	324,345	1,110,724	18,907	43,813	1,927,552
September	383,155	-	208,603	24,275	197,758	712,393	10,170	44,055	1,197,252
October	391,929	5,163	202,035	18,169	202,679	686,962	13,588	42,063	1,170,660
Total	5,490,005	18,870	3,608,324	342,551	3,293,493	10,484,527	267,803	447,540	18,463,109

<sup>9,74%</sup> loss occured at Kalak due to the refining process

<sup>\*</sup>At the Kalak refinery, Naphtha is reprocessed into Gasoline Sweet Naphtha and Liquid Gas. Therefore Total Products refined excludes the first stage of Naphtha refining.





Beginning Stock Tanks up to October 2015 reached a total of 5,431,837 barrels



Production reached a total of 174,113,009 barrels up to October 2015.



KRG Exports (KRG operated fields) reached a total of 112,133,293 barrels up to October 2015.



Exports through Trucking reached a total of 4,483,877 barrels up to October 2015.



Local Consumption reached a total of 26,929,771 barrels up to October 2015.



A total of 31,135,181 barrels was supplied to the main refineries up to October 2015.



Field Usage by Operators reached a total of 13,988 barrels up to October 2015







Export via KRG Pipeline: 112,133,293 bbls



Local Consumption: 26,929,771 bbls



**Export via Trucking:** 4,483,877 bbls

Supplied to Main Refineries: 31,135,181 bbls



Output by Refineries at an average of 7% loss



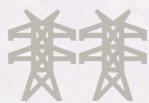
Internal Consumption



Domestic Use: Kerosene and LPG



Industrial Use: Fuel Oil and Naphtha



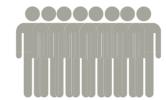
Power Plants: Diesel

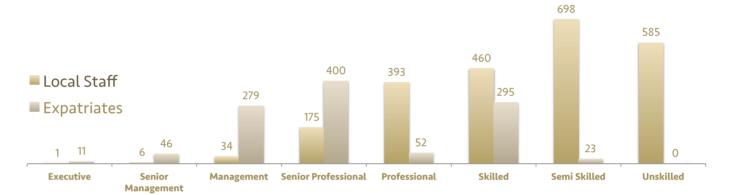


Stations: Diesel and Gasoline

# Employment in the KRG Oil & Gas Industry

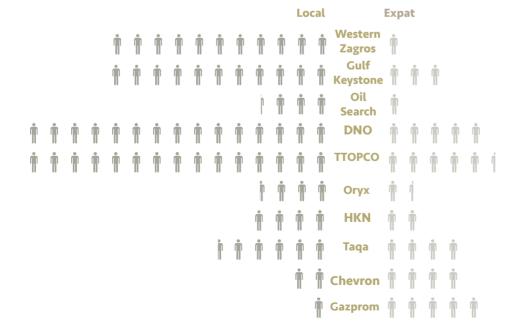
## 3400+Individuals are employed by International Oil Companies in the KRG



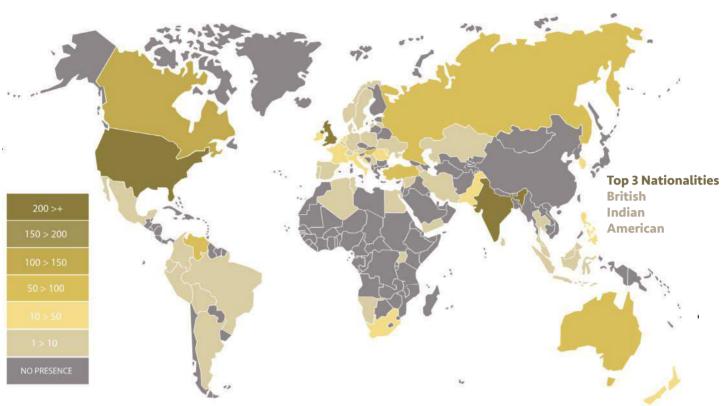




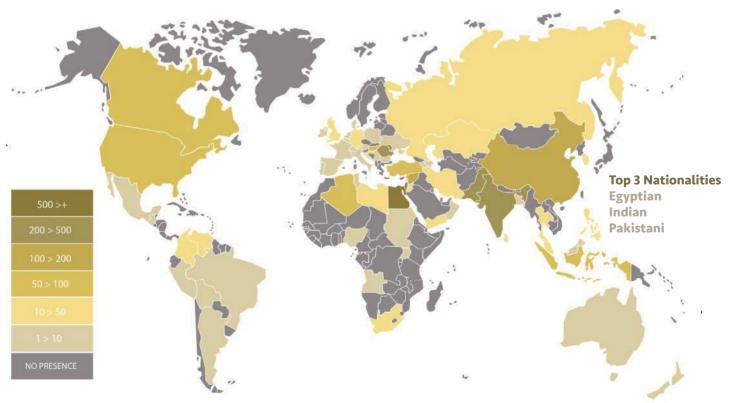
### **Top 10 IOC Employment: Expat vs. Local**



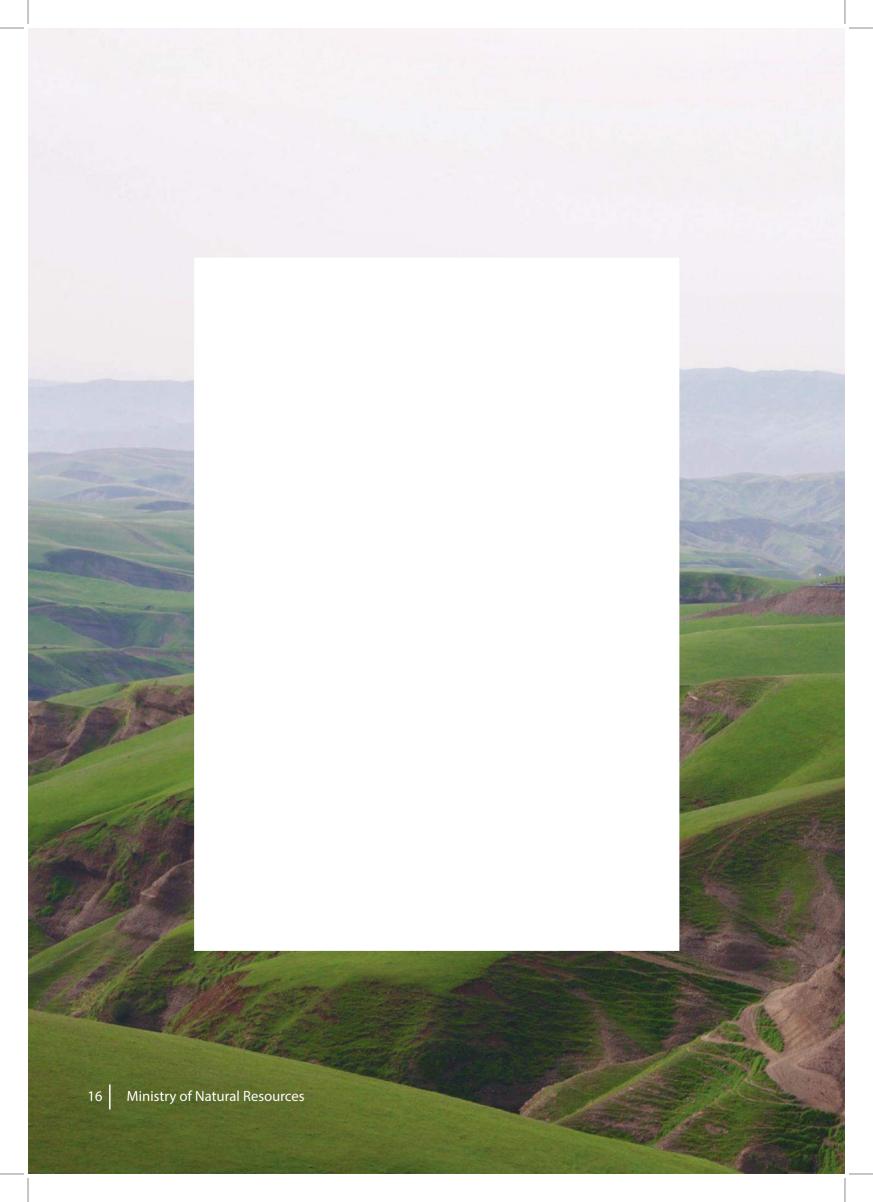
IOC	Local	Expat	Total	Local/Expa Ratio	
Western Zagros	276	24	300	92%	
Gulf Keystone	281	75	356	79%	
Oil Search	81	25	106	76%	
DNO	396	123	519	76%	
TTOPCO	414	136	550	75%	
Oryx	93	31	124	75%	
HKN	109	55	164	66%	
Taqa	142	99	241	59%	
Chevron	52	109	161	32%	
Gazprom 18		134	152	12%	
Total	1862	811	2673	70%	

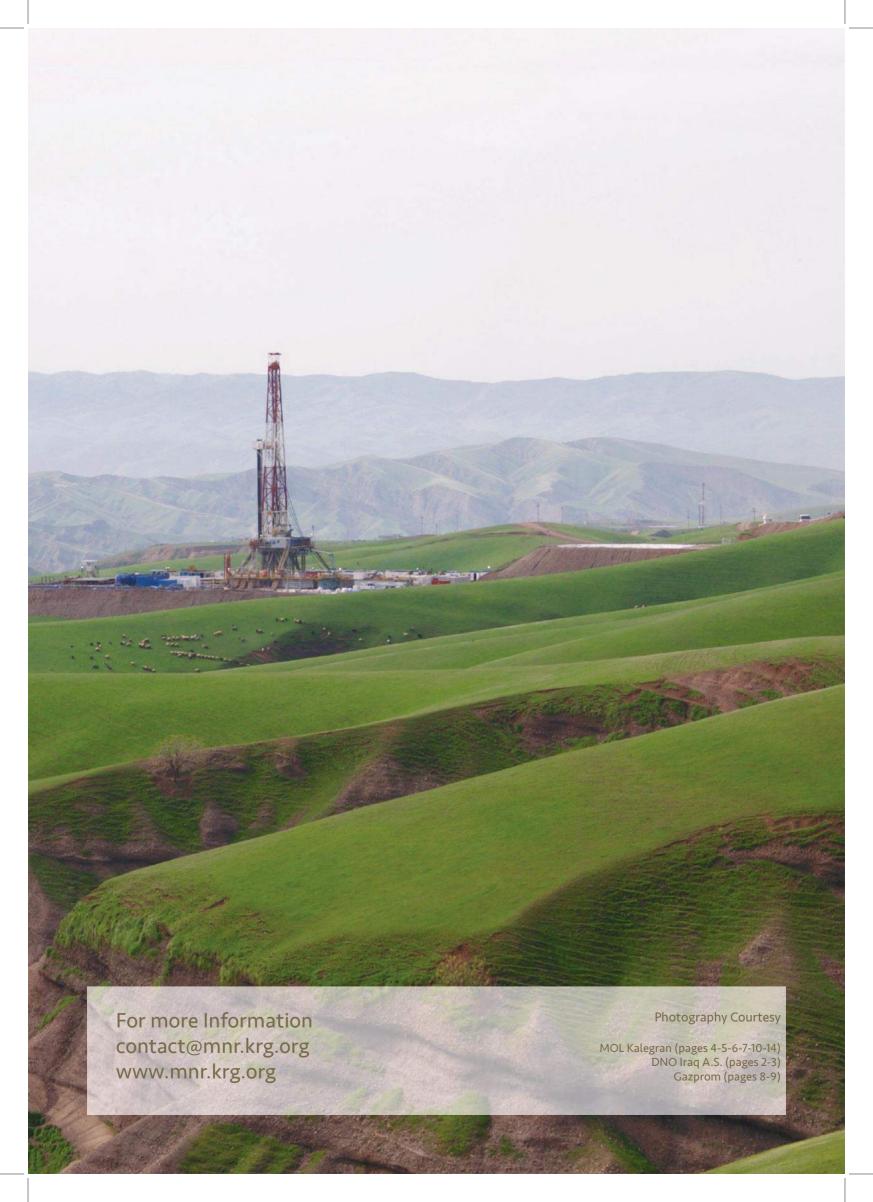


## IOC workforce distribution of nationalities in the KRG



OSC workforce distribution of nationalities in the KRG





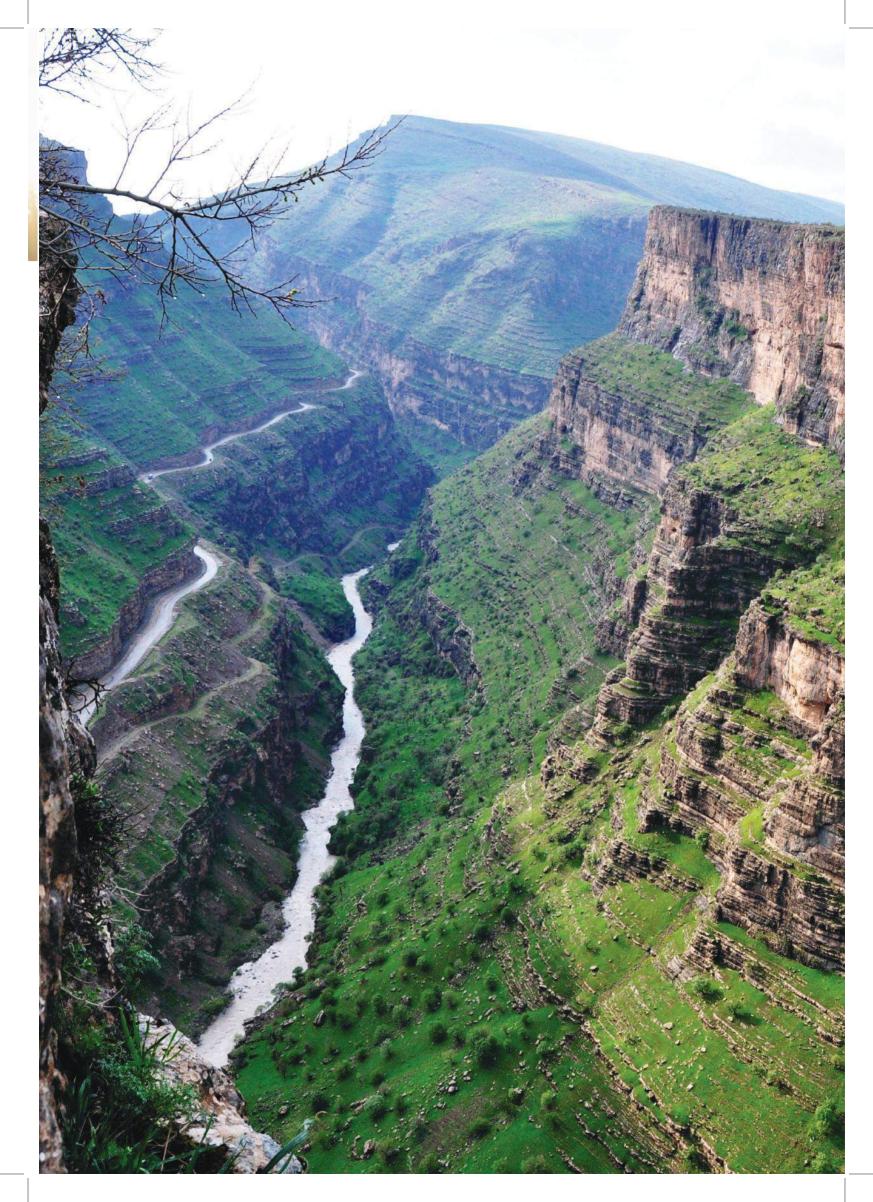


**APPENDIX** 

Production, Exports, and Refining per Block Up to 31 October 2015

SUM	5,431,838	174,113,009	-	4,483,877	112,133,293
Garmian	83,035	1,388,246	•	-	-
Taq Taq	837,368	36,886,222	1	-	23,260,776
Hawler	114,297	853,729	Ī	730,025	ı
Khurmala	1,895,244	83,635,708	ı	-	52,164,083
Akre Bijel	174,307	355,908	ı	-	-
Sarsang	42,365	847,332	ı	-	-
Sheikhan	613,658	8,956,927	1	3,753,853	2,719,992
Khalakan	-	32,026	Ī	-	ı
Tawke	1,671,564	41,156,913	ı	-	33,988,443
Block	Beginning Stock Tank (BOE)	Stock Tank Productions (BOE)	Exports via SOMO (BOE)	Exports via Trucking (BOE)	Export via KRG Pipeline (BBL)

Block	Local Consumption (BOE)	Supplied to Kalak Refinery (BOE)	Supplied to Bazian Refinery (BOE)	Supplied to Tawke Refinery (BOE)	Operational Use on the Field (BOE)	End Stock Tank (BOE)
Tawke	5,783,813	-	-	1,283,719	8,397	1,764,105
Khalakan	32,026	-	-	-	•	
Sheikhan	2,473,045	-	-	-	•	623,695
Sarsang	849,471	-	-	-	•	40,225
Akre Bijel	366,566	-	-	-	٠	163,648
Khurmala	11,636,009	20,455,464	-	-	٠	1,275,396
Hawler	119,660	-	-	-	3,205	115,136
Taq Taq	4,295,335	-	9,394,326	-	2,386	770,767
Garmian	1,373,845	-	1,673	-	•	95,764
SUM	26,929,771	20,455,464	9,395,999	1,283,719	13,988	4,848,736





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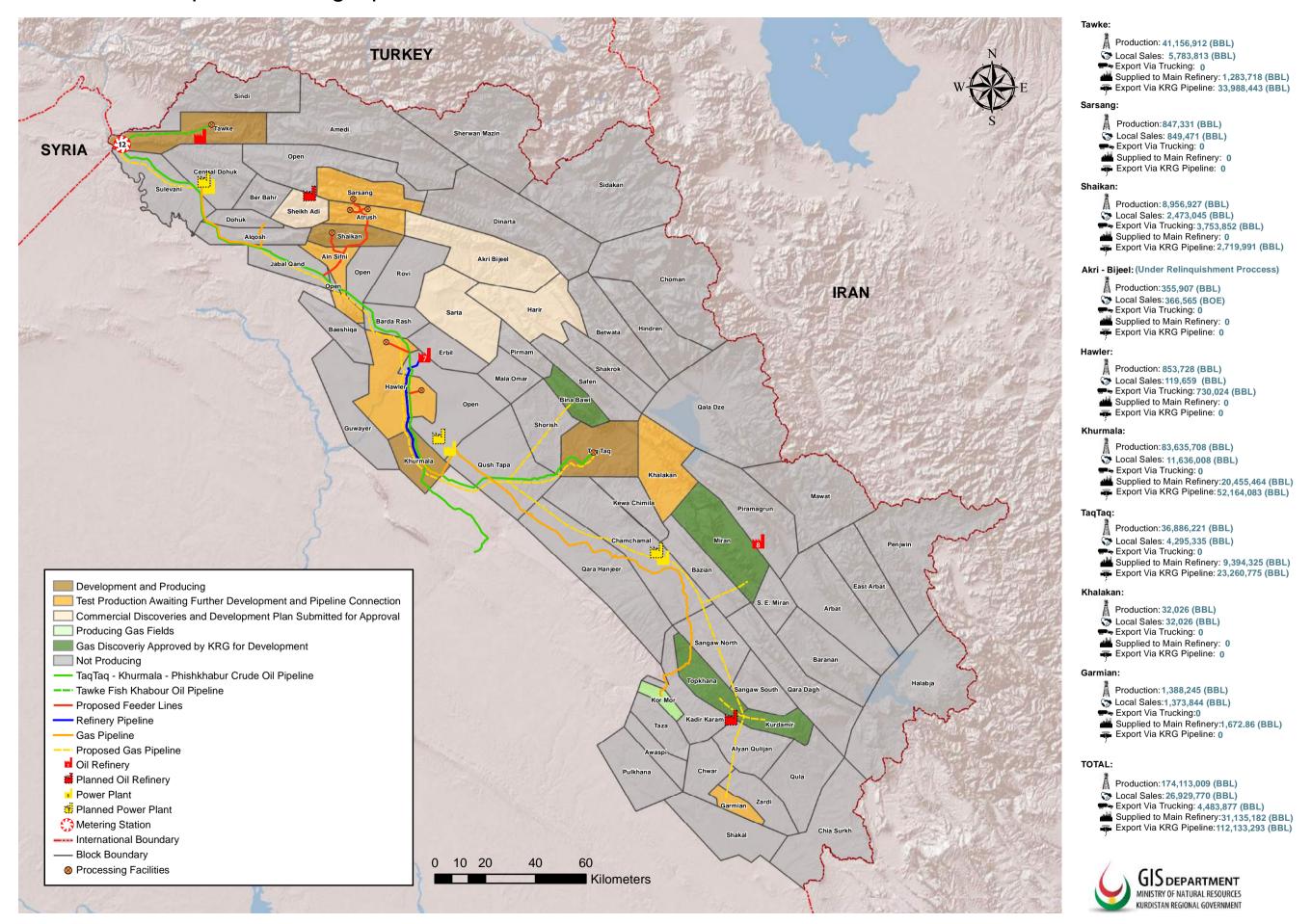
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### Production, Export, Refining Up to 31 October 2015



### Block Status Up to 31 October 2015

