FSU Regional Fiscal Templates Library

Kazakhstan Royalty Tax 2015
Fiscal Template

GeoX* 6.1 implementation

15 July 2015

* Mark of Schlumberger

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1. Executive Summary

The present Kazakhstan Royalty Tax 2015 fiscal template model has several production, property, income tax elements and project fees. Some elements – e.g. mineral extraction taxes – are calculated separately for crude oil, gas and condensate with a breakdown into export and domestic HC flows.

The fiscal template model is initially set up with the Point&Click functionality of GeoX Value tool with extensive modifications made with GeoX Fiscal Programming Language.

The fiscal template reflects general Kazakhstan fiscal terms (Royalty Tax model) in effect from 19 March 2015 for new petroleum E&P contracts. It may or may not be fully applicable to existing subsoil use contracts concluded before that date without additional customization as those may have a tax stabilization ("grandfathering") clause. At the same time, the practical experience of the country legislature suggests that operators with significant deviations of stabilized terms from current general ones are gradually pushed towards amending their contracts. The template does not cover Kazakhstani PSA contracts (such as Kashagan, Karachaganak, Chinarevskoye) each of which uses rather unique terms.

The user of the present template can define certain economic and fiscal parameters applicable to his particular context by entering relevant values in GeoX.SetUserParameters() function. Particularly, this is important for HC pricing and HC flows allocation information since the country fiscal system requires a differentiation between export, domestic and 'world' HC prices and volumes.

The template model calculations are broken down into Working Interest (WI) and Other Interest (OI) levels.

In addition to fiscal code, the present template includes a localized cash flow report for WI level found in both the main Notebook screen and in the Trial Browser.

2. Disclaimer and Proprietary Rights

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Schlumberger fiscal template and fiscal template documentation do not constitute tax advice and may not be used other than for their intended purpose as a tool to assess the after-tax value distribution for upstream petroleum exploration projects analyzed with GeoX software.

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5. Detailed Description of Fiscal Elements

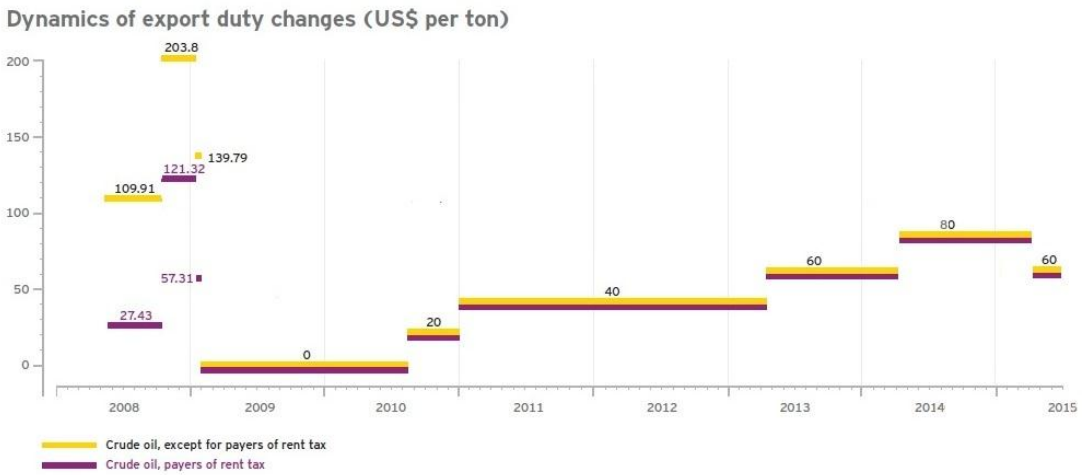
5.1. Export Duty on Crude Oil

The taxable base is exported volumes of Crude Oil. Condensate is not dutiable provide it can be classified as condensate when it crosses the border, eg. when lifted by railway.

When condensate is blended into crude oil pipelines, it is most likely to be classified as crude oil at the border and therefore be dutiable. A logical variable *IncludeCondensateInExportDuty* in GeoX.SetUserParameters() function (see Chapter 7) controls such situations.

The duty is not applicable for exports to member countries of the Eurasian Economic Union (currently Russia, Kazakshtan, Belarus, Kyrgyzstan and Armenia). A logical variable *IsExportDutyApplicable* in GeoX.SetUserParameters() function controls such situations.

The applicable rate is currently $60/metric tonne and seems to be reviewed by the RK Government on a more or less annual basis. Rate changes should take into account world oil prices, however the history of duty rate changes doesn't demonstrate a directly proportional link (ref.below chart).



Source: Ernst and Young, Schlumberger

5.2. Rent Tax on Exports

The tax is charged on export volumes of crude and condensate at the following rates:

Fiscal World Oil Price, US$/bbl	Rate
>= 0	0%
> 40	7%
> 50	11%
> 60	14%
> 70	16%
> 80	17%
> 90	19%
> 100	21%
> 110	22%
> 120	23%
> 130	25%
> 140	26%
> 150	27%
> 160	29%
> 170	30%
> 180	32%
> 190	32%

The fiscal world oil price is understood as either Brend Dtd or Urals Cif Med. The selection of particular benchmark depends on the pricing clause set in export contracts, i.e. whether the sales are priced off Brent or Urals. When such clause doesn't exists or is unclear, the higher of Brent Dtd or Urals Med should be used.

This charge is levied for exports to Eurasian Economic Union countries (currently Russia, Kazakshtan, Belarus, Kyrgyzstan and Armenia) unlike the export duty.

5.3. Mineral Extraction Tax

5.3.1. On Crude Oil and Condensate

The tax is charged on crude and condensate at the following rates:

Field Production, kt/y	Rate for Export Sales	Rate for Domestic Sales
>= 0	5.0%	2.5%
> 250	7.0%	3.5%
> 500	8.0%	4.0%
> 1000	9.0%	4.5%
> 2000	10.0%	5.0%
> 3000	11.0%	5.5%
> 4000	12.0%	6.0%
> 5000	13.0%	6.5%
> 7000	15.0%	7.5%
> 10000	18.0%	9.0%

Export volumes are valued at Fiscal World Oil price (same as defined in *Section 5.2 Rent Tax on Exports*).
Domestic volumes are valued at actual sales price (i.e. Domestic Oil Price as defined in the present template).

RK Government may set special rates for 'Economically Marginal Unproductive, Highly Viscous, Water Flooded and Depleted fields', which are reduced by 20 times from general MET rates. At the time of writing only one Kazakhstani field (developed by Karazhanbasmunai, a 50/50 JV between KMGEP and Chinese CITIC) qualifies for such concession with effect from 18 June 2014. As field economics improves, the concessionary rate may be changed upwards targeting to maintain the field profitability at 0%. Given a limited practical use the complex formulas governing such subsequent rate changes are not modelled in the present template, leaving the user to choose between general or concessionary MET rates by triggering *IsMarginalUneconomicField* logical variable in GeoX.SetUserParameters() function.

5.3.2. On Gas

The tax is charged on associated and non-associated gas at the following rates:

Field Production, bcm/y	Rate for Export Sales	Rate for Domestic Sales
>= 0	10%	0.5%
> 1	10%	1.0%
> 2	10%	1.5%

Export volumes are valued at Fiscal World Gas price which is a quoted price for European natural gas at Zeebrugge with Day Ahead delivery.

Domestic volumes are valued at actual sales price (i.e. Domestic Gas Price as defined in the present template – see Chapter 6).

RK Government regulations provides for a concession of MET on gas production for Economically Marginal Unproductive, Highly Viscous, Water Flooded and Depleted fields mirroring those described in Section 5.3.1. However, as far as we are aware there's no marketable gas production from Karazhanbas field.

5.4. Property Tax

The tax is levied on depreciated value of immovable fixed assets at 1.5**%.** Typically surface facilities and development oil and gas wells would fall under this category. However, some oil and gas equipment may be excluded. The user has an ability to define a share of Development and Production Activity CAPEX subject to Property Tax rate by setting the value of *CAPEXShareSubjectToPropertyTax* variable in GeoX.SetUserParameters() function.

As the tax can only be levied on fully commissioned assets accepted by state bodies and recorded on the company's completed fixed assets register, tax payers do not rush to commission their assets prior to the start of production. Therefore for all practical purposes it may be assumed that the tax is only payable from the start of production.

5.5. Bonuses

5.5.1. Signature Bonus

Kazakhstani legislation sets the amount of Signature Bonus for exploration blocks without approved reserves (which are the main targets for assessment in GeoX) at 2800 Monthly Calculation Indices or some 30,000 USD.

Since co-venturers may agree a specific payment ratio for covering bonuses without regard to actual WI/OI equity participation, the user is expected to set both *WISignatureBonus* and *OISignatureBonus* values in GeoX.SetUserParameters() function.

5.5.2. Commercial Discovery Bonus

This is a payment triggered by declaration of field commerciality based on the amount of state audited 1P reserves times Fiscal World Oil Price and Fiscal World Gas Price (as defined in Sections 5.2 and 5.3.2 respectively). The applicable rate is 0.1%. Every increase in official 1P reserves triggers an additional CD bonus payment.

As GeoX does not distinguish between reserves categories for its full cycle calculations, for practical purposes the template assumes the full bonus value based on GeoX Prospect Recoverable Accumulation Size to be paid in three tranches, for example upon start of development and 5 and 10 years thereafter.

The timing of such payments and relevant share of AccumulationSize falling on each tranche are defined in GeoX.SetUserParameters() function. For example, setting the value of *CDBonus_Tranche1Year* at 1, the first tranche is payable on the first year of first Development activity. Setting *CDBonus_Tranche1WIShare* at 0.3 means that the first tranche charge on WI equity participant will be 30% of total AccumulationSize valued at Fiscal World HC prices

5.5.3. Historic Costs Reimbursement

A one-off charge aimed to compensate the state for past G&G studies on the contract area. There are no strict rules governing its calculation so it is a negotiable contract item. For practical purposes it may be assumed the charge is commensurate with the Signature Bonus amount.

The user is expected to set both *WIHistoricCosts* and *OIHistoricCosts* values in GeoX.SetUserParameters() function.

5.5.4. Surface Rentals and Miscellaneous

An annual charge covering contract area rentals and some miscellaneous regular payments. The value is usually insignificant and defined in the subsoil use contract.

The user is expected to set both *WIRentals* and *OIRentals* values in GeoX.SetUserParameters() function.

5.6. Corporate Income Tax

The general rate of tax is 20%.

OPEX and all taxes (except for Excess Profits Tax) are expensed.

CAPEX from Pre-exploration, Exploration and Appraisal activities is depreciated using Declining Balance rule with a depreciation rate of 25% starting from first year of production.

Development and Production CAPEX (except for Repeated Investments) is depreciated using Declining Balance rule with a depreciation rate of 15% starting from expenditure year. However, depreciation for the first year can be doubled. Technically this is implemented in GeoX as expensing 30% of relevant CAPEX and depreciating the balance with a one year delay.

Repeated Investments (“expenses actually incurred on use, repair, maintenance and liquidation of fixed assets”) are defined as “subsequent costs” and are deductible in the tax period when they are actually incurred.

Losses can be carried forward up to 10 years.

There’s a Ring Fence around Contract Area for CIT purposes.

5.7. Excess Profits Tax

An income tax type levy with full OPEX, CAPEX and all other taxes expensed in the year they are incurred.

An unlimited carryforward of EPT losses is allowed. There's a Ring Fence around Contract Area for EPT.

The taxable basis is split into seven traches based on a proportion of EPT deduction which are taxed at the following rates:

Excess Profit Tax	Net income allocation schedule for EPT, % of deductions	% for calculating marginal net income allocation for EPT	EPT Rate, %
Tier 1	above 0%	25%	0%
Tier 2	above 25%	5%	10%
Tier 3	above 30%	10%	20%
Tier 4	above 40%	10%	30%
Tier 5	above 50%	10%	40%
Tier 6	above 60%	10%	50%
Tier 7	above 70%		60%

EPT Deductions are defined as full OPEX, CAPEX and all taxes except for Corporate Income Tax.

By its construction, for many common E&P projects, the tax charge (if applicable at all) would be important at plateau and early decline phases after all CAPEX expenditures are completed.

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8. Localized Cash Flow Report

The present template includes a localized cash flow report providing full details of taxes calculations for WI level found in both main Notebook screen (go to *Results -> Working Interest -> Government Take -> Localized CF Report*) and in Trial Browser.

It uses common units of measurement for Kazakhstan – metric tonnes for HC Liquids volumes and cubic meters for Gas volumes. The units of measurement for Localized CF Report will not change regardless of GeoX SI-FI button setting.

As discussed in Section 6, revenues reported by GeoX Value in standard cash flow reports and in Localized CF report will differ by the amount of Revenue Loss Due to DMO. Net Cash Flow results are obviously equal in both report types.

The report can be further customized by the user (go to *Fiscal Regime -> Results -> Result page: Localized CF Report*). Schlumberger is also available to provide a client-specific customization services for this report.

Government take | Details | Localized CF report

Profile	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
<CLIENT> Customized Cash Flow Report													
Working Interest													
PRICES													
Export Oil Price, EXW, $/t	364.84	364.84	364.84	364.84	364.84	364.84	364.84	364.84	364.84	364.84	364.84	364.84	364.84
Domestic Oil Price, EXW, net of VAT, $/t	218.90	218.90	218.90	218.90	218.90	218.90	218.90	218.90	218.90	218.90	218.90	218.90	218.90
Export Condensate Price, EXW, $/t	416.54	416.54	416.54	416.54	416.54	416.54	416.54	416.54	416.54	416.54	416.54	416.54	416.54
Domestic Condensate Price, EXW, net of VAT, $/t	312.41	312.41	312.41	312.41	312.41	312.41	312.41	312.41	312.41	312.41	312.41	312.41	312.41
Export Gas Price, EXW, $/kcm	105.94	105.94	105.94	105.94	105.94	105.94	105.94	105.94	105.94	105.94	105.94	105.94	105.94
Domestic Gas Price, EXW, net of VAT, $/kcm	21.19	21.19	21.19	21.19	21.19	21.19	21.19	21.19	21.19	21.19	21.19	21.19	21.19
PRODUCTION ENTITLEMENT													
Crude Oil, mmt/y											6.85	6.85	6.85
Condensate, mmt/y											2.03	2.40	2.40
Associated Gas, bcm/y											1.42	1.42	1.42
Non-Associated Gas, bcm/y											4.78	5.66	5.66
HC FLOWS ALLOCATION													
Crude Oil - for exports, fraction	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
- for domestic market, fraction	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Condensate - for exports, fraction	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
- for domestic market, fraction													
Gas - for exports, fraction	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
- for domestic market, fraction	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
REVENUE													
From Export Sales, mm$											2659.73	2825.00	2825.00
From Domestic Sales, mm$											568.16	585.00	585.00
TOTAL SALES, mm$											3227.89	3410.00	3410.00
NB: Revenue Loss due to DMO, mm$											772.65	840.00	840.00
OPEX, mm$											621.40	690.00	690.00
CAPEX, mm$	10.00	87.50	87.50	100.00	100.00	5.00	5.00	216.67	816.67	966.67	800.00	600.00	50.00
TAXES													
Export Duty on Crude Oil, mm$											287.80	287.80	287.80
Rent Tax on Exports, mm$											342.42	363.00	363.00
MET on Export Oil, mm$											466.94	495.00	495.00
MET on Domestic Oil, mm$											33.75	33.75	33.75
MET on Export Gas, mm$											14.44	16.50	16.50
MET on Domestic Gas, mm$											1.77	2.02	2.02
Signature Bonus, mm$	0.03												
Commercial Discovery Bonus, mm$						17.55					23.40		
Historic Costs Reimbursement, mm$	0.03												
Rentals and Misc, mm$	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Property Tax, mm$											24.67	27.27	23.70
Corporate Income Tax, mm$											26.41	199.15	231.27
Excess Profits Tax, mm$													
TOTAL GOVERNMENT TAKE, mm$	0.07	0.01	0.01	0.01	0.01	17.56	0.01	0.01	0.01	0.01	1221.61	1424.50	1453.06

NET CASH FLOW AFTER TAXES, mm$	-10.07	-87.51	-87.51	-100.01	-100.01	-22.56	-5.01	-216.68	-816.68	-966.68	584.89	695.50	1216.94
EBITDA, mm$	-0.07	-0.01	-0.01	-0.01	-0.01	-17.56	-0.01	-0.01	-0.01	-0.01	1411.30	1494.65	1498.21

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Appendix 2 - Verification of GeoX Fiscal Template

The calculations under the GeoX fiscal template model have been verified vis-à-vis five cash flow spreadsheet models based on standard GeoX cases. Both GeoX and spreadsheet models were run deterministically for 100% WI. Description of the five standard GeoX cases is provided as Appendix 3.

The screenshots of verification runs are provided below while full Excel models are attached to this fiscal template package.

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Verification of standard Case 5. Combined Large Oil and Gas Case

Cash Flow Model :	**100% WI Basis**	**Colour Codes :**
Country :	**Kazakhstan**	= Parameter inputs
Field/Project :	**All HC Case**	= Copy gFullCycle results here
Fiscal Regime :	**Royalty Tax 2015**	= gFullCycle output
Other:	**Default Fiscal Parameters**	= Spreadsheet results

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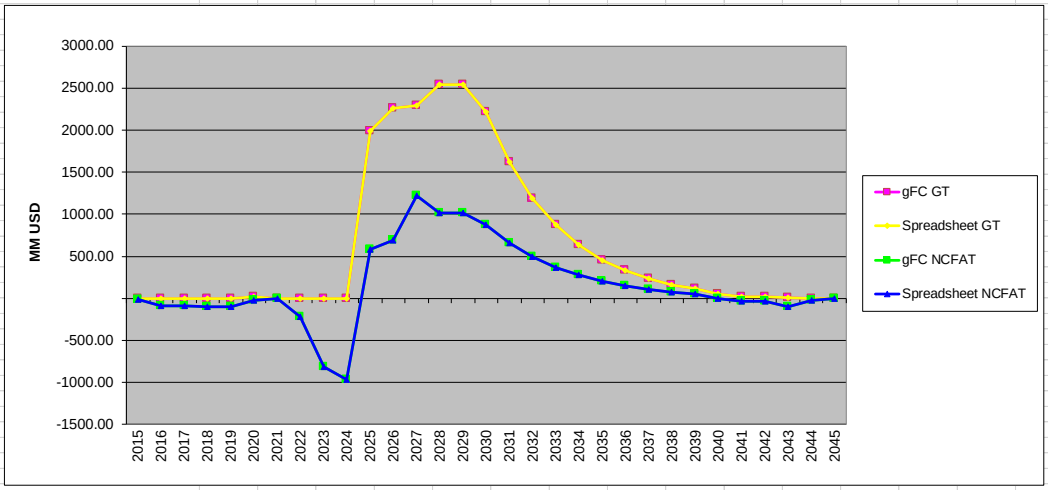
Comparison of Government Takes and Net Cash Flows after Taxes



Spreadsheet - Government take (Working Interest)

Profile [1e6 USD]	Total	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Production taxes															
WI Crude Oil Export Duty	2353.95											287.79	287.79	287.79	287.79
WI Property Tax	200.00											24.67	27.27	23.70	20.15
WI MET Export Oil	3744.41											466.92	495.00	495.00	495.00
WI MET Domestic Oil	255.39											33.75	33.75	33.75	33.75
WI MET Domestic Gas	15.81											1.77	2.03	2.03	2.03
WI MET Export Gas	136.18											14.44	16.50	16.50	16.50
WI Rent Tax on Export	2981.35											342.41	363.00	363.00	363.00
Fees															
WI Signature Bonus	0.03	0.03													
WI Commercial Discovery Bonus	58.50						17.55					23.40			
WI Historic Costs Reimbursement	0.03	0.03													
WI Surface Rentals and Misc.	0.29	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Revenue taxes															
WI Revenue Loss due to DMO	6910.61											772.65	840.00	840.00	840.00
Income taxes															
WI Corporate Income Tax	1707.84											26.40	199.15	231.28	244.82
WI Excess Profits Tax	1217.83														237.29
Sum taxes	19582.22	0.07	0.01	0.01	0.01	0.01	17.56	0.01	0.01	0.01	0.01	1994.21	2264.50	2293.06	2540.34

Spreadsheet - Net Cash Flow after Tax (Working Interest)

Net Cash Flow after Tax	5176.08	-10.07	-87.51	-87.51	-100.01	-100.01	-22.56	-5.01	-216.68	-816.68	-966.68	584.85	695.50	1216.94	1019.66

gFC - Government take (Working Interest)

Profile [MM USD]	Total	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Production taxes															
WI Crude Oil Export Duty	2353.96											287.80	287.80	287.80	287.80
WI Property Tax	201.49											24.67	27.27	23.70	20.15
WI MET Export Oil	3744.32											466.94	495.00	495.00	495.00
WI MET Domestic Oil	255.38											33.75	33.75	33.75	33.75
WI MET Domestic Gas	15.81											1.77	2.02	2.02	2.02
WI MET Export Gas	136.18											14.44	16.50	16.50	16.50
WI Rent Tax on Export	2981.26											342.42	363.00	363.00	363.00
Fees															
WI Signature Bonus	0.03	0.03													
WI Commercial Discovery Bonus	58.50						17.55					23.40			
WI Historic Costs Reimbursement	0.03	0.03													
WI Surface Rentals and Misc.	0.30	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Revenue taxes															
WI Revenue Loss due to DMO	6910.51											772.65	840.00	840.00	840.00
Income taxes															
WI Corporate Income Tax	1707.71											26.41	199.15	231.27	244.82
WI Excess Profits Tax	1217.66														237.28
Sum taxes	19583.14	0.07	0.01	0.01	0.01	0.01	17.56	0.01	0.01	0.01	0.01	1994.25	2264.50	2293.06	2540.34

gFC- Net Cash Flow after Tax (Working Interest)

Net Cash Flow after Tax	5174.33	-10.07	-87.51	-87.51	-100.01	-100.01	-22.56	-5.01	-216.68	-816.68	-966.68	584.89	695.50	1216.94	1019.66

