

## Time Value of Money

Money	At Jan 1					
	2019	2020	2021	2022	2023	2024
US\$ in wallet						
US\$ in bank						
US\$ (deflated)						
Inflation	0%	0%	0%	0%	0%	0%
Interest Rate	0%	0%	0%	0%	0%	0%
Cumulative Interest Rate	1	1.00	1.00	1.00	1.00	1.00

Cost of printer ink						
	2019	2020	2021	2022	2023	2024
US\$ flat						
US\$ inflation						
US\$						

Amount of printer ink						
	2019	2020	2021	2022	2023	2024
US\$						
US\$						
US\$						

## Real versus Nominal

Costs	At Dec 31					
	2018	2019	2020	2021	2022	2023
US\$ Nominal	1	1	1.00	1.00	1.00	1.00
Inflation Rate	0%	0%	0%	0%	0%	0%
Multiplier		1	1.00	1.00	1.00	1.00

## Money available

100

Chocolate Bars

## Money Invested

	100.0						
Chocolate Bars	100.0	0.0	0.0	0.0	0.0	0.0	0.0

**US\$ Real (2018)**

Money Available  
Cost of Choc Bar

2025      2026      2027      2028      2029

0%      0%      0%      0%      0%  
0%      0%      0%      0%      0%  
1.00      1.00      1.00      1.00      1.00

2025      2026      2027      2028      2029

2025      2026      2027      2028      2029

2024      2025      2026      2027      2028  
1.00      1.00      1.00      1.00      1.00

0%      0%      0%      0%      0%  
1.00      1.00      1.00      1.00      1.00

0.0

0.0

0.0

0.0

0.0

Real and Nominal

	Year 1	Year 2	Year 3	Year 4	Year 5
Real					
Nominal	0	0.0	0.0	0.0	0.0
Inflation	0.0%	0.0%	0.0%	0.0%	0.0%

Capex	
US\$2019	0
Nominal	0

Oil Price	Year 1	Year 2	Year 3	Year 4	Year 5
Real					
Nominal					
Inflation					
Oil Price Increase					

## Example Discounted Cashflow

### Example 1

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
Cashflow		0	0	0	0	0	0	0
Discount Factor								
Discounted Cashflow								
NPV								
Discount Rate		0%						
Excel Calculation								

### Example 2

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Capital Cost							
Revenue							
Operating Cost							
Net Cashflow							
Discount Factor							
Discounted Cashflow							
NPV							
Discount Rate							
IRR							
Excel Calculation							

Year 8	Year 9	Year 10
0	0	0

Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
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Year 17   Year 18   Year 19   Year 20



## WACC Calculation

Risk Free Rate 0.00%

Corporate Interest Rate 0.00%

Equity market return 0.00%

Company Beta 0

Corporate Tax Rate 0%

	Debt	Equity
Debt:Equity Split	0%	100%

Cost of Debt 0.00%

Cost of Equity 0.00%

WACC 0.00%

## An Example Conventional Oil Field

Sensitivities		1	0%
Oil Price	1	2	15%
Production	1	3	30%
Operating Costs & Transport	1	4	-15%
Capex	1	5	-30%

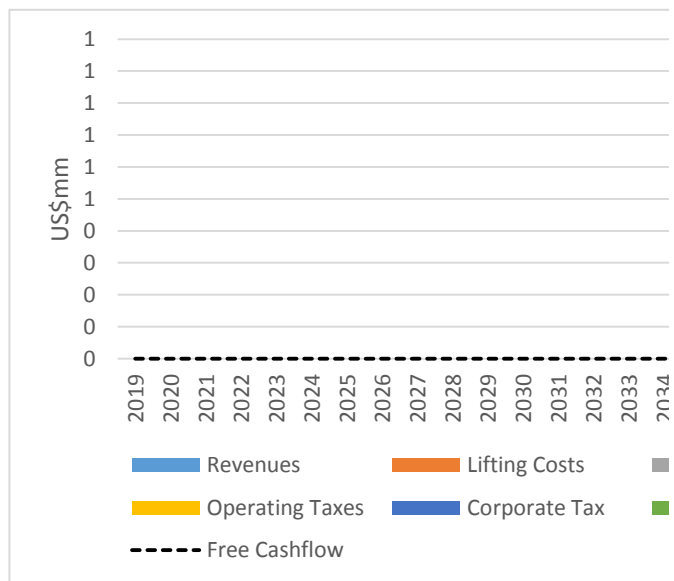
	2019	2020	2021	2022	2023	2024
Revenues	0	0	0	0	0	0
Operating Costs	0	0	0	0	0	0
Transport Costs	0	#####	0	0	0	0
Operating Taxes	0	0	0	0	0	0
EBITDA	0	#####	0	0	0	0
Depreciation <i>Straight Line (0) or Unit of Prod (1)</i>	#DIV/0! 1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
EBIT	#DIV/0!	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Tax on EBIT <i>Corporate Tax Rate</i>	#DIV/0! 20%	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Post tax cashflow	#DIV/0!	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
CAPEX	0	0	0	0	0	0
Free Cashflow (FCF)	#DIV/0!	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Cumulative FCF	#DIV/0!	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Discount Rate	0.0%					
Discount Factor	1.00	1.00	1.00	1.00	1.00	1.00
Discounted Cashflow (DCF)	#DIV/0!	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
NPV (\$mm)	#DIV/0!					
IRR (%)	#####					
Payback (years)	10	When does cumulative cashflow turn positive				
Excel Calculation	#####					

**Breakeven Oil Price**      \$0.00      *After Goal Seek Function in Data:What If*

Alternative NPV (terminal value)						
FCF for 10 years	#DIV/0!	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Terminal Value	
Implied FCF	#DIV/0! ##### #DIV/0! #DIV/0! #DIV/0! #DIV/0!
Implied DCF	#DIV/0! ##### #DIV/0! #DIV/0! #DIV/0! #DIV/0!
NPV	#DIV/0!
Plus Cash	0
Less Debt	0
Total NPV	#DIV/0!
IRR	#####
<i>EBITDA Multiple</i>	7

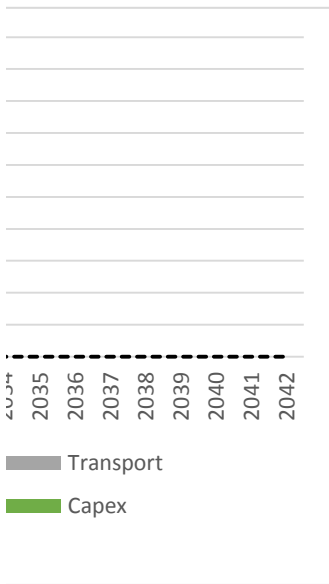
	2019	2020	2021	2022	2023	2024
Revenues	0	0	0	0	0	0
Lifting Costs	0	0	0	0	0	0
Transport	0	#####	0	0	0	0
Operating Taxes	0	0	0	0	0	0
Corporate Tax	#DIV/0!	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Capex	0	0	0	0	0	0
Free Cashflow	#DIV/0!	#####	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!





					0
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0

2025	2026	2027	2028	2029	2030	2031	2032	2033
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0	0	0	0	0	0	0	0	0
#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!





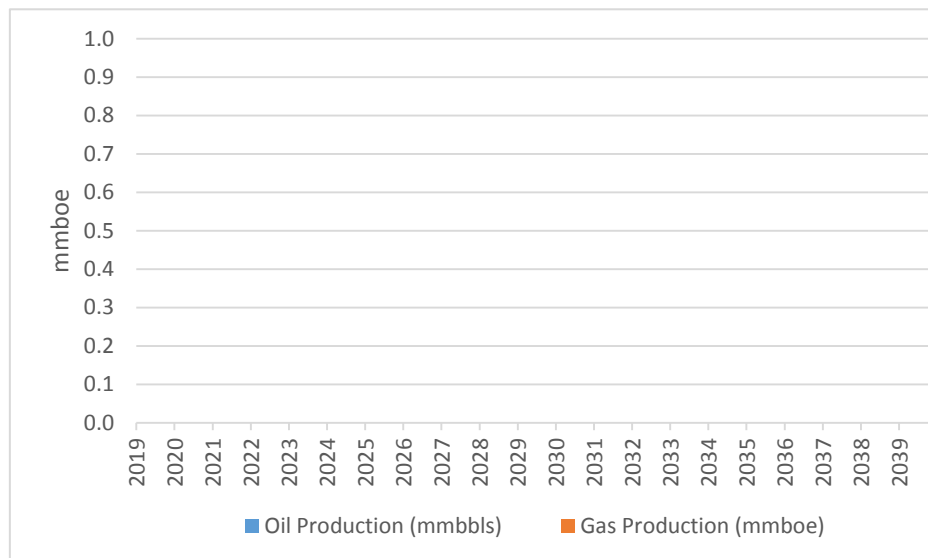


**Production**

	<b>Oil</b>		
	mmbbls	kbpd	
Resources	0		
Recovery Factor	0%		
<b>Reserves</b>	<b>0</b>		
Start date	5 years after first capex		Peak as % Reserves
<b>Peak Production (mmbbls)</b>	<b>0</b>	0	5%
<b>Time to Peak (yrs)</b>	<b>0</b>		
<b>Length of Peak (yrs)</b>	<b>0</b>		
<b>Decline rate (%)</b>	<b>0%</b>		

	<i>First capex</i>					
	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Oil production	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total oil produced to 2040</b>	<b>0.0</b>					
Barrels per day		0	0	0	0	0
Gas Production	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total gas produced to 2040</b>	<b>0.0</b>					

	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Oil Production (mmbbls)	0.0	0.0	0.0	0.0	0.0	0.0
Gas Production (mmboe)	0.0	0.0	0.0	0.0	0.0	0.0
Total (mmboe)	0.0	0.0	0.0	0.0	0.0	0.0



Production Scenarios

Total Produced

Oil Production Scenarios



1	0.00
2	0.00
3	0.00
4	0.00
5	0.00

Gas Production Scenarios

1	0.00
2	0.00
3	0.00
4	0.00
5	0.00

**Gas**  
Bcf

**Total**

0

5 years  
after first  
capex

0

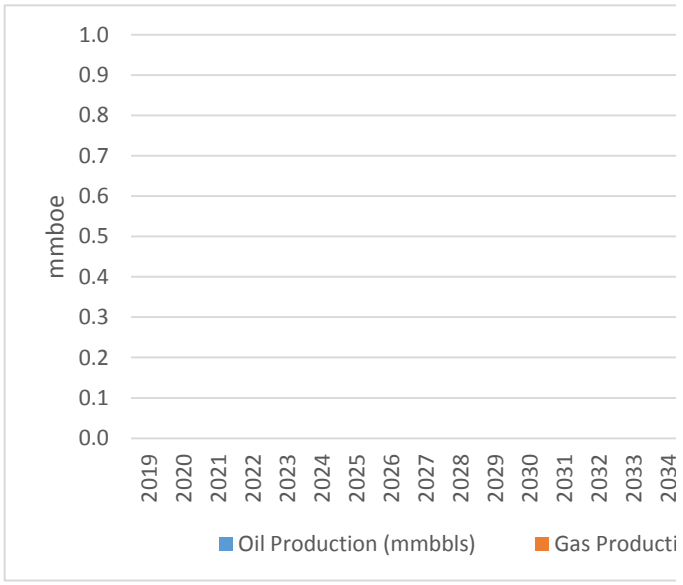
0

0

0%

1st year	Peak Oil							
2025	2026	2027	2028	2029	2030	2031	2032	2033
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0	0	0	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2025	2026	2027	2028	2029	2030	2031	2032	2033
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0







**Revenue Calculation**

<i>Export %</i>	<i>Oil</i>	<i>45%</i>
	<i>Gas</i>	<i>20%</i>

	2019	2020	2021	2022	2023	2024
Oil Production	0.0	0.0	0.0	0.0	0.0	0.0
Domestic Sales	0.0	0.0	0.0	0.0	0.0	0.0
Export Sales	0.0	0.0	0.0	0.0	0.0	0.0
<i>Domestic Oil Price</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>Export Oil Price</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Domestic Revenue	0	0	0	0	0	0
Export Revenue	0	0	0	0	0	0
Total Oil Revenue	0	0	0	0	0	0
Gas Production	0.0	0.0	0.0	0.0	0.0	0.0
<i>Domestic Gas Price</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
<i>Export Gas Price</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
Domestic Sales	0	0	0	0	0	0
Export Sales	0	0	0	0	0	0
Domestic Revenue	0	0	0	0	0	0
Export Revenue	0	0	0	0	0	0
Total Gas Revenue	0	0	0	0	0	0
Total Revenues	0	0	0	0	0	0
Oil Production Scenarios						
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0
Gas Production Scenarios						
1	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0
<b>Export Oil Price</b>	#DIV/0!					
Base Case	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 2	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 3	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 4	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 5	0.0	0.0	0.0	0.0	0.0	0.0

**Domestic Oil Price**

Base Case	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 2	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 3	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 4	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 5	0.0	0.0	0.0	0.0	0.0	0.0

**Domestic Gas Price**

Base Case	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 2	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 3	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 4	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 5	0.0	0.0	0.0	0.0	0.0	0.0

**Export Gas Price**

Base Case	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 2	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 3	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 4	0.0	0.0	0.0	0.0	0.0	0.0
Scenario 5	0.0	0.0	0.0	0.0	0.0	0.0

Slope 0%









0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2042

0.0

0.0

0.0

0

0

0

0

0

0.0

0.0

0.0

0

0

0

0

0

0

0.0

0.0 15%

0.0 30%

0.0 -15%

0.0 -30%

0.0

0.0 15%

0.0 30%

0.0 -15%

0.0 -30%

0.0

0.0

0.0

0.0

0.0

0.0  
0.0  
0.0  
0.0  
0.0

0.0  
0.0  
0.0  
0.0  
0.0

0.0  
0.0  
0.0  
0.0  
0.0

## Capital Expenditure

Reserves	0	
Capex per bbl	0.00	
Total capex	0	
% before first oil	100%	0
% first oil to peak	0%	0
Maintenance capex	0%	0

	First Capex					
	2019	2020	2021	2022	2023	2024
US\$mm	0	0	0	0	0	0
Before first oil	0					
First oil to peak	0					
Maintenance	0					
Total	0					

## Sensitivities

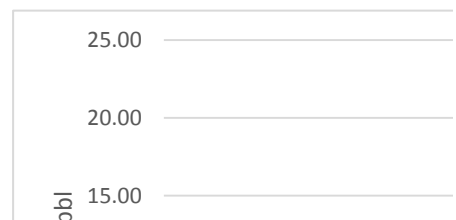
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
15%						
30%						
-15%						
-30%						

## Field Comparisons

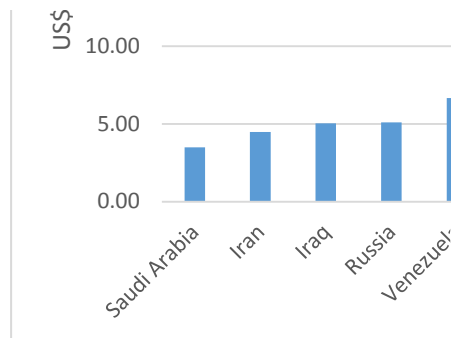
	Cost /bbl	Capex	Reserves	Peak Prod	Peak Prod
	US\$/bbl	US\$mm	mmbbls	kbpd	mmbbls
Kashagan ( Kazakhstan)	10.46	136000	13000	1500	547.5
ACG (Azerbaijan)	4.00	20000	5000	620	226.3
Thunderhorse (Gulf of Mexico)	5.00	5000	1000	250	91.25
Novy Port (Russia onshore)	3.25	4500	1385	161	58.64
Ghawar (Saudi)	3.50	248500	71000	5000	1825
Lula (Brazil deep water)	9.04	75000	8300	500	182.5

## Global Comparisons

	Capex US\$/bbl
Saudi Arabia	3.50
Iran	4.48
Iraq	5.03
Russia	5.10
Venezuela	6.66



US shale	7.56
Indonesia	7.65
US conv	7.70
Canada	9.69
Nigeria	13.10
Norway	13.76
Brazil	16.09
UK	22.67

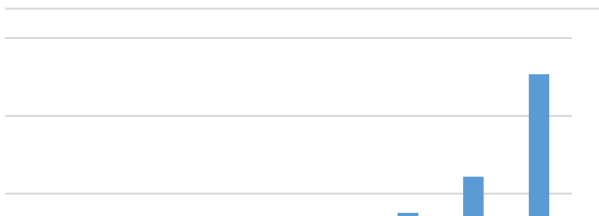
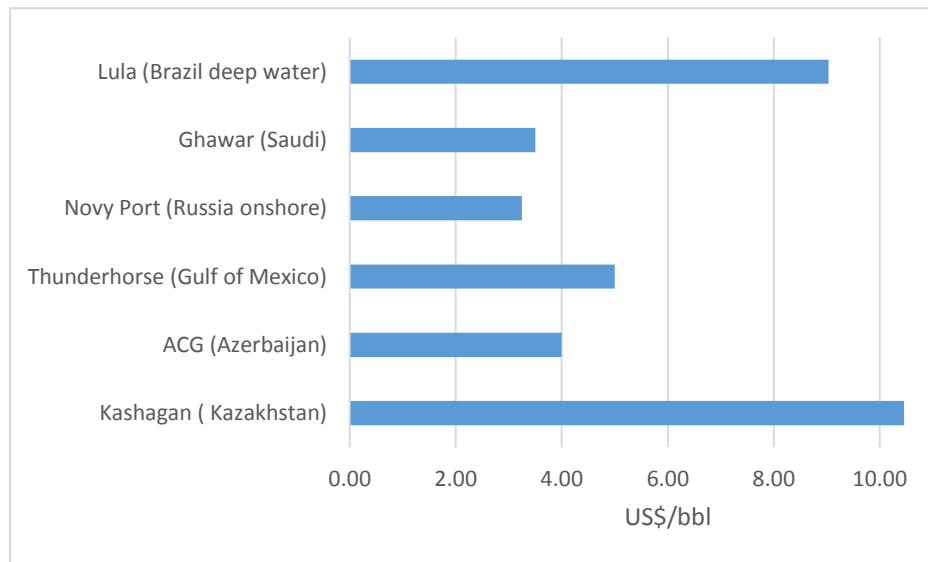


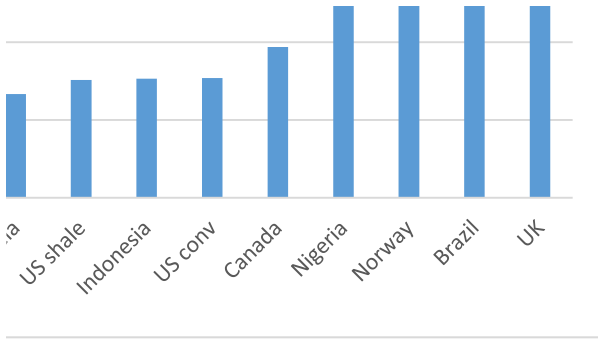
First Oil					Peak Oil				
<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>	
0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

Capex/  
peak bbl  
US\$/bbl

248  
88  
55  
77  
136  
411

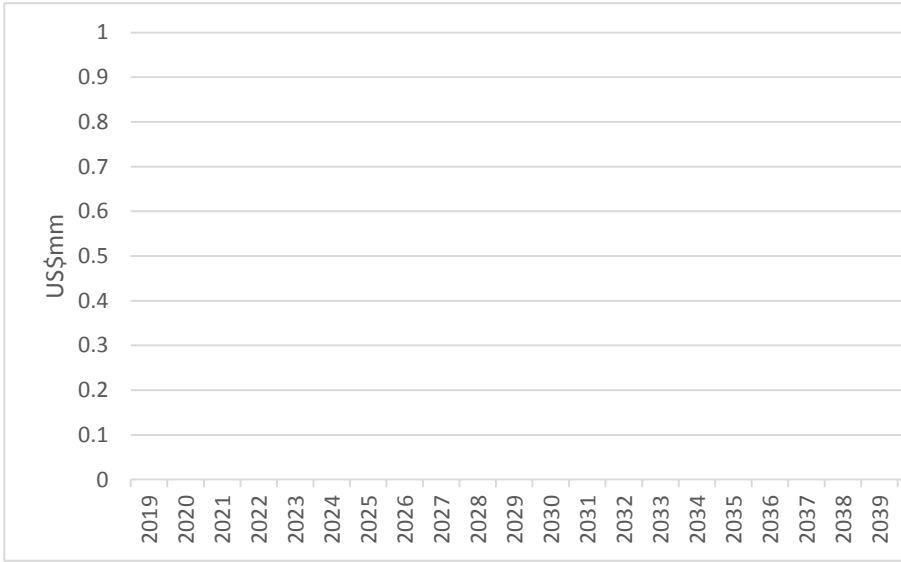






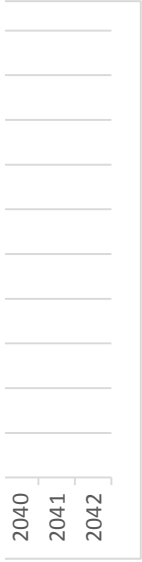
2034	2035	2036	2037	2038	2039	2040	2041	2042
0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0





2040  
2041  
2042



## Operating Costs

Lifting Costs 0 US\$/boe real  
 Total for model 0 US\$mm

	2019	2020	2021	2022	2023	2024	2025
US\$mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0						

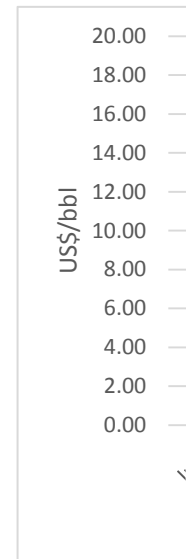
## Base Case and Sensitivities

1	0
2	15%
3	30%
4	-15%
5	-30%

## Global Comparisons

	Lifting US\$/bbl		Transport US\$/bbl
Iran	1.94	Saudi Arabi	2.49
Iraq	2.16	Iran	2.67
Russia	2.98	Iraq	2.47
Saudi Arabia	3.00	Russia	2.69
Norway	4.24	Indonesia	3.63
US conv	5.15	US conv	3.11
US shale	5.85	Norway	3.12
Indonesia	6.87	US shale	3.52
Venezuela	7.94	Canada	2.92
Nigeria	8.81	Venezuela	2.54
Brazil	9.45	Nigeria	2.97
Canada	11.56	Brazil	2.80
UK	17.36	UK	4.30

## Lifting Costs



## Company examples

Rosneft	3.10
Lukoil	4.26
BP	6.90
Chesapeake	2.92

## Transport Costs

Oil 0.00 US\$/bbl  
 Gas 0.00 US\$/mcf

	2019	2020	2021	2022	2023	2024	2025
Oil (US\$mm)	0.0	#####	0.0	0.0	0.0	0.0	0.0
Gas (US\$mm)	0.0	#####	0.0	0.0	0.0	0.0	0.0

Total (US\$mm)	0.0	#####	0.0	0.0	0.0	0.0	0.0
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**Base Case and Sensitivities**

1	0.00
2	15%
3	30%
4	-15%
5	-30%



0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

2034

0.0

2035

0.0

2036

0.0

2037

0.0

2038

0.0

2039

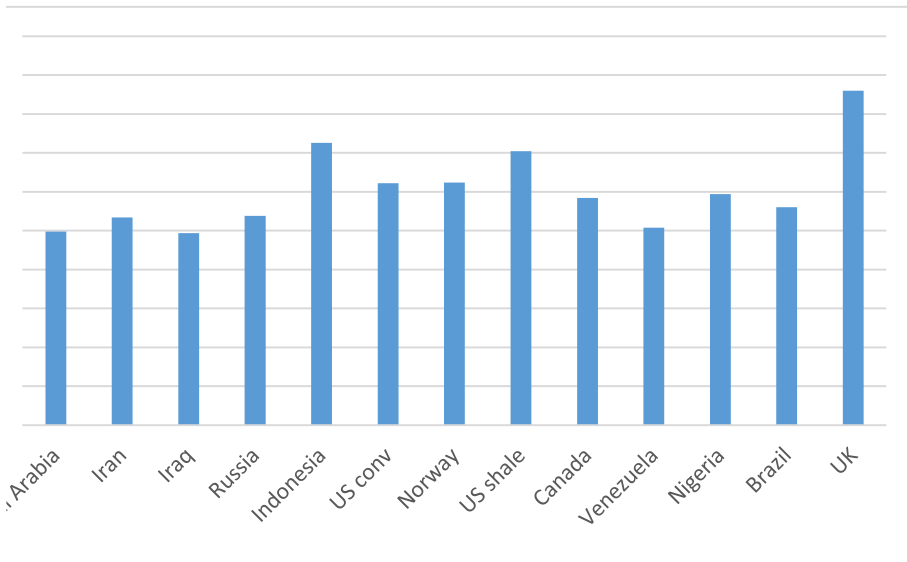
0.0

2040

0.0

2041

0.0



2034

0.0

0.0

2035

0.0

0.0

2036

0.0

0.0

2037

0.0

0.0

2038

0.0

0.0

2039

0.0

0.0

2040

0.0

0.0

2041

0.0

0.0



0.0

0.0

0.0

0.0

0.0

0.0

0.0

0.0

**2042**

0.0

**2042**

0.0

0.0

0.0

## Operating Taxes

### Oil Tax

Export Tax Sliding of export barrels  
**Royalty** 0.0% of oil revenues  
**Other taxes** 0.0% of total revenues

Export Oil Price 0 0 0 0 0 0

	2019	2020	2021	2022	2023	2024
Export Tax	0.0	0.0	0.0	0.0	0.0	0.0
Royalty	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
Total	0	0	0	0	0	0

### Export Tax

**Cut-off point** 0 US\$/bbl  
**Tax** 0% above cut-off point

Export Tax (\$/bbl) 0 0 0 0 0 0

### Gas Tax

**Export Tax** 0% export revenues  
**Royalty** 0 US\$/mcf

	2019	2020	2021	2022	2023	2024
Export Tax	0	0	0	0	0	0
Royalty	0	0	0	0	0	0
Total	0	0	0	0	0	0

Total Operating Taxes 0 0 0 0 0 0

Total US\$/boe

### Gross Taxes

US\$/bbl

Saudi Arabia 0

Iran 0

Iraq 0.91

Russia 8.44

Indonesia 1.55

US conv 5.03

Norway 0.19

US shale 6.42

Canada 2.48

Venezuela 10.48

Nigeria 4.11

Brazil  
UK

6.66  
0









## Depreciation

### Straight Line

Total Capex	0
Years of Production	0
Annual Depreciation (US\$mm)	#DIV/0!

	2019	2020	2021	2022	2023	2024
Depreciation	0	0	0	0	0	0
<i>Production</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Total	0					

### Unit of Production

Total Reserves	0
Total Produced	0
Total Capex	0
Depreciation per barrel	#DIV/0!

	2019	2020	2021	2022	2023	2024
Depreciation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Total	#DIV/0!					

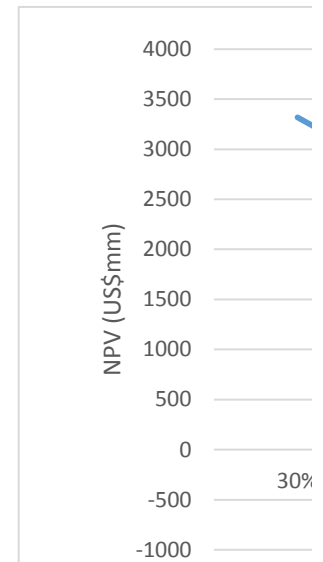




## Sensitivities

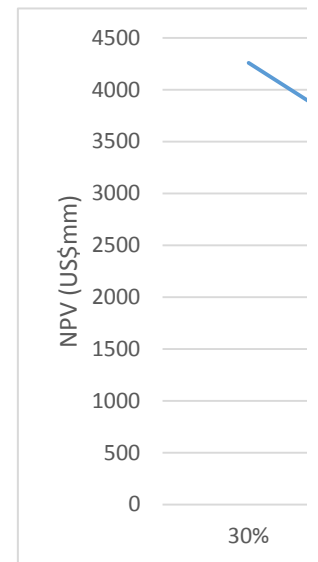
### Oil Price

	NPV
30%	3318
15%	2392
0%	1465
-15%	539
-30%	-388



### Production

	NPV
30%	4257
15%	3203
0%	2149
-15%	1094
-30%	40



### Capex

	NPV
30%	1012
15%	1580
0%	2149
-15%	2717
-30%	3285

### Opex

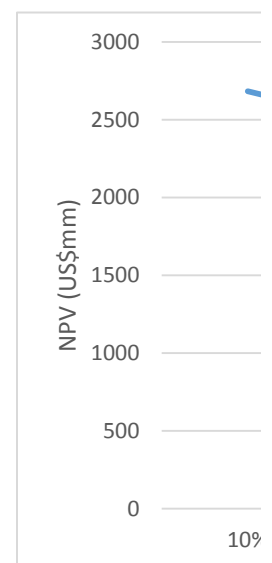
	NPV
30%	1735
15%	1942
0%	2149
-15%	2356
-30%	2563

### Corporate Tax Rate

	NPV
10%	2682
15%	2415
20%	2149
25%	1882
30%	1615

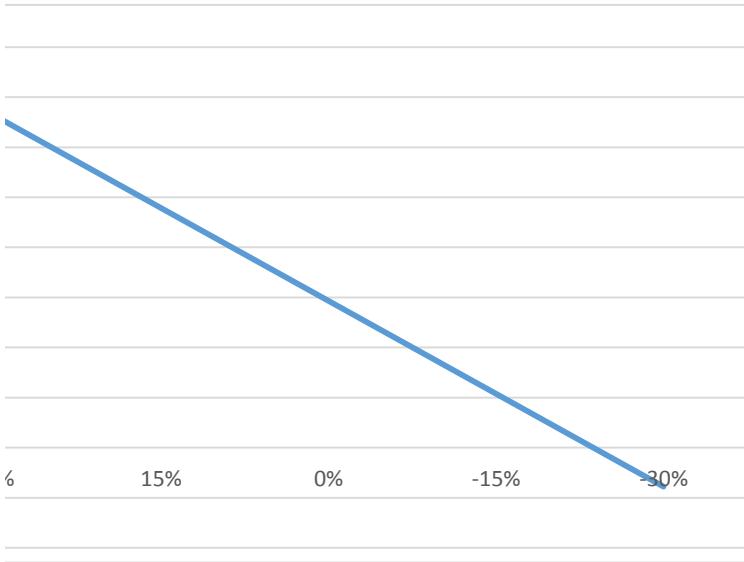
### Discount Rate

	NPV
5.0%	5152
7.5%	2932
10.0%	2149
12.5%	496
15.0%	-154

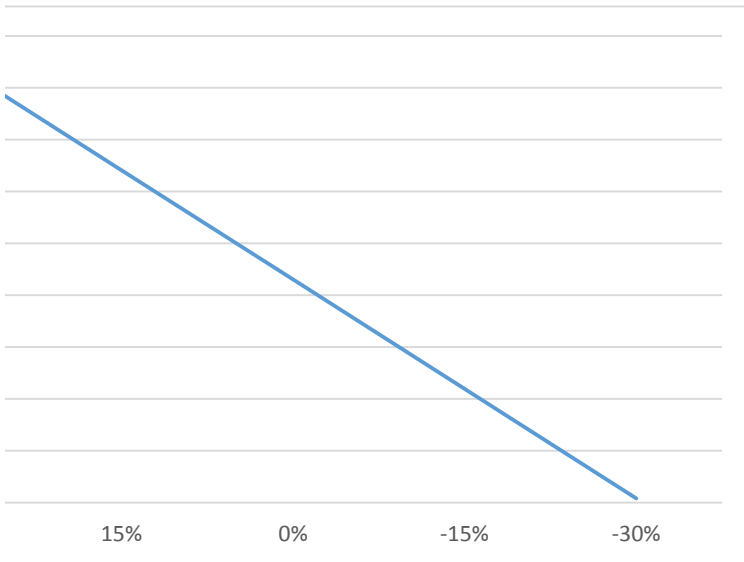


## Summary

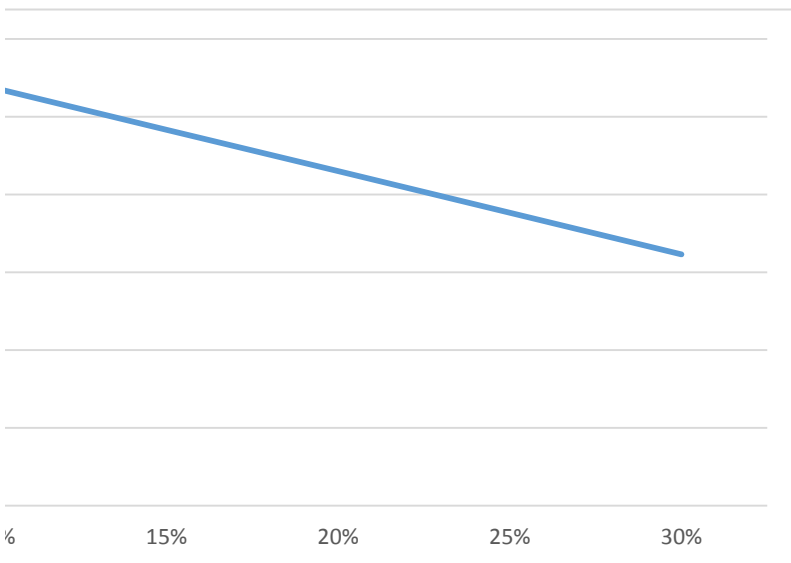
	Oil Price	Production Capex	Opex	Corp Tax	Disc. Rate	
Downside	-388	40	1012	1735	1615	-154
Low	539	1094	1580	1942	1882	496
Base	1465	2149	2149	2149	2149	2149
High	2392	3203	2717	2356	2415	2932
Upside	3318	4257	3285	2563	2682	5152



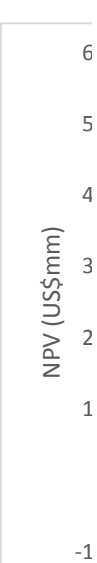
Oil Price

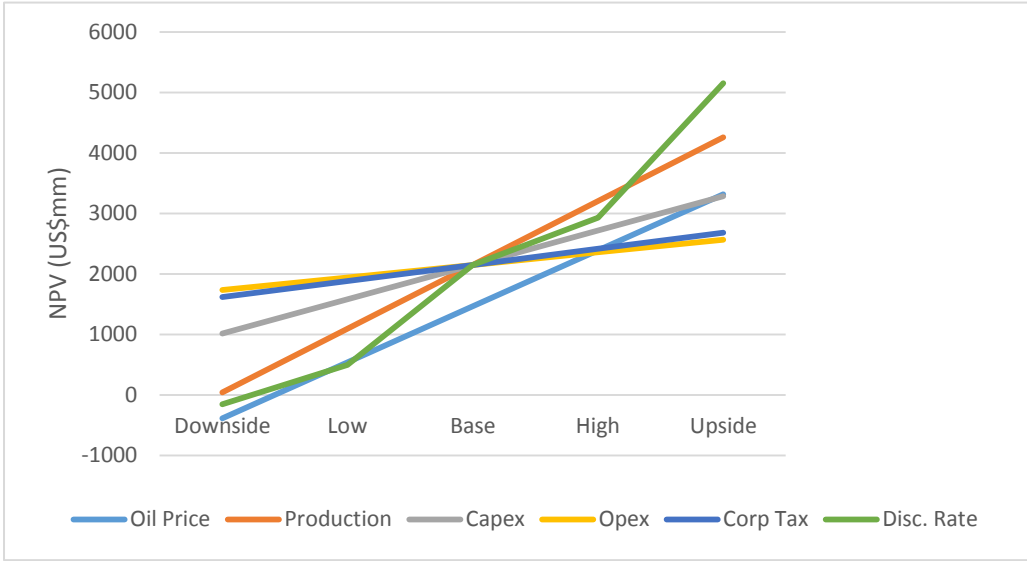


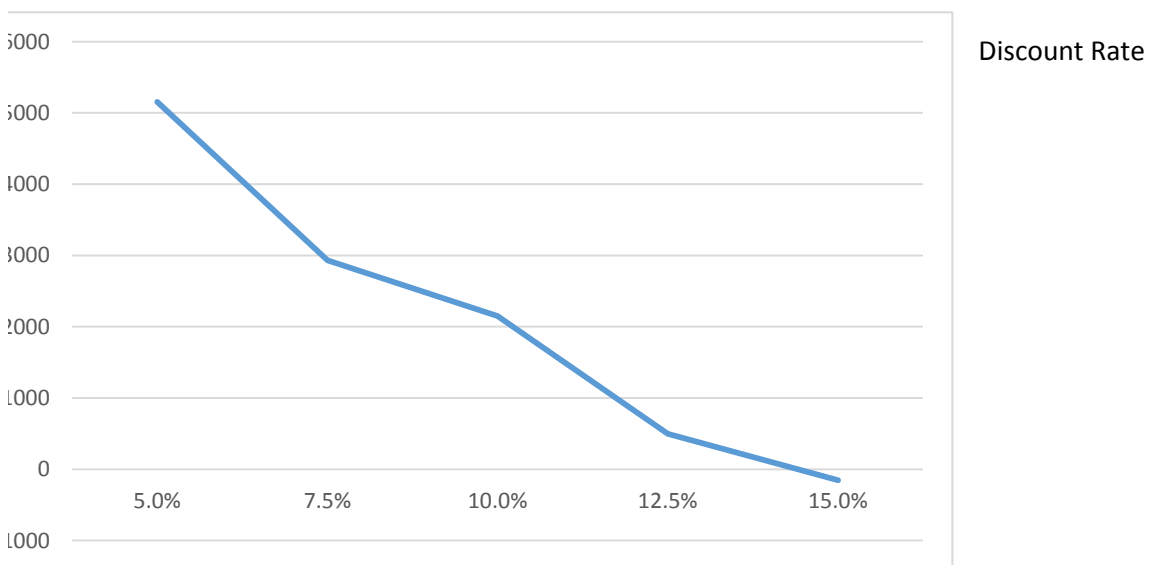
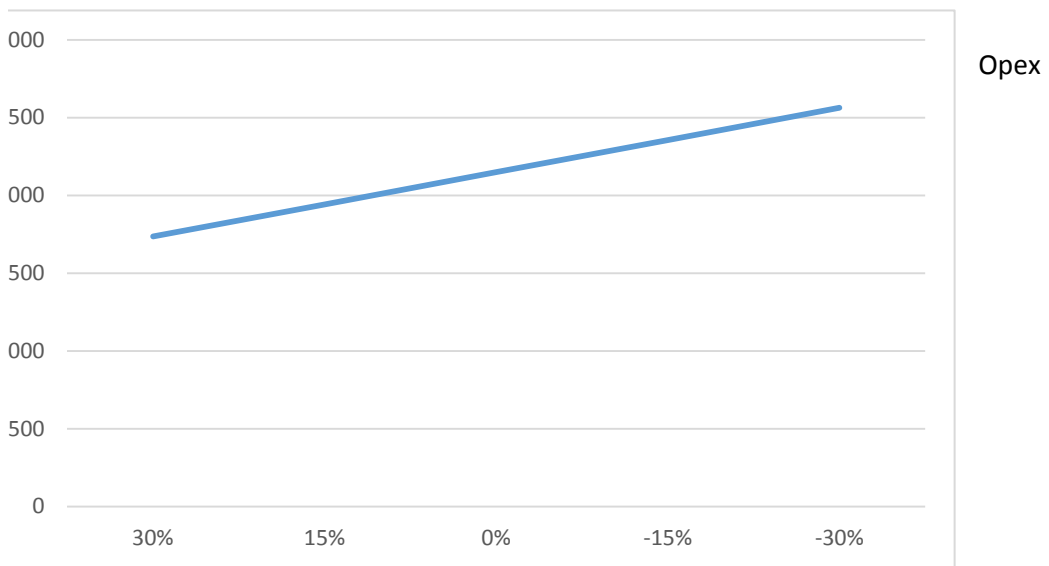
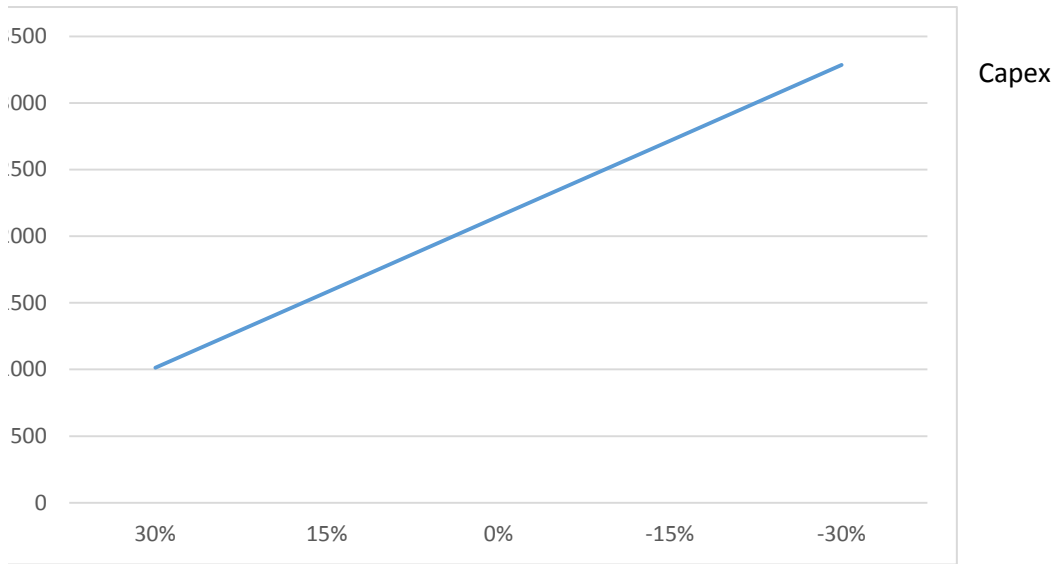
Production



Tax Rate









**Exploration Well Analysis**

Chance of Success	0%
Cost of Well	0 US\$mm
NPV of Success	#DIV/0!
Dry Hole	0.0
Successful Well	#DIV/0!
EMV	#DIV/0!

**PSA Regime**

	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Company Revenues	0	#####	#####	#####	#####	#####
Operating Costs	0	0	0	0	0	0
Transport Costs	0	#####	0	0	0	0
Operating Taxes	0	0	0	0	0	0
EBITDA	0	#####	#####	#####	#####	#####
Depreciation	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
EBIT	#DIV/0!	#####	#####	#####	#####	#####
Tax on EBIT <i>Corporate Tax Rate</i>	#DIV/0! 20%	#####	#####	#####	#####	#####
Post tax cashflow	#DIV/0!	#####	#####	#####	#####	#####
CAPEX	0	0	0	0	0	0
Free Cashflow (FCF)	#DIV/0!	#####	#####	#####	#####	#####
Cumulative FCF	#DIV/0!	#####	#####	#####	#####	#####
Discount Rate	10%					
Discount Factor	1.10	1.21	1.33	1.46	1.61	1.77
Discounted Cashflow (DCF)	#DIV/0!	#####	#####	#####	#####	#####
NPV (\$mm)	#DIV/0!					
IRR (%)	#####					

**Revenue Calculation**

	Company	Govt				
Cost Oil	80%					
Profit Oil	50%	50%				
	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Total Revenues	0	0	0	0	0	0
Govt Royalty	0	0	0	0	0	0
Taxable Revenues	1%	0	0	0	0	0
<b>Cost Oil</b>						
80% of Revenues	0	0	0	0	0	0

Accumulated Cost Oil	0	0	0	0	0	
Annual Costs	#####	0	0	0	0	
Accumulated Costs	#####	#####	#####	#####	#####	
Payback	#####	#####	#####	#####	#####	
<b>Cost Oil to Company</b>	<b>0</b>	#####	#####	#####	#####	
Profit Oil	0	#####	#####	#####	#####	
<b>Profit Oil</b>						
Company	0	#####	#####	#####	#####	
Govt	0	#####	#####	#####	#####	
<b>Total Company Revenues</b>	<b>0</b>	#####	#####	#####	#####	
	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Company Revenues	0	#####	#####	#####	#####	#####
Govt. Revenues	0	#####	#####	#####	#####	#####









## Questions

### Real and Nominal

	2018	2019	2020	2021	2022	2023
<b>Q1</b>	100	102.5	105.1	107.7	110.4	113.1

### Q2

	2018	2019	2020	2021	2022	2023
Real	60	60	60	60	60	60
Nominal	60	61.20	62.42	63.67	64.95	66.24

Inflation 2%

Real +1% 60 60.60 61.21 61.82 62.44 63.06

### NPV and DCF

#### Q1

	2018	2019	2020	2021	2022	2023	2024	2025
US\$m	100	100	100	100	100	100	100	100
Discount factor	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.14
Discount Rate	10%							
DCF	91	83	75	68	62	56	51	47
NPV	614							
NPV Excel	614							

#### Q2

	2018	2019	2020	2021	2022	2023	2024	2025
Capex	-187.5	-187.5	-187.5	-187.5	-187.5			
Cashflow						100	150	200
Net Cashflow	-188	-188	-188	-188	-188	100	150	200
Discount Factor	1.1	1.21	1.33	1.46	1.61	1.77	1.95	2.14
Discount Rate	10%							
DCF	-170	-155	-141	-128	-116	56	77	93
NPV	381							
NPV Excel	381							
IRR	16%							
Cost Inflation	1.25							



2026	2027
100	100
2.36	2.59
42	39

2026	2027	2028	2029	2030	2031	2032	2033	2034
250	300	300	300	300	300	300	270	243
250	300	300	300	300	300	300	270	243
2.36	2.59	2.85	3.14	3.45	3.80	4.18	4.59	5.05
106	116	105	96	87	79	72	59	48

2035	2036	2037
219	197	177
219	197	177
5.56	6.12	6.73
39	32	26