

Appendix C - Jack-up platform

C1 COST REPORT

Date: 09.06.2015



Resume

Project name	Tesla
Location	North Sea South
Development Concept	Stand Alone
Water Depth	115 m (MSL)
Reservoir Depth	2290 m (MSL)

Wells	Number
Producers	4
Water Injectors	2
Gas Injectors	0
Total	6

Platform

Concept	0
Number of inlet systems	1
Living quarters capacity	40 beds
Liquid capacity	16000 Sm ³ /d

Cost

Capex facilities	8941 mill.NOK
Capex wells	2085 mill.NOK
Opex per year	542 mill.NOK
Lease costs	1905 mill.NOK
Removal and abandonment	0 mill.NOK
Cost Reference Year	2015
Currency	NOK
Currency Factor	6,00 NOK/USD

Price and tariff

Oil price	71,76 USD/bbl
Oil tariff	1,79 USD/bbl
Gas price	0,00 NOK/scm
Gas tariff	0,00 NOK/scm

COST REPORT

Tesla Cost year: 2015 Currency: NOK Region: North Sea South

Capex Facilities Overview

mill.NOK

Cost element	Engineering	Procurement	Construction	SUM EPC	Marine op	SUM EPCI	Management	Base estimate	Contingency	Total
Topsides	911	1216	429	2556	28	2583	362	2945	442	3387
Substructure ii	382	1097	344	1824	208	2032	284	2316	347	2663
Piles, anchors	0	0	0	0	0	0	0	0	0	0
Sum Platform	1293	2313	772	4379	236	4615	646	5261	789	6050
Subsea produc	190	1139	36	1365	84	1448	203	1651	248	1899
Flowlines	13	39	31	82	55	138	19	157	24	181
Flowline/pipel	13	65	14	92	59	150	21	172	26	197
Umbilicals/rise	22	64	18	104	109	213	30	243	36	279
Riser bases, PL	8	26	0	33	222	256	36	291	44	335
Sum Subsea	246	1333	98	1676	529	2205	309	2514	377	2891
Export pipelin	0	0	0	0	0	0	0	0	0	0
Power cables/r	0	0	0	0	0	0	0	0	0	0
SUM Facilities	1539	3646	871	6056	764	6820	955	7775	1166	8941

Capex Wells Overview

	days per well	days	mill.NOK
Drilling	37	221	1168
Completion	26	159	916
Sum Drilling and completion	63	380	2085

COST REPORT

Tesla Cost year: 2015 Currency: NOK Region: North Sea South

Removal Cost Overview

mill.NOK

	Engineering	Decommissioning	Removal operations	Dismantling	Sub-total	Management	Base estimate	Contingency	TOTAL
Well plugging and abandonm	39	0	893	0	931	93	1024	154	1178
Platform topsides	18	43	0	78	138	14	152	23	175
Platform substructure	63	38	40	116	257	26	283	42	325
Mooring lines, piles, anchors	0	0	0	0	0	0	0	0	0
Risers, conductors	0	0	17	0	18	2	19	3	22
Flowlines, umbilicals and cab	0	2	16	0	18	2	20	3	23
Export pipelines	0	0	0	0	0	0	0	0	0
Subsea equipment and struct	6	24	76	9	114	11	126	19	145
Sea bottom clean-up	1	0	23	0	24	2	27	4	30
TOTAL	126	107	1065	203	1501	150	1651	248	1899

COST REPORT

Tesla

Cost year: 2015

Currency: NOK

Region: North Sea South

Cost Phasing Assumptions

Capex Facilities

Number of months from project sanction to production start-up:	38	mill.NOK
Expenditure in year	1	2104
Expenditure in year	2	4208
Expenditure in year	3	2576
Expenditure in year	4	54
Total expenditure		8941

Capex Wells

Number of months for drilling and completion	13	mill.NOK
Expenditure in year	1	0
Expenditure in year	2	111
Expenditure in year	3	1974
Expenditure in year	4	0
Expenditure in year	5	0
Expenditure in year	6	0
Expenditure in year	7	0
Expenditure in year	8	0
Expenditure in year	9	0
Total expenditure	0	2085

COST REPORT

Tesla

Cost year: 2015

Currency: NOK

Region: North Sea South

Drilling and Completions Costs

Time for drilling	221 days	7 months
Time for completion	159 days	5 months
Total time for drilling and completion	380 days	13 months
Drilling cost	181 mill.USD	1087 mill.NOK
Completion cost	142 mill.USD	852 mill.NOK
Planning and other costs	24 mill.USD	145 mill.NOK
Total cost for drilling and completion	347 mill.USD	2085 mill.NOK
Total number of wells	6	
Average well cost	58 mill.USD	347 mill.NOK
Drilling expenditure per month	27 mill.USD	165 mill.NOK
Total steel weight of all wells	7589 tonnes	
Average steel weight per well	1265 tonnes	
Diesel consumption of MODU	7603 tonnes	20 tonnes/d
Fuel gas consumption of platform rig	3802 tonnes	10 tonnes/d

Rates

	Basis	Index	Cost
	K USD/day		K USD/day
Platform drilling	59	1,11	66
Platform light intervention	24	1,11	27
MODU drilling - semisub	525	1,11	584
MODU drilling - jack-up	350	1,11	390
Service rate for drilling	400	1,09	437
Service rate for completion	440	1,09	481
Service rate for plugging and abandonment	260	1,09	284

OPEX REPORT

Tesla

Cost year: 2015

Currency: NOK

Region: North Sea South

Basis for cost phasing - OPEX

Preparation for operation - last year before production start		326
First period; start-up	Duration - years	652
Second period; drilling and production	Duration - years	473
Third period; production, maintenance and modification	Duration - years	583
Fourth period; preparation for abandonment	Duration - years	-31
Total	Duration - years	4337

Opex Overview

	mill. USD	mill.NOK
	OPEX per year	OPEX per year
Offshore personnel	26	156
Catering	2	10
Production materials, chemicals and diesel	2	11
Communication	0	1
Maintenance materials/spare parts	2	11
Onshore base, purchase and contracts	1	6
Supply vessels	8	46
Stand-by vessels	16	97
Helicopter transportation	3	19
Well maintenance and well monitoring - platform wells	0	0
Well maintenance and well monitoring - subsea wells	5	32
Subsea inspection and maintenance	5	30
Stand-by maintenance of drilling package	0	0
Onshore organization, administration/support	4	22

Onshore organization, subsurface and licence adm	1	8
SUBTOTAL 1	75	449
Modifications/optimization/upgrading	1	6
Reservoir area fee	0	0
Contingency	7	45
SUBTOTAL 2	83	501
Insurance	4	27
CO2 tax	2	14
TOTAL OPEX	90	542
"Day-rate" (USD/day)	247556	1485333
Contingency (percent)	10	10

C2 NPV REPORT

Tesla Cost year: 2015 Currency: NOK Date: 09.06.2015 Region: North Sea South

Recoverable Volumes – metric units	
Recoverable volume of oil	8,00 mill.scm
Recoverable volume of gas	0,00 bill.scm
Daily Production – metric units	
Oil	8219 scm/d
Gas	0,00 mill scm/d

Case Description	
Concept	0
Water depth	115 metres
Reservoir depth	2290 metres
Number of producers	4 P
Number of water injectors	2 WI
Number of gas injectors	0 GI
Gas/oil – ratio	0 scm/scm
Field life (production)	8 scm/scm
Plateau length oil	1,0 years
Plateau length gas	1,0 years
Average number of streamdays	340,0 years

NPV Report Jack-up

Recoverable Volumes – oil field units	
Recoverable volume of oil	50,3 mill.bbl
Recoverable volume of gas	0,0 bill.scft
Daily Production – oil field units	
Oil	51693 bpd
Gas	0 mill scft/d

Basis for NPV calculations

Capex facilities		8941 mill.NOK
Capex wells		2085 mill.NOK
Opex	542	4337 mill.NOK
Lease costs		1905 mill.NOK
Removal and abandonment		0 mill.NOK
Cost reference year		2015
Currency (NOK/USD)		6 NOK/USD
Discount rate		10,00 percent

Price and Tariff

Oil price		71,76 USD/bbl
Gas price		0,00 NOK/scm
Oil tariff		1,79 USD/bbl
Gas tariff		0,00 NOK/scm

NPV Report Jack-up

Economic Indicators (pre-tax)

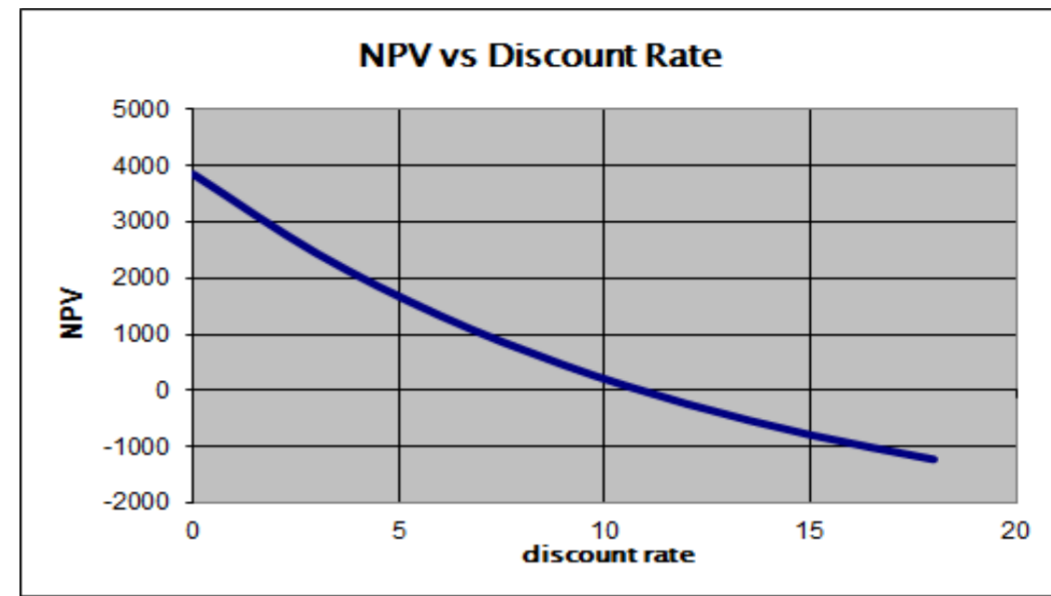
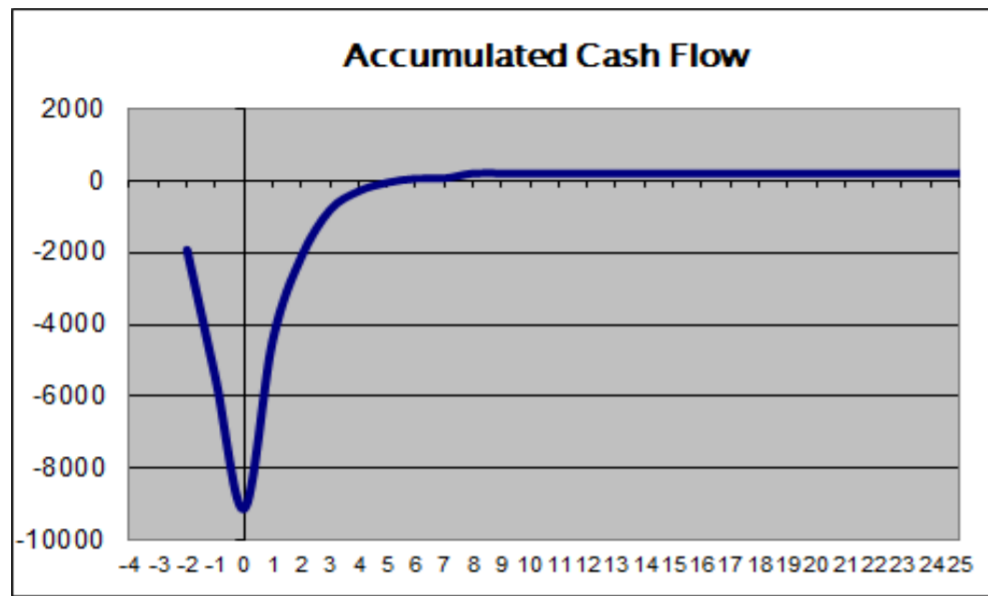
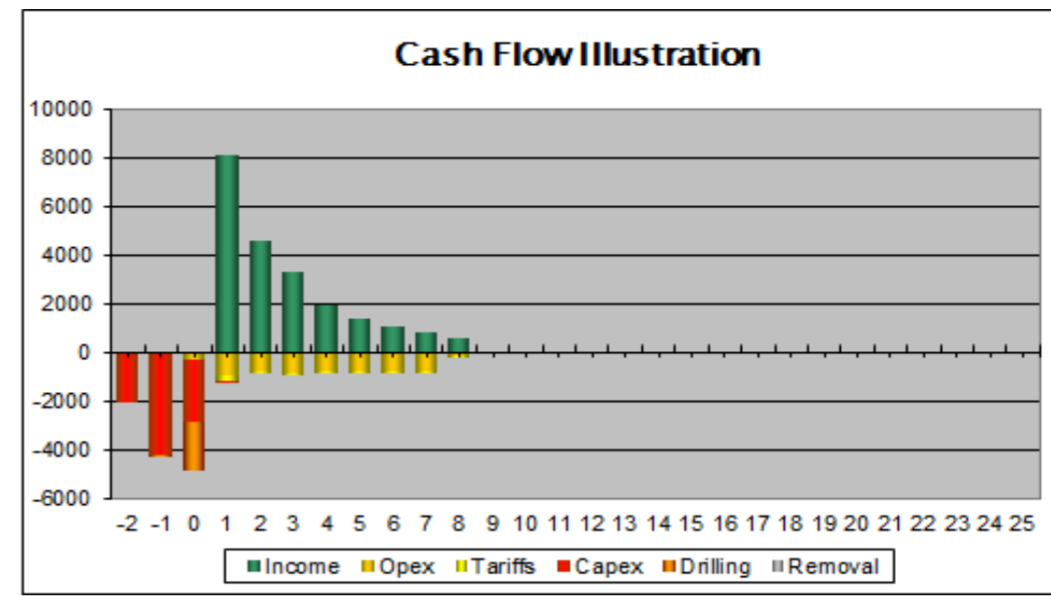
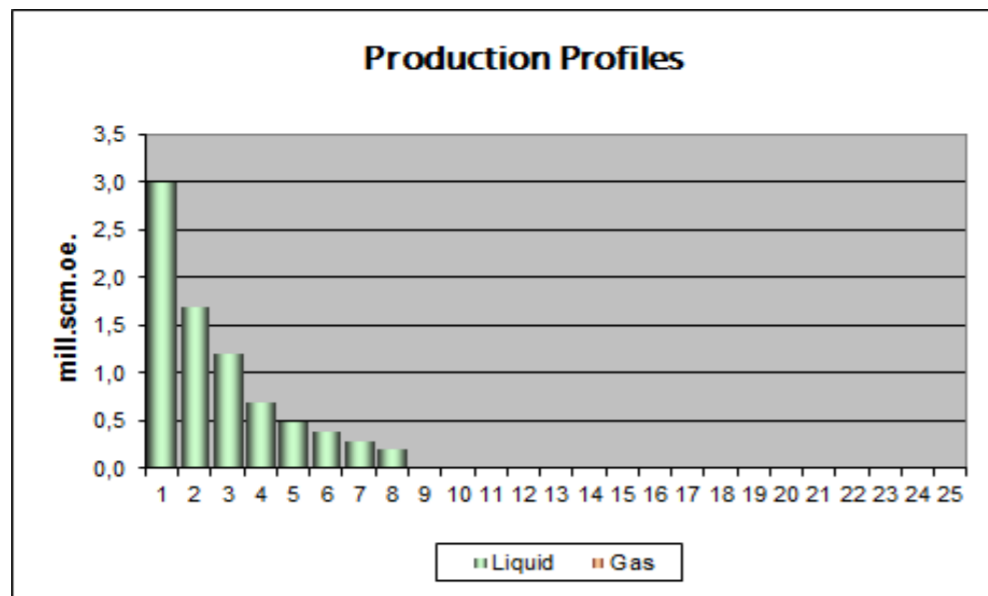
NPV	NPV	IRR	PI	Capex	Opex	Tariffs	TUC	TUC
mill.NOK	mill.USD	percent	-	USD/boe	USD/boe	USD/boe	USD/boe	NOK/scm
210	35	10,91	0,02	36,52	20,68	1,79	70,58	2664

NPV REPORT

Tesla Cost year: 2015 Currency: NOK Region: North Sea South

Year	mill.scm Oil prod	bill.scm Gas prod	mill.NOK Oil inc	mill.NOK Gas inc	mill.NOK Income	mill.NOK Oil tariff	mill.NOK Gas tariff	mill.NOK Opex	mill.NOK Lease	mill.NOK Capex(f)	mill.NOK Capex(w)	mill.NOK Removal	mill.NOK Net CF
1	0	0	0	0	0	0	0	0	0	2104	0	0	-2104
2	0	0	0	0	0	0	0	0	0	4208	111	0	-4318
3	0	0	0	0	0	0	0	321	0	2576	1974	0	-4871
4	3,00	0,00	8124	0	8124	203	0	668	305	54	0	0	6895
5	1,70	0,00	4603	0	4603	115	0	481	286	0	0	0	3722
6	1,20	0,00	3250	0	3250	81	0	584	267	0	0	0	2317
7	0,70	0,00	1896	0	1896	47	0	580	248	0	0	0	1021
8	0,50	0,00	1354	0	1354	34	0	578	229	0	0	0	513
9	0,40	0,00	1083	0	1083	27	0	577	210	0	0	0	269
10	0,30	0,00	812	0	812	20	0	577	191	0	0	0	25
11	0,20	0,00	542	0	542	14	0	-29	172	0	0	0	385
12	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
13	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
14	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
15	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
16	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
17	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
18	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
19	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
20	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
21	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
22	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
23	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
24	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
25	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
26	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
27	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
28	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
29	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
30	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
31	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
32	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
33	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
34	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
35	0,00	0,00	0	0	0	0	0	0	0	0	0	0	0
SUM	8,00	0,00	21663	0	21663	540	0	4337	1905	8941	2085	0	3855
NPV	4,73	0,00	12808	0	12808	319	0	2350	992	7362	1575	0	210
NPV	5,20	0,00	14089	0	14089	351	0	2585	1092	5994	1732	0	2335

NPV REPORT



NPV REPORT

Lease rate for production and storage units		
Capital cost of leased unit:		1996 mill.NOK
Contractor's interest rate (base unit)		8 percent
Contractor's interest rate (special equipment)		10 percent
Contract duration (equal field life)		8 years
Lease rate first year		139091 USD/day
Lease rate base unit		69742 USD/day
Sum of lease costs		1905 mill.NOK
NPV of lease costs		992 mill.NOK
NPV of lease costs; year 3 ref		1321 mill.NOK
Capital cost of equipment to be leased:		1996 mill.NOK
Capital cost of base unit		1500 mill.NOK
Capital cost of special equipment		496 mill.NOK
Economical life of base unit		20 years
Contract duration (special equipment)		8 years
Interest rate for base unit		8,0 percent
Interest rate for special equipment		10,0 percent
Lease rate for base unit	152,7 mill.NOK	69742 USD/d
Lease rate for special equipment	93,1 mill.NOK	42489 USD/d
Leased Storage Tanker included?		Yes
Leased Production Unit included?		Yes
Leasing of Storage Tanker or Production Unit		
	percent	mill.NOK
Production unit - base unit	44,0	2663
Production unit - special equipment	56,0	3387
Storage tanker - base unit	75,1	1500
Storage tanker - special equipment	24,9	496