

Annexure – I**(Referred to in paragraph No. 12)****Audit had taken the following assumptions for calculation of financial implications**

1. PSC for R&RS fields would have been signed in 2001 alongwith PSCs for 9 other small sized fields which were signed in February 2001. All these fields were part of the CCEA's approval for conclusion of contracts for 11 small sized fields apart from R&RS fields.
2. Development of production facilities and commencement of commercial production from R&RS fields would have taken four years eight months (eight out of nine fields started production and maximum time taken to start production in these fields was four years eight months) from October 2005.
3. MoPNG, in its reply to an audit query, stated (May 2015) that it was not in a position to provide details of quantities of oil and gas to be produced from R&RS fields. Audit has, therefore, assumed that R&RS fields would have been developed and production profile for the R-12, Basal Clastics, R-10, R-7 and R-9 structures would be as indicated in the proposed Plan of Development (PoD) submitted by CoSB to GoI, after making required capital investment and incurring the required cost of production. Accordingly, commencement of commercial production of Crude Oil and Nature Gas from various constituent fields of R&RS fields would have been as under:

1. 1 st Year	R-12 field	From October 2005.
2. 2 nd Year	R-10 field and Basal Clastics	From 2006-07.
3. 3 rd Year	R-7 field and R-9 field	From 2007-08.

4. Though annual production of Crude Oil and Natural Gas as projected in PoD by CoSB submitted to GoI was lower than the daily production (shown in PoD) multiplied by number of days in the relevant year, Audit has, to be on conservative side, adopted the said lower figures of annual production depicted in PoD. It was assumed that the reduced annual figures of production so adopted would have factored into (a) normative loss of Crude Oil and flaring of Natural Gas that would have occurred during petroleum operations and (b) loss of production due to shut down of production facilities for preventive maintenance and/or normal repairs and maintenance etc.
5. Crude Oil prices have been arrived at after adopting average monthly price of the Brent Crude Oil (specification as mentioned in the draft PSC and bidding documents) from October 2005 to March 2015, (source:<http://www.indexmundi.com/commodities/?commodity=crude-oil&months=360> & commodity=crude-oil-brent).
6. Sale price of Natural Gas = US\$ 3.11 per MMBTU (as per draft PSC for R&RS fields).
7. In the absence of data regarding post wellhead expenses, sale price of Natural Gas has been assumed as the wellhead price.
8. In case of Crude Oil, royalty at the rate of ₹ 528 per metric tonne and cess at the rate of ₹ 900 per metric tonne have been assumed, as envisaged in the draft PSC.
9. In case of Natural Gas, royalty has been assumed at the rate of 10 per cent of the sale price of Natural Gas as per draft PSC.
10. In the absence of information about year wise estimated operating expenditure, an estimate for profit petroleum receivable by GoI could not be made.

Annexure II

(Referred to in paragraph No.12)

**Part A - Quantity and Value of Crude Oil Production Deferred from October 2005 to March 2015 and Consequent Deferment of related Royalty and Cess
(To be read in conjunction with the assumptions stated in Annexure I)**

Month	Production (in million bbls) (Annual Production/ 12)	Rate of Brent crude (In USD/bbl.)	Value of Crude Oil (in million USD) {Col.2 x Col.3}	Exchange rate 1 USD to ₹	Value of Crude Oil (in ₹ crore) {Col.4 x Col.5/10}	Production(in MT) (1bbl = 0.131 MT) {Col.2 x 0.131 x 1000000}	Royalty + Cess (in ₹ crore) {Col.7 x (528+900)}
Col.1	Col.2	Col.3	Col.4	Col.5	Col.6	Col.7	Col.8
October-05	0.121	58.52	7.061	44.82	31.65	15807	2.26
November-05	0.121	55.53	6.701	45.73	30.64	15807	2.26
December-05	0.121	56.75	6.848	45.65	31.26	15807	2.26
January-06	0.121	63.57	7.671	44.40	34.06	15807	2.26
February-06	0.121	59.92	7.230	44.33	32.05	15807	2.26
March-06	0.121	62.25	7.512	44.48	33.41	15807	2.26
April-06	0.121	70.44	8.500	44.95	38.21	15807	2.26
May-06	0.121	70.19	8.470	45.41	38.46	15807	2.26
June-06	0.121	68.86	8.309	46.06	38.27	15807	2.26
July-06	0.121	73.90	8.917	46.46	41.43	15807	2.26
August-06	0.121	73.61	8.882	46.54	41.34	15807	2.26
September-06	0.121	62.77	7.574	46.12	34.93	15807	2.26
October-06	0.233	58.38	13.627	45.47	61.96	30578	4.37
November-06	0.233	58.48	13.650	44.85	61.22	30578	4.37
December-06	0.233	62.31	14.544	44.63	64.92	30578	4.37
January-07	0.233	54.30	12.675	44.33	56.19	30578	4.37
February-07	0.233	57.76	13.482	44.16	59.54	30578	4.37
March-07	0.233	62.14	14.505	44.03	63.86	30578	4.37
April-07	0.233	67.40	15.732	42.15	66.31	30578	4.37
May-07	0.233	67.48	15.751	40.78	64.23	30578	4.37
June-07	0.233	71.32	16.647	40.77	67.87	30578	4.37
July-07	0.233	77.20	18.020	40.42	72.83	30578	4.37
August-07	0.233	70.80	16.526	40.82	67.45	30578	4.37
September-07	0.233	77.13	18.003	40.34	72.63	30578	4.37
October-07	0.667	83.04	55.408	39.51	218.94	87410	12.48
November-07	0.667	92.53	61.741	39.44	243.51	87410	12.48
December-07	0.667	91.45	61.020	39.44	240.66	87410	12.48
January-08	0.667	91.92	61.334	39.37	241.50	87410	12.48
February-08	0.667	94.82	63.269	39.73	251.36	87410	12.48
March-08	0.667	103.28	68.914	40.36	278.11	87410	12.48
April-08	0.667	110.44	73.691	40.03	294.97	87410	12.48
May-08	0.667	123.94	82.699	42.13	348.37	87410	12.48
June-08	0.667	133.05	88.778	42.82	380.15	87410	12.48
July-08	0.667	133.90	89.345	42.84	382.72	87410	12.48
August-08	0.667	113.85	75.966	42.94	326.19	87410	12.48
September-08	0.667	99.06	66.098	45.56	301.17	87410	12.48

Month	Production (in million bbls) (Annual Production/ 12)	Rate of Brent crude (In USD/bbl.)	Value of Crude Oil (in million USD) {Col.2 x Col.3}	Exchange rate 1 USD to ₹	Value of Crude Oil (in ₹ crore) {Col.4 x Col.5/10}	Production(in MT) (1bbl = 0.131 MT) {Col.2 x 0.131 x 1000000}	Royalty + Cess (in ₹ crore) {Col.7 x (528+900)}
October-08	0.640	72.84	46.587	48.64	226.61	83785	11.96
November-08	0.640	53.24	34.051	49.00	166.86	83785	11.96
December-08	0.640	41.58	26.594	48.64	129.36	83785	11.96
January-09	0.640	44.86	28.692	48.83	140.11	83785	11.96
February-09	0.640	43.24	27.656	49.22	136.13	83785	11.96
March-09	0.640	46.84	29.958	51.23	153.48	83785	11.96
April-09	0.640	50.85	32.523	50.06	162.82	83785	11.96
May-09	0.640	57.94	37.057	48.53	179.85	83785	11.96
June-09	0.640	68.59	43.869	47.77	209.58	83785	11.96
July-09	0.640	64.92	41.522	48.48	201.28	83785	11.96
August-09	0.640	72.50	46.370	48.34	224.14	83785	11.96
September-09	0.640	67.69	43.293	48.44	209.71	83785	11.96
October-09	0.617	73.19	45.122	46.72	210.81	80762	11.53
November-09	0.617	77.04	47.495	46.57	221.18	80762	11.53
December-09	0.617	74.67	46.034	46.63	214.66	80762	11.53
January-10	0.617	76.37	47.082	45.96	216.40	80762	11.53
February-10	0.617	74.31	45.812	46.33	212.23	80762	11.53
March-10	0.617	79.27	48.870	45.50	222.35	80762	11.53
April-10	0.617	84.93	52.359	44.50	232.99	80762	11.53
May-10	0.617	76.25	47.008	45.80	215.32	80762	11.53
June-10	0.617	74.84	46.139	46.56	214.84	80762	11.53
July-10	0.617	74.74	46.077	46.84	215.81	80762	11.53
August-10	0.617	76.69	47.279	46.57	220.17	80762	11.53
September-10	0.617	77.79	47.958	46.06	220.89	80762	11.53
October-10	0.614	82.92	50.927	44.41	226.18	80456	11.49
November-10	0.614	85.67	52.616	45.02	236.86	80456	11.49
December-10	0.614	91.80	56.381	45.16	254.61	80456	11.49
January-11	0.614	96.29	59.138	45.39	268.45	80456	11.49
February-11	0.614	103.96	63.849	45.44	290.11	80456	11.49
March-11	0.614	114.44	70.285	44.99	316.21	80456	11.49
April-11	0.614	123.15	75.635	44.37	335.58	80456	11.49
May-11	0.614	114.46	70.298	44.90	315.67	80456	11.49
June-11	0.614	113.76	69.868	44.85	313.37	80456	11.49
July-11	0.614	116.46	71.526	44.42	317.69	80456	11.49
August-11	0.614	110.08	67.607	45.28	306.12	80456	11.49
September-11	0.614	110.88	68.099	47.64	324.41	80456	11.49
October-11	0.562	109.47	61.531	49.26	303.08	73633	10.51
November-11	0.562	110.50	62.110	50.84	315.79	73633	10.51
December-11	0.562	107.97	60.688	52.67	319.63	73633	10.51
January-12	0.562	110.99	62.386	51.35	320.33	73633	10.51
February-12	0.562	119.70	67.281	49.16	330.78	73633	10.51
March-12	0.562	124.93	70.221	50.32	353.37	73633	10.51

Month	Production (in million bbls) (Annual Production/ 12)	Rate of Brent crude (In USD/bbl.)	Value of Crude Oil (in million USD) {Col.2 x Col.3}	Exchange rate 1 USD to ₹	Value of Crude Oil (in ₹ crore) {Col.4 x Col.5/10}	Production(in MT) (1bbl = 0.131 MT) {Col.2 x 0.131 x 1000000}	Royalty + Cess (in ₹ crore) {Col.7 x (528+900)}
April-12	0.562	120.59	67.782	51.80	351.13	73633	10.51
May-12	0.562	110.52	62.121	54.47	338.40	73633	10.51
June-12	0.562	95.59	53.730	56.03	301.05	73633	10.51
July-12	0.562	103.14	57.973	55.49	321.72	73633	10.51
August-12	0.562	113.34	63.707	55.56	353.95	73633	10.51
September-12	0.562	113.38	63.729	54.61	348.00	73633	10.51
October-12	0.536	111.97	60.053	53.02	318.43	70260	10.03
November-12	0.536	109.71	58.841	54.78	322.31	70260	10.03
December-12	0.536	109.64	58.804	54.65	321.35	70260	10.03
January-13	0.536	112.93	60.568	54.32	328.99	70260	10.03
February-13	0.536	116.46	62.461	53.77	335.88	70260	10.03
March-13	0.536	109.24	58.589	54.40	318.75	70260	10.03
April-13	0.536	102.88	55.178	54.38	300.03	70260	10.03
May-13	0.536	103.03	55.258	55.01	303.98	70260	10.03
June-13	0.536	103.11	55.301	58.40	322.94	70260	10.03
July-13	0.536	107.72	57.774	59.78	345.35	70260	10.03
August-13	0.536	110.96	59.512	63.21	376.17	70260	10.03
September-13	0.536	111.62	59.866	63.75	381.66	70260	10.03
October-13	0.466	109.48	50.999	61.62	314.24	61024	8.71
November-13	0.466	108.08	50.347	62.63	315.34	61024	8.71
December-13	0.466	110.63	51.535	61.91	319.06	61024	8.71
January-14	0.466	107.57	50.110	62.08	311.06	61024	8.71
February-14	0.466	108.81	50.687	62.25	315.55	61024	8.71
March-14	0.466	107.41	50.035	61.01	305.28	61024	8.71
April-14	0.466	107.88	50.254	60.36	303.32	61024	8.71
May-14	0.466	109.68	51.093	59.31	303.00	61024	8.71
June-14	0.466	111.87	52.113	59.73	311.27	61024	8.71
July-14	0.466	106.98	49.835	60.06	299.30	61024	8.71
August-14	0.466	101.92	47.478	60.90	289.12	61024	8.71
September-14	0.466	97.34	45.344	60.86	275.99	61024	8.71
October-14	0.449	87.27	39.141	61.34	240.10	58754	8.39
November-14	0.449	78.44	35.180	61.70	217.08	58754	8.39
December-14	0.449	62.16	27.879	62.75	174.95	58754	8.39
January-15	0.449	48.42	21.716	62.23	135.13	58754	8.39
February-15	0.449	57.93	25.982	62.04	161.18	58754	8.39
March-15	0.449	55.79	25.022	62.45	156.26	58754	8.39
Total:	56.166		5136.95		25655.51	7357104	1050.42
Rounded off to	56		5135		25650	737100	1050

Part B - Quantity and Value of Natural Gas Production Deferred from October 2005 to March 2015 and Consequent Deferment of related Royalty
(To be read in conjunction with the assumptions stated in Annexure I)

Month	Production (in million metric standard cubic metres i.e mmsm ³) (Annual Production/12)	Production (in MMBTU) (1 m ³ = 0.0397) {Col.2 x 0.0397 BTU}	Value of Natural Gas (in million USD) @ USD 3.11 per MMBTU {Col.3 x 3.11}	Exchange rate 1 USD to ₹	Value of Natural Gas (₹ in crore) {Col.4 x Col.5}/10	Royalty @ 10% of Gas Value (₹ in crore) {Col.6 x 10%}
Col.1	Col.2	Col.3	Col.4	Col.5	Col.6	Col.7
October-05	11.48	0.46	1.42	44.82	6.35	0.64
November-05	11.48	0.46	1.42	45.73	6.48	0.65
December-05	11.48	0.46	1.42	45.65	6.47	0.65
January-06	11.48	0.46	1.42	44.40	6.29	0.63
February-06	11.48	0.46	1.42	44.33	6.28	0.63
March-06	11.48	0.46	1.42	44.48	6.30	0.63
April-06	11.48	0.46	1.42	44.95	6.37	0.64
May-06	11.48	0.46	1.42	45.41	6.44	0.64
June-06	11.48	0.46	1.42	46.06	6.53	0.65
July-06	11.48	0.46	1.42	46.46	6.58	0.66
August-06	11.48	0.46	1.42	46.54	6.60	0.66
September-06	11.48	0.46	1.42	46.12	6.54	0.65
October-06	7.45	0.30	0.92	45.47	4.18	0.42
November-06	7.45	0.30	0.92	44.85	4.12	0.41
December-06	7.45	0.30	0.92	44.63	4.10	0.41
January-07	7.45	0.30	0.92	44.33	4.08	0.41
February-07	7.45	0.30	0.92	44.16	4.06	0.41
March-07	7.45	0.30	0.92	44.03	4.05	0.40
April-07	7.45	0.30	0.92	42.15	3.88	0.39
May-07	7.45	0.30	0.92	40.78	3.75	0.37
June-07	7.45	0.30	0.92	40.77	3.75	0.37
July-07	7.45	0.30	0.92	40.42	3.72	0.37
August-07	7.45	0.30	0.92	40.82	3.75	0.38
September-07	7.45	0.30	0.92	40.34	3.71	0.37
October-07	9.12	0.36	1.13	39.51	4.45	0.45
November-07	9.12	0.36	1.13	39.44	4.44	0.44
December-07	9.12	0.36	1.13	39.44	4.44	0.44
January-08	9.12	0.36	1.13	39.37	4.44	0.44
February-08	9.12	0.36	1.13	39.73	4.48	0.45
March-08	9.12	0.36	1.13	40.36	4.55	0.45
April-08	9.12	0.36	1.13	40.03	4.51	0.45
May-08	9.12	0.36	1.13	42.13	4.75	0.47
June-08	9.12	0.36	1.13	42.82	4.82	0.48
July-08	9.12	0.36	1.13	42.84	4.83	0.48
August-08	9.12	0.36	1.13	42.94	4.84	0.48
September-08	9.12	0.36	1.13	45.56	5.13	0.51
October-08	8.83	0.35	1.09	48.64	5.30	0.53
November-08	8.83	0.35	1.09	49.00	5.34	0.53

Month	Production (in million metric standard cubic metres i.e mmsm ³) (Annual Production/12)	Production (in MMBTU) (1 m ³ = 0.0397) {Col.2 x 0.0397 BTU}	Value of Natural Gas (in million USD) @ USD 3.11 per MMBTU {Col.3 x 3.11}	Exchange rate 1 USD to ₹	Value of Natural Gas (₹ in crore) {Col.4 x Col.5}/10	Royalty @ 10% of Gas Value (₹ in crore) {Col.6 x 10%}
Col.1	Col.2	Col.3	Col.4	Col.5	Col.6	Col.7
December-08	8.83	0.35	1.09	48.64	5.30	0.53
January-09	8.83	0.35	1.09	48.83	5.32	0.53
February-09	8.83	0.35	1.09	49.22	5.36	0.54
March-09	8.83	0.35	1.09	51.23	5.58	0.56
April-09	8.83	0.35	1.09	50.06	5.46	0.55
May-09	8.83	0.35	1.09	48.53	5.29	0.53
June-09	8.83	0.35	1.09	47.77	5.21	0.52
July-09	8.83	0.35	1.09	48.48	5.28	0.53
August-09	8.83	0.35	1.09	48.34	5.27	0.53
September-09	8.83	0.35	1.09	48.44	5.28	0.53
October-09	9.19	0.36	1.13	46.72	5.30	0.53
November-09	9.19	0.36	1.13	46.57	5.28	0.53
December-09	9.19	0.36	1.13	46.63	5.29	0.53
January-10	9.19	0.36	1.13	45.96	5.21	0.52
February-10	9.19	0.36	1.13	46.33	5.25	0.53
March-10	9.19	0.36	1.13	45.50	5.16	0.52
April-10	9.19	0.36	1.13	44.50	5.05	0.50
May-10	9.19	0.36	1.13	45.80	5.19	0.52
June-10	9.19	0.36	1.13	46.56	5.28	0.53
July-10	9.19	0.36	1.13	46.84	5.31	0.53
August-10	9.19	0.36	1.13	46.57	5.28	0.53
September-10	9.19	0.36	1.13	46.06	5.22	0.52
October-10	8.47	0.34	1.05	44.41	4.65	0.46
November-10	8.47	0.34	1.05	45.02	4.71	0.47
December-10	8.47	0.34	1.05	45.16	4.72	0.47
January-11	8.47	0.34	1.05	45.39	4.75	0.47
February-11	8.47	0.34	1.05	45.44	4.75	0.48
March-11	8.47	0.34	1.05	44.99	4.71	0.47
April-11	8.47	0.34	1.05	44.37	4.64	0.46
May-11	8.47	0.34	1.05	44.90	4.70	0.47
June-11	8.47	0.34	1.05	44.85	4.69	0.47
July-11	8.47	0.34	1.05	44.42	4.65	0.46
August-11	8.47	0.34	1.05	45.28	4.74	0.47
September-11	8.47	0.34	1.05	47.64	4.98	0.50
October-11	7.33	0.29	0.90	49.26	4.46	0.45
November-11	7.33	0.29	0.90	50.84	4.60	0.46
December-11	7.33	0.29	0.90	52.67	4.76	0.48
January-12	7.33	0.29	0.90	51.35	4.64	0.46
February-12	7.33	0.29	0.90	49.16	4.45	0.44
March-12	7.33	0.29	0.90	50.32	4.55	0.46
April-12	7.33	0.29	0.90	51.80	4.69	0.47

Month	Production (in million metric standard cubic metres i.e mmsm ³) (Annual Production/12)	Production (in MMBTU) (1 m ³ = 0.0397) {Col.2 x 0.0397 BTU}	Value of Natural Gas (in million USD) @ USD 3.11 per MMBTU {Col.3 x 3.11}	Exchange rate 1 USD to ₹	Value of Natural Gas (₹ in crore) {Col.4 x Col.5}/10	Royalty @ 10% of Gas Value (₹ in crore) {Col.6 x 10%}
Col.1	Col.2	Col.3	Col.4	Col.5	Col.6	Col.7
May-12	7.33	0.29	0.90	54.47	4.93	0.49
June-12	7.33	0.29	0.90	56.03	5.07	0.51
July-12	7.33	0.29	0.90	55.49	5.02	0.50
August-12	7.33	0.29	0.90	55.56	5.03	0.50
September-12	7.33	0.29	0.90	54.61	4.94	0.49
October-12	6.70	0.27	0.83	53.02	4.39	0.44
November-12	6.70	0.27	0.83	54.78	4.53	0.45
December-12	6.70	0.27	0.83	54.65	4.52	0.45
January-13	6.70	0.27	0.83	54.32	4.50	0.45
February-13	6.70	0.27	0.83	53.77	4.45	0.45
March-13	6.70	0.27	0.83	54.40	4.50	0.45
April-13	6.70	0.27	0.83	54.38	4.50	0.45
May-13	6.70	0.27	0.83	55.01	4.55	0.46
June-13	6.70	0.27	0.83	58.40	4.83	0.48
July-13	6.70	0.27	0.83	59.78	4.95	0.49
August-13	6.70	0.27	0.83	63.21	5.23	0.52
September-13	6.70	0.27	0.83	63.75	5.28	0.53
October-13	5.69	0.23	0.70	61.62	4.33	0.43
November-13	5.69	0.23	0.70	62.63	4.40	0.44
December-13	5.69	0.23	0.70	61.91	4.35	0.43
January-14	5.69	0.23	0.70	62.08	4.36	0.44
February-14	5.69	0.23	0.70	62.25	4.37	0.44
March-14	5.69	0.23	0.70	61.01	4.29	0.43
April-14	5.69	0.23	0.70	60.36	4.24	0.42
May-14	5.69	0.23	0.70	59.31	4.17	0.42
June-14	5.69	0.23	0.70	59.73	4.20	0.42
July-14	5.69	0.23	0.70	60.06	4.22	0.42
August-14	5.69	0.23	0.70	60.90	4.28	0.43
September-14	5.69	0.23	0.70	60.86	4.28	0.43
October-14	5.34	0.21	0.66	61.34	4.04	0.40
November-14	5.34	0.21	0.66	61.70	4.07	0.41
December-14	5.34	0.21	0.66	62.75	4.14	0.41
January-15	5.34	0.21	0.66	62.23	4.10	0.41
February-15	5.34	0.21	0.66	62.04	4.09	0.41
March-15	5.34	0.21	0.66	62.45	4.12	0.41
Total	923.16	36.78	114		552.98	55.26
Rounded off to	920	36	110		550.00	55.00