

COVER SHEET

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ENCO 4312-001

September 30, 2009

Project #HLC-0T1

[NOTES: Put your name on the cover sheet, but not on the rest of the pages. Put your "Project #" on every page.]

ECONOMIC EVALUATION OF PROPOSED PROJECT #HLC-0T1

Date of the report: September 30, 2009

Discussion

Definitions and assumptions employed

Except as noted in the discussion below, for purposes of this evaluation the report relies upon the assumptions and definitions of terms as provided in the SPE/AAPG/WPC/SPEE *Petroleum Resources Management System* (2007).

In addition, the evaluation is based on and assumes as correct project data supplied by the client, including projections of production, capital costs, and operating costs. Note also the discussion of economic assumptions employed below.

Summary of Reserves

Net Reserves of Oil – Project #HLC-0T1

Proved:	416,000 barrels
Probable:	624,000 barrels
Possible:	228,000 barrels
Net present value* :	\$16,023,935

*NPV estimate based upon the sum of proved and probable amounts; assumes a discount rate of 10%. See the Economic Data section for additional discussion.

Data and methods used to estimate reserve quantities

Data on the physical resource was provided by the client without support supporting documentation. Accuracy of the evaluation will necessarily depend upon the accuracy of the supplied data.

Economic data, methods, and assumptions

The report assumes a price of \$70.00/bbl for the purposes of the analysis. The assumed price was the closing price for the front month (OCT-2009) contract NYMEX light-sweet crude oil as printed in the *Wall Street Journal*, September 22, rounded to the nearest dollar. *[In your assignment, after you list your price(s) and the price data source, please explain your choice of prices. If you use the same price throughout, explain why; if your projected prices change over the analysis, explain why.]*

The analysis assumes an annual inflation rate of 5 percent at the direction of the client. *[In an actual report you may seek a justifiable estimate of future inflation rates and use it in the analysis. But for now stick with the requested assumption of 5 percent.]*

The analysis assumes a discount rate of 10 percent. *[In your assignment, explain your choice of discount rate and why your selection is reasonable – you may cite to a source deemed authoritative (if you know of one) or you may offer economic reasoning in support of your chosen discount rate. My sample use of 10 percent may or may not be reasonable, so make your choice and explain it.]*

The reader is reminded that economic estimates of future prices, revenues, and costs are inherently uncertain, and the actual values may vary from estimated amounts. The report was prepared using conventional industry methods and practices as guided by SPEE *Recommended Evaluation Practice #1* and the SPE *Petroleum Resources Management System*. *[**NOTE: With modifications for the purposes of this assignment.**]*

Comparison of primary and secondary project analyses

[Here is one way to present the comparison, your scenario and values will differ, and feel free to write up the comparison in a way that seems most understandable.] In addition to the primary project proposed, identified as #HLC-OT1, the client requested preparation of a second data analysis, identified herein as #HLC-OT1-A. The client indicated that the initial *per unit* project operating cost estimates seemed unduly high, and therefore requested a second analysis conducted using per unit operating costs that are 95 percent of the per unit operating costs used in the initial analysis.

Under the primary project, the net present value of expected cash flow over the 14 year term of the lease of \$ 16,023,935. The second project presents a net present value total of \$16,690,941.

The second data analysis suggests a more profitable project (i.e., a higher net present value) due to the lower assumed per unit operating costs. In comparing the two analyses, the reader of this report should consider which of the operating cost estimates are more likely to be obtained over the course of the actual project development.

Statement of independence

The analysis and opinions presented in this report represent an independent, best-efforts evaluation of the project as outlined herein. The analyst does not hold any ownership stake in the property evaluated and is not otherwise affiliated with the owner or proposed developer of the project.

Disclaimer

Please be aware that any reserve estimate is a function of engineering judgment and interpretation, and should be accepted with the understanding that events subsequent to the date of the report could necessitate revision. This report was prepared using conventional industry procedures as were considered appropriate and necessary.

DATA SECTION
DISCOUNTED CASH FLOW ANALYSIS
PROJECT #HLC-0T1

As discussed above, the following analysis relies on production and cost estimates supplied by the client, and on various economic assumptions as noted. See the prior discussion for additional explanation.

Table 1: Discounted cash flow analysis for project #HLC-0T1

<u>Year</u>	<u>Production</u> ¹	<u>Revenue</u> ²	<u>Operating Expenses</u> ³	<u>Capital Expenses</u> ⁴	<u>Net Cash Flow</u> ⁵	<u>Discounted Cash Flow</u> ⁶
1	-	-	-	\$(600,000)	(600,000)	(600,000)
2	-	-	-	\$(1,000,000)	(1,000,000)	(869,565)
3	80,000	5,600,000	(2,375,000)	\$(1,100,000)	2,125,000	1,606,805
4	90,000	6,300,000	(2,660,000)	-	3,640,000	2,393,359
5	110,000	7,700,000	(3,230,000)	-	4,470,000	2,555,737
6	130,000	9,100,000	(3,800,000)	-	5,300,000	2,635,037
7	130,000	9,100,000	(3,800,000)	-	5,300,000	2,291,336
8	130,000	9,100,000	(3,800,000)	-	5,300,000	1,992,466
9	120,000	8,400,000	(3,515,000)	-	4,885,000	1,596,915
10	90,000	6,300,000	(2,660,000)	-	3,640,000	1,034,715
11	70,000	4,900,000	(2,090,000)	-	2,810,000	694,589
12	50,000	3,500,000	(1,520,000)	-	1,980,000	425,588
13	30,000	2,100,000	(950,000)	-	1,150,000	214,943
14	<u>10,000</u>	<u>700,000</u>	<u>(380,000)</u>	<u>-</u>	<u>320,000</u>	<u>52,009</u>
Totals:	1,040,000	72,800,000	(30,780,000)	(2,700,000)	39,320,000	16,023,935

Note: Negative amounts are indicated by (parentheses). All values rounded off to the nearest whole dollar. *[Please include on this page the price(s) you assume, the inflation rate you use, and the discount rate you use. You can add them as footnotes to the table, like I have done here, or present them in a brief text paragraph or list. Even though these values are discussed in the body of the report, you will want the presentation of the quantitative analysis to document these key assumptions. This documentation would become more important if you were considering multiple different scenarios or analyzing the sensitivity of the analysis to different assumptions.]*

¹ Production estimates as provided by the client.

² Revenue estimates based upon production amounts and assumed price of \$70/bbl.

³ Formula for estimating operating expenses provided by the client.

⁴ Capital expense estimates as provided by the client.

⁵ Net Cash Flow in current dollars (i.e., in "Money of the Day").

⁶ Discounted Cash Flow estimates incorporate assumed 5 percent inflation rate and the assumed 10 percent discount factor.

SECONDARY ANALYSIS
DISCOUNTED CASH FLOW ANALYSIS
PROJECT #HLC-0T1-A

As discussed above, the following analysis relies on production and cost estimates supplied by the client, and on various economic assumptions as noted. See the prior discussion for additional explanation. As requested by the client, the following analysis is identical to the first analysis but for a revision downward to the estimated operating expenses.

Table 1: Discounted cash flow analysis for project #HLC-0T1-A

<u>Year</u>	<u>Production</u> ¹	<u>Revenue</u> ²	<u>Operating Expenses</u> ³	<u>Capital Expenses</u> ⁴	<u>Net Cash Flow</u> ⁵	<u>Discounted Cash Flow</u> ⁶
1	-	-	-	\$(600,000)	(600,000)	(600,000)
2	-	-	-	\$(1,000,000)	(1,000,000)	(869,565)
3	80,000	5,600,000	(2,256,250)	\$(1,100,000)	2,243,750	1,696,597
4	90,000	6,300,000	(2,527,000)	-	3,773,000	2,480,809
5	110,000	7,700,000	(3,068,500)	-	4,631,500	2,648,075
6	130,000	9,100,000	(3,610,000)	-	5,490,000	2,729,500
7	130,000	9,100,000	(3,610,000)	-	5,490,000	2,373,479
8	130,000	9,100,000	(3,610,000)	-	5,490,000	2,063,894
9	120,000	8,400,000	(3,339,250)	-	5,060,750	1,654,368
10	90,000	6,300,000	(2,527,000)	-	3,773,000	1,072,522
11	70,000	4,900,000	(1,985,500)	-	2,914,500	720,420
12	50,000	3,500,000	(1,444,000)	-	2,056,000	441,923
13	30,000	2,100,000	(902,500)	-	1,197,500	223,821
14	<u>10,000</u>	<u>700,000</u>	<u>(361,000)</u>	<u>-</u>	<u>339,000</u>	<u>55,097</u>
Totals:	1,040,000	72,800,000	(29,241,000)	(2,700,000)	40,859,000	16,690,941

Note: Negative amounts are indicated by (parentheses). All values rounded off to the nearest whole dollar.

¹ Production estimates as provided by the client.

² Revenue estimates based upon production amounts and assumed price of \$70/bbl.

³ Formula for estimating operating expenses provided by the client.

⁴ Capital expense estimates as provided by the client.

⁵ Net Cash Flow in current dollars (i.e., in "Money of the Day").

⁶ Discounted Cash Flow estimates incorporate assumed 5 percent inflation rate and the assumed 10 percent discount factor.