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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata, Assessment Unit 53050103
Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. MFS, minimum field size assessed (MMBO or BCFG). Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the MFS. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. Shading indicates not applicable]

Field Type	MFS	Prob. (0-1)	Undiscovered Resources												Largest Undiscovered Field (MMBO or BCFG)			
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)							
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
Oil Fields	1	1.00	173	720	1,731	807	357	1,538	3,981	1,775	20	90	250	106	40	154	538	200
Gas Fields	6						1,069	4,011	8,783	4,371	44	171	408	192	214	719	2,177	885
Total		1.00	173	720	1,731	807	1,426	5,549	12,764	6,147	64	261	658	299				

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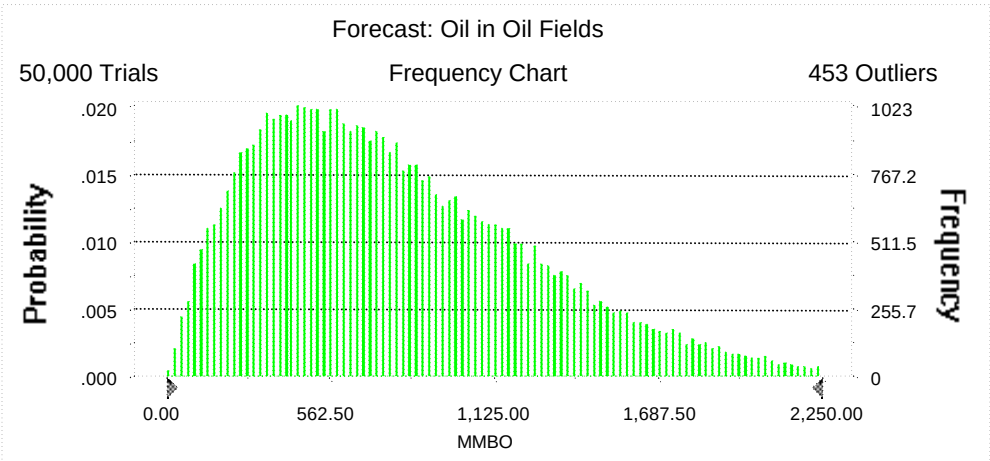
Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 2,250.00 MMBO
Entire range is from 8.59 to 3,380.39 MMBO
After 50,000 trials, the standard error of the mean is 2.18

Statistics:	Value
Trials	50000
Mean	806.52
Median	720.36
Mode	---
Standard Deviation	487.04
Variance	237,206.17
Skewness	0.89
Kurtosis	3.72
Coefficient of Variability	0.60
Range Minimum	8.59
Range Maximum	3,380.39
Range Width	3,371.80
Mean Standard Error	2.18



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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

Percentile	MMBO
100%	8.59
95%	172.82
90%	251.89
85%	316.81
80%	375.21
75%	431.80
70%	487.89
65%	543.80
60%	600.85
55%	659.84
50%	720.36
45%	782.98
40%	851.54
35%	924.78
30%	1,007.57
25%	1,100.47
20%	1,199.82
15%	1,320.40
10%	1,477.71
5%	1,730.83
0%	3,380.39

End of Forecast

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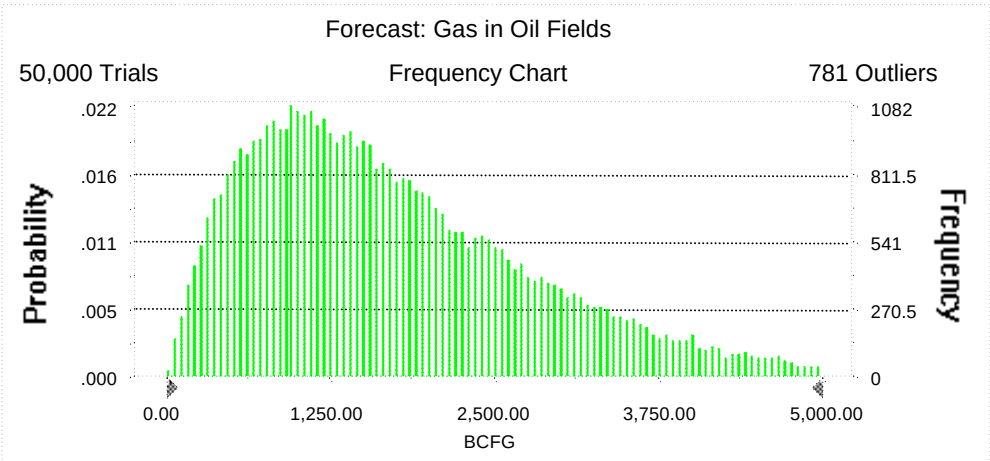
Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 5,000.00 BCFG
Entire range is from 14.72 to 10,236.59 BCFG
After 50,000 trials, the standard error of the mean is 5.16

Statistics:	Value
Trials	50000
Mean	1,775.46
Median	1,538.02
Mode	---
Standard Deviation	1,153.67
Variance	1,330,944.53
Skewness	1.15
Kurtosis	4.79
Coefficient of Variability	0.65
Range Minimum	14.72
Range Maximum	10,236.59
Range Width	10,221.86
Mean Standard Error	5.16



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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	14.72
95%	356.94
90%	518.74
85%	659.64
80%	788.11
75%	911.46
70%	1,031.52
65%	1,150.23
60%	1,274.09
55%	1,404.68
50%	1,538.02
45%	1,677.13
40%	1,833.99
35%	1,996.49
30%	2,186.38
25%	2,408.08
20%	2,647.39
15%	2,955.23
10%	3,352.15
5%	3,981.27
0%	10,236.59

End of Forecast

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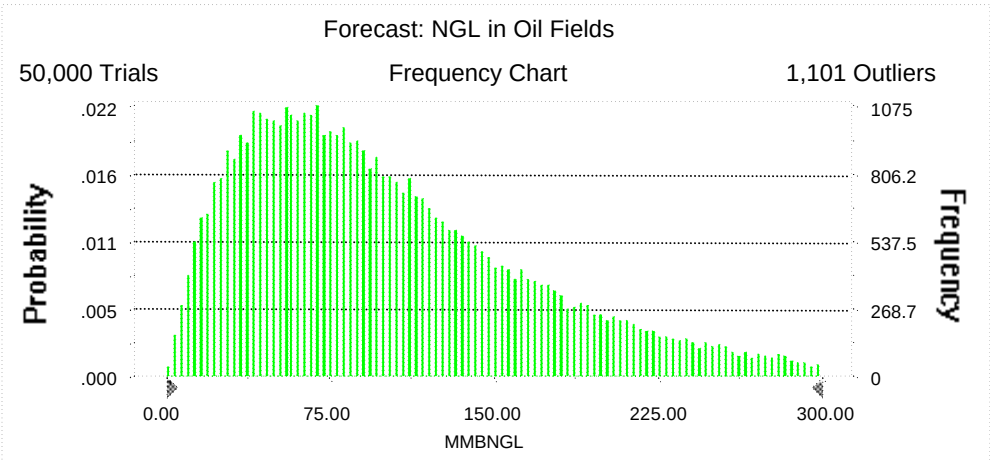
Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 300.00 MMBNGL
Entire range is from 0.76 to 794.76 MMBNGL
After 50,000 trials, the standard error of the mean is 0.33

Statistics:	Value
Trials	50000
Mean	106.42
Median	89.63
Mode	---
Standard Deviation	73.89
Variance	5,460.17
Skewness	1.41
Kurtosis	6.04
Coefficient of Variability	0.69
Range Minimum	0.76
Range Maximum	794.76
Range Width	794.00
Mean Standard Error	0.33



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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	0.76
95%	20.08
90%	29.49
85%	37.63
80%	44.90
75%	52.21
70%	59.42
65%	66.70
60%	73.95
55%	81.73
50%	89.63
45%	98.19
40%	107.68
35%	117.70
30%	129.20
25%	142.70
20%	158.76
15%	178.26
10%	205.72
5%	249.75
0%	794.76

End of Forecast

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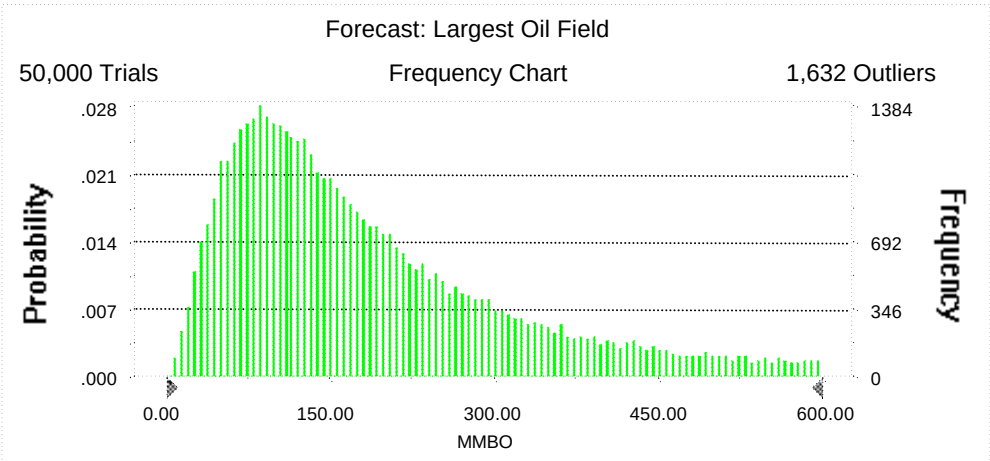
Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 600.00 MMBO
Entire range is from 2.87 to 799.70 MMBO
After 50,000 trials, the standard error of the mean is 0.68

Statistics:	Value
Trials	50000
Mean	199.74
Median	153.55
Mode	---
Standard Deviation	153.13
Variance	23,449.45
Skewness	1.49
Kurtosis	5.08
Coefficient of Variability	0.77
Range Minimum	2.87
Range Maximum	799.70
Range Width	796.83
Mean Standard Error	0.68



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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Largest Oil Field (cont'd)

Percentiles:

Percentile	MMBO
100%	2.87
95%	40.30
90%	55.39
85%	68.12
80%	79.76
75%	90.72
70%	102.17
65%	113.99
60%	126.22
55%	139.27
50%	153.55
45%	169.67
40%	187.69
35%	207.40
30%	231.77
25%	260.82
20%	296.49
15%	344.79
10%	416.79
5%	537.92
0%	799.70

End of Forecast

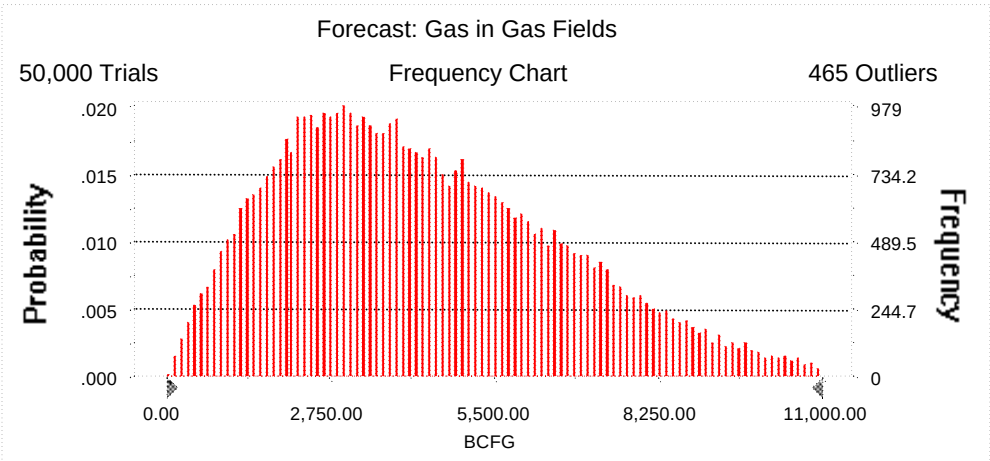
53050103
Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 11,000.00 BCFG
Entire range is from 44.90 to 19,586.09 BCFG
After 50,000 trials, the standard error of the mean is 10.75

Statistics:	Value
Trials	50000
Mean	4,371.19
Median	4,011.10
Mode	---
Standard Deviation	2,403.56
Variance	5,777,089.82
Skewness	0.70
Kurtosis	3.31
Coefficient of Variability	0.55
Range Minimum	44.90
Range Maximum	19,586.09
Range Width	19,541.19
Mean Standard Error	10.75



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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	44.90
95%	1,069.05
90%	1,524.56
85%	1,901.94
80%	2,231.38
75%	2,525.38
70%	2,815.97
65%	3,107.10
60%	3,397.63
55%	3,706.80
50%	4,011.10
45%	4,344.44
40%	4,693.39
35%	5,063.47
30%	5,459.80
25%	5,903.61
20%	6,402.40
15%	6,972.61
10%	7,682.22
5%	8,783.05
0%	19,586.09

End of Forecast

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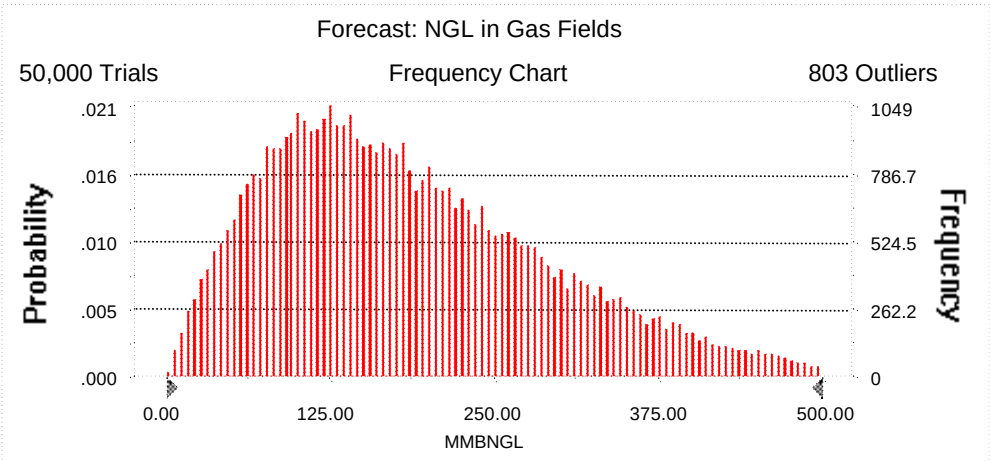
Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 500.00 MMBNGL
Entire range is from 1.85 to 986.25 MMBNGL
After 50,000 trials, the standard error of the mean is 0.51

Statistics:	Value
Trials	50000
Mean	192.08
Median	171.07
Mode	---
Standard Deviation	114.83
Variance	13,185.32
Skewness	0.98
Kurtosis	4.20
Coefficient of Variability	0.60
Range Minimum	1.85
Range Maximum	986.25
Range Width	984.40
Mean Standard Error	0.51



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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	1.85
95%	43.64
90%	63.29
85%	78.82
80%	92.64
75%	105.55
70%	118.43
65%	130.82
60%	143.46
55%	156.96
50%	171.07
45%	185.34
40%	201.64
35%	218.30
30%	237.09
25%	258.47
20%	282.03
15%	311.86
10%	349.41
5%	408.05
0%	986.25

End of Forecast

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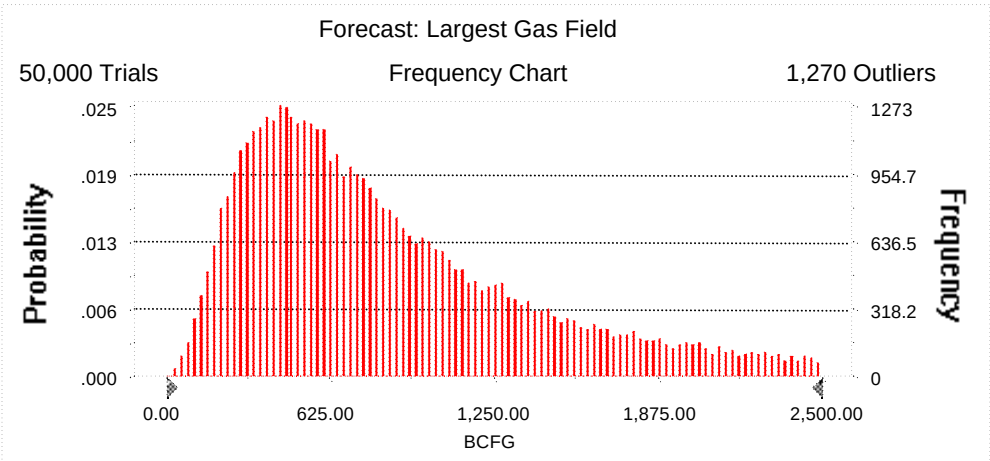
Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 2,500.00 BCFG
Entire range is from 17.79 to 2,999.82 BCFG
After 50,000 trials, the standard error of the mean is 2.69

Statistics:	Value
Trials	50000
Mean	885.39
Median	718.69
Mode	---
Standard Deviation	602.00
Variance	362,408.88
Skewness	1.24
Kurtosis	4.15
Coefficient of Variability	0.68
Range Minimum	17.79
Range Maximum	2,999.82
Range Width	2,982.02
Mean Standard Error	2.69



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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Forecast: Largest Gas Field (cont'd)

Percentiles:

Percentile	BCFG
100%	17.79
95%	214.11
90%	282.63
85%	339.26
80%	392.33
75%	442.34
70%	493.07
65%	545.05
60%	597.77
55%	654.77
50%	718.69
45%	785.08
40%	861.17
35%	947.66
30%	1,046.72
25%	1,165.83
20%	1,311.03
15%	1,501.02
10%	1,770.77
5%	2,177.44
0%	2,999.82

End of Forecast

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Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

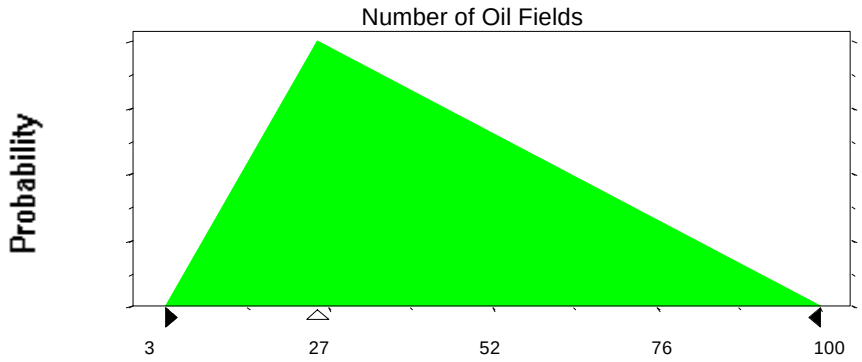
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	3
Likeliest	26
Maximum	100

Selected range is from 3 to 100
Mean value in simulation was 43



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	19.25	20.25
Standard Deviation	71.58	71.58

Selected range is from 0.00 to 799.00	1.00 to 800.00
Mean value in simulation was 17.61	18.61

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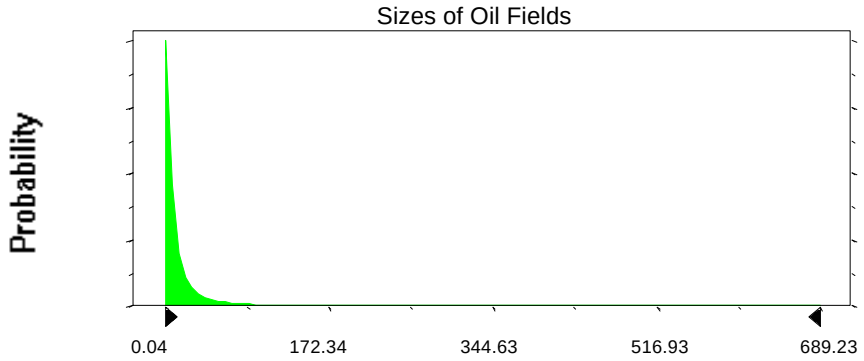
Monte Carlo Results

Assumption: Sizes of Oil Fields (cont'd)

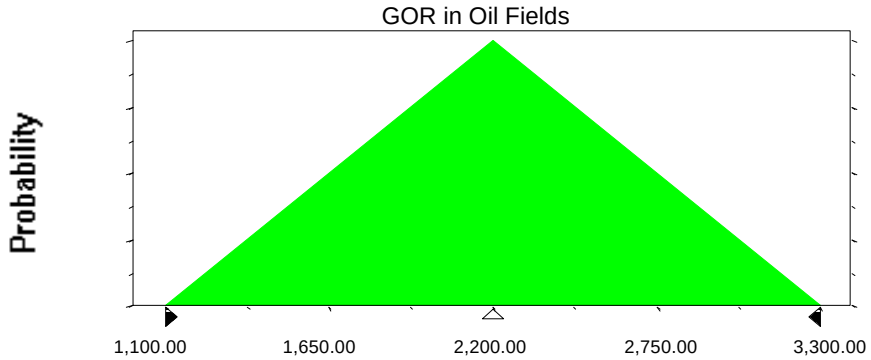


Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	1,100.00
Likeliest	2,200.00
Maximum	3,300.00

Selected range is from 1,100.00 to 3,300.00
Mean value in simulation was 2,201.26



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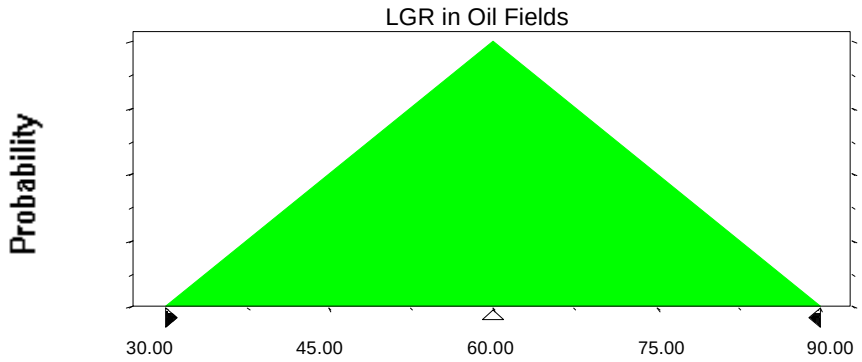
Monte Carlo Results

Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	30.00
Likeliest	60.00
Maximum	90.00

Selected range is from 30.00 to 90.00
Mean value in simulation was 59.98



Assumption: Number of Gas Fields

Triangular distribution with parameters:

Minimum	3
Likeliest	36
Maximum	120

Selected range is from 3 to 120
Mean value in simulation was 53

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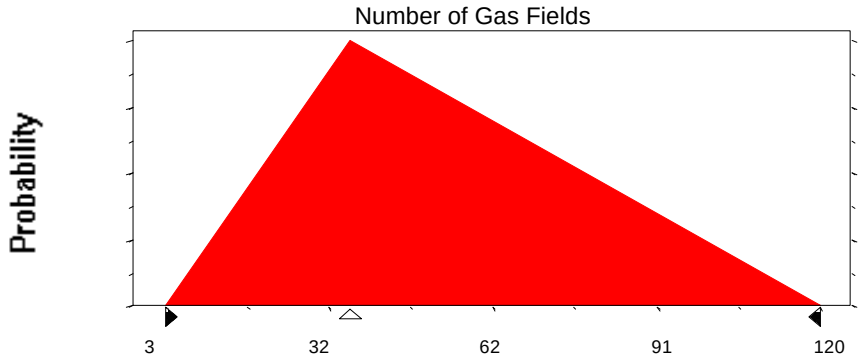
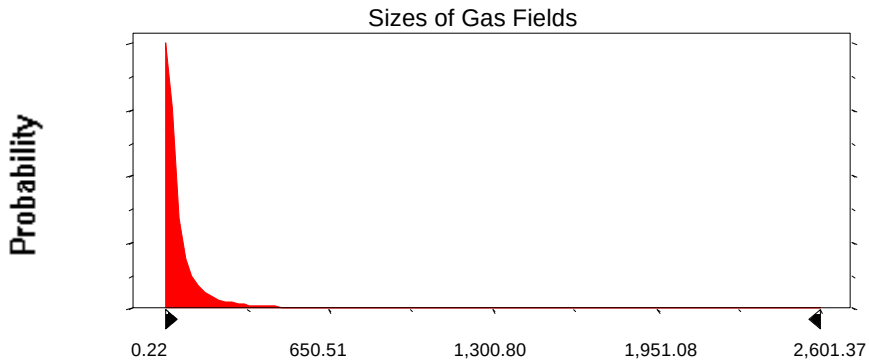
Monte Carlo Results

Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	81.28	87.28
Standard Deviation	262.96	262.96
Selected range is from 0.00 to 2,994.00		6.00 to 3,000.00
Mean value in simulation was 76.99		82.99



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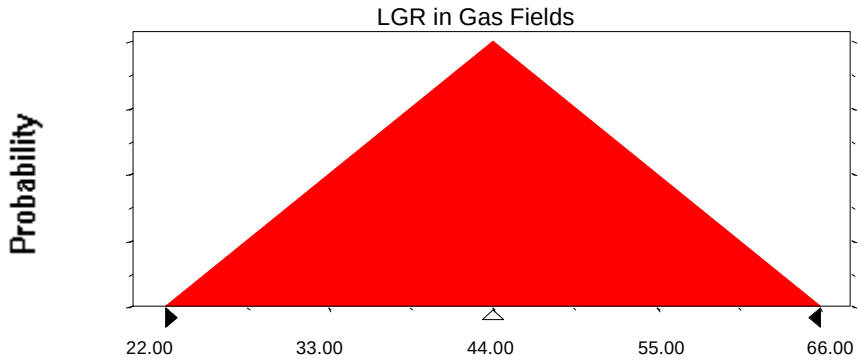
Tamabra-Like Debris-Flow-Breccia Limestone and Overlying Strata
Monte Carlo Results

Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	22.00
Likeliest	44.00
Maximum	66.00

Selected range is from 22.00 to 66.00
Mean value in simulation was 43.93



End of Assumptions

Simulation started on 12/2/99 at 12:14:45
Simulation stopped on 12/2/99 at 13:08:04