

Northern, Assessment Unit 60900101
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	67	180	351	191	38	109	234	119	2	6	15	7	13	34	98	41
Gas Fields	6						0	0	0	0	0	0	0	0	NA	NA	NA	NA
Total		1.00	67	180	351	191	38	109	234	119	2	6	15	7				

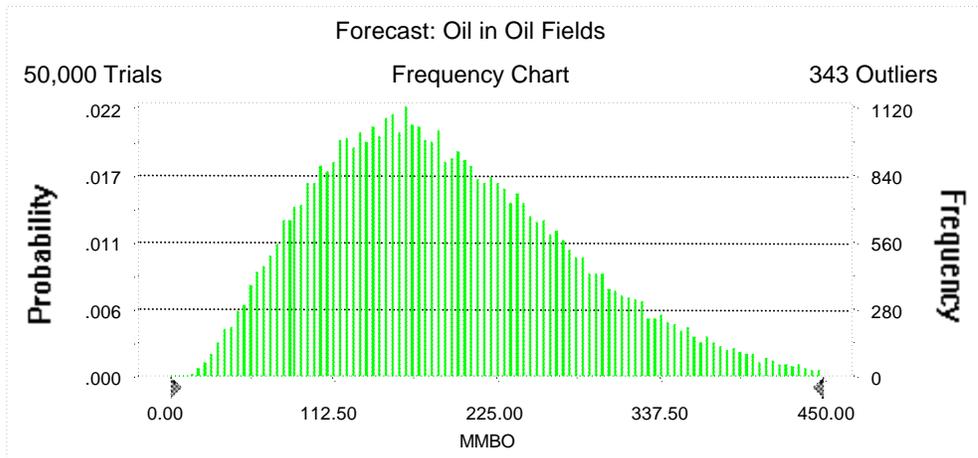
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Monte Carlo Results

Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 450.00 MMBO
Entire range is from 13.36 to 641.64 MMBO
After 50,000 trials, the standard error of the mean is 0.39

Statistics:	Value
Trials	50000
Mean	191.18
Median	180.10
Mode	---
Standard Deviation	87.70
Variance	7,690.95
Skewness	0.65
Kurtosis	3.35
Coefficient of Variability	0.46
Range Minimum	13.36
Range Maximum	641.64
Range Width	628.28
Mean Standard Error	0.39



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	13.36
95%	66.60
90%	85.86
85%	100.96
80%	114.01
75%	125.53
70%	137.01
65%	148.07
60%	158.68
55%	169.10
50%	180.10
45%	191.57
40%	203.87
35%	216.81
30%	230.79
25%	245.96
20%	263.21
15%	283.61
10%	310.62
5%	351.37
0%	641.64

End of Forecast

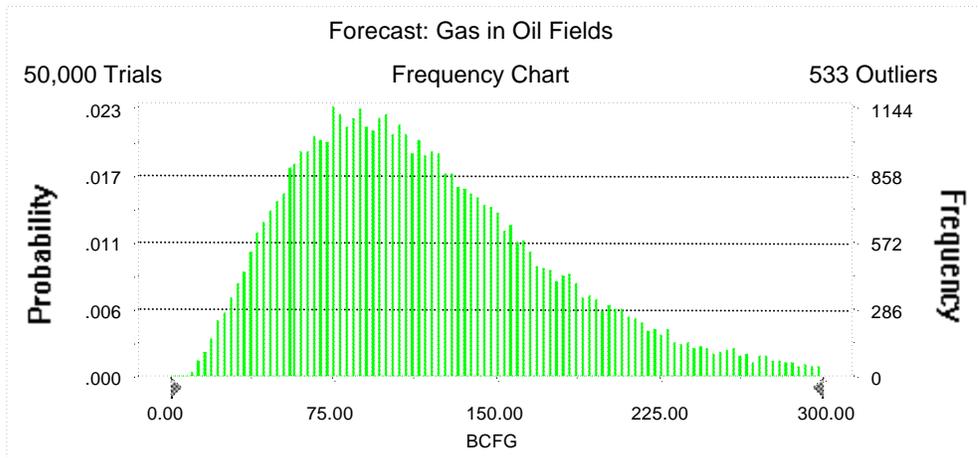
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 300.00 BCFG
Entire range is from 6.76 to 497.10 BCFG
After 50,000 trials, the standard error of the mean is 0.27

Statistics:	Value
Trials	50000
Mean	118.75
Median	108.55
Mode	---
Standard Deviation	61.09
Variance	3,731.71
Skewness	0.99
Kurtosis	4.31
Coefficient of Variability	0.51
Range Minimum	6.76
Range Maximum	497.10
Range Width	490.34
Mean Standard Error	0.27



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	6.76
95%	38.49
90%	49.77
85%	58.72
80%	66.60
75%	74.00
70%	80.75
65%	87.62
60%	94.54
55%	101.39
50%	108.55
45%	115.97
40%	123.92
35%	132.46
30%	141.96
25%	152.30
20%	164.57
15%	180.65
10%	201.58
5%	234.01
0%	497.10

End of Forecast

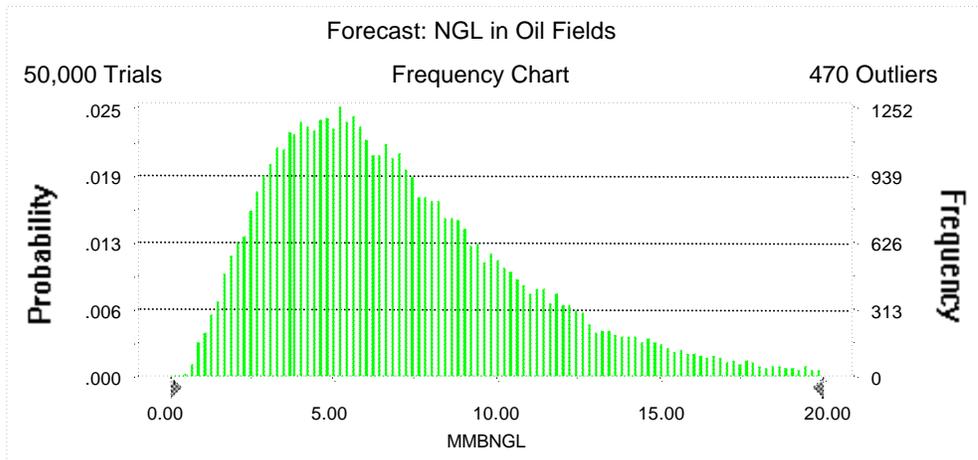
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Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 20.00 MMBNGL
Entire range is from 0.34 to 41.95 MMBNGL
After 50,000 trials, the standard error of the mean is 0.02

Statistics:	<u>Value</u>
Trials	50000
Mean	7.12
Median	6.34
Mode	---
Standard Deviation	4.01
Variance	16.11
Skewness	1.22
Kurtosis	5.27
Coefficient of Variability	0.56
Range Minimum	0.34
Range Maximum	41.95
Range Width	41.61
Mean Standard Error	0.02



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.34
95%	2.13
90%	2.79
85%	3.30
80%	3.76
75%	4.19
70%	4.63
65%	5.04
60%	5.46
55%	5.88
50%	6.34
45%	6.81
40%	7.31
35%	7.88
30%	8.48
25%	9.18
20%	10.04
15%	11.10
10%	12.46
5%	14.82
0%	41.95

End of Forecast

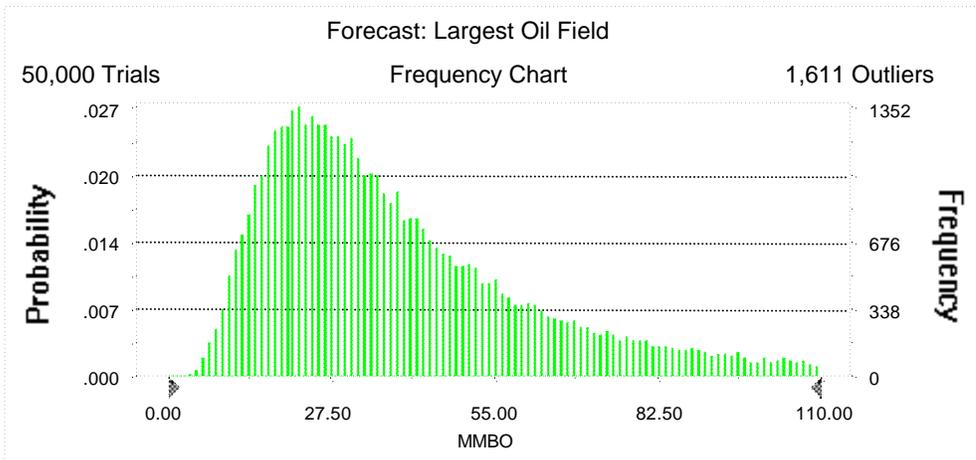
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 110.00 MMBO
Entire range is from 3.07 to 149.96 MMBO
After 50,000 trials, the standard error of the mean is 0.12

Statistics:	Value
Trials	50000
Mean	41.28
Median	33.92
Mode	---
Standard Deviation	26.40
Variance	697.06
Skewness	1.48
Kurtosis	5.21
Coefficient of Variability	0.64
Range Minimum	3.07
Range Maximum	149.96
Range Width	146.89
Mean Standard Error	0.12



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	3.07
95%	12.81
90%	15.88
85%	18.31
80%	20.51
75%	22.55
70%	24.67
65%	26.84
60%	29.08
55%	31.38
50%	33.92
45%	36.67
40%	39.69
35%	43.21
30%	47.31
25%	52.11
20%	58.08
15%	66.12
10%	77.73
5%	97.61
0%	149.96

End of Forecast

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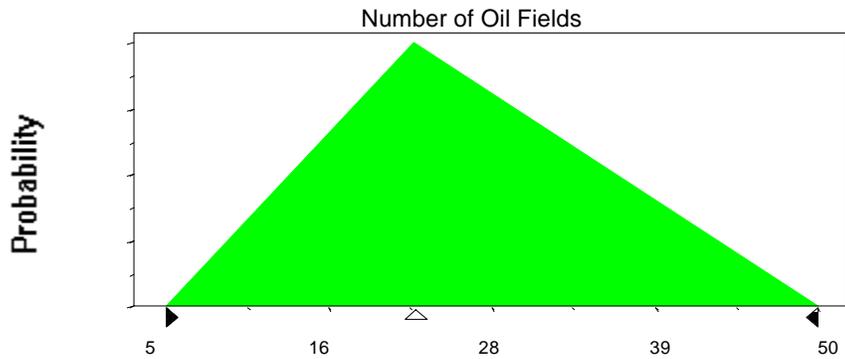
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	5
Likeliest	22
Maximum	50

Selected range is from 5 to 50
Mean value in simulation was 26



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	6.67
Standard Deviation	13.24

Shifted parameters

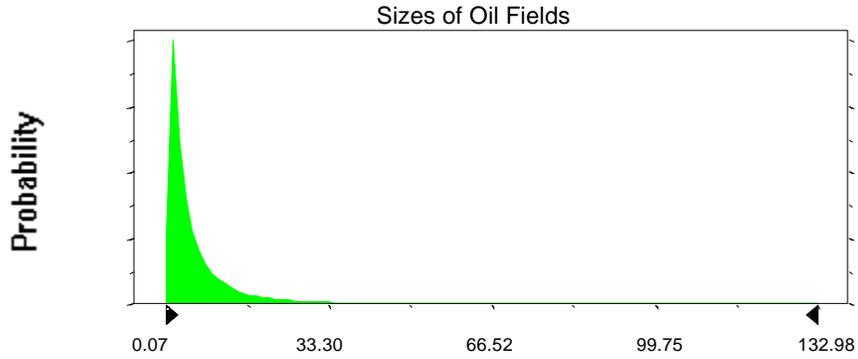
7.67
13.24

Selected range is from 0.00 to 149.00
Mean value in simulation was 6.40

1.00 to 150.00
7.4

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Assumption: Sizes of Oil Fields (cont'd)



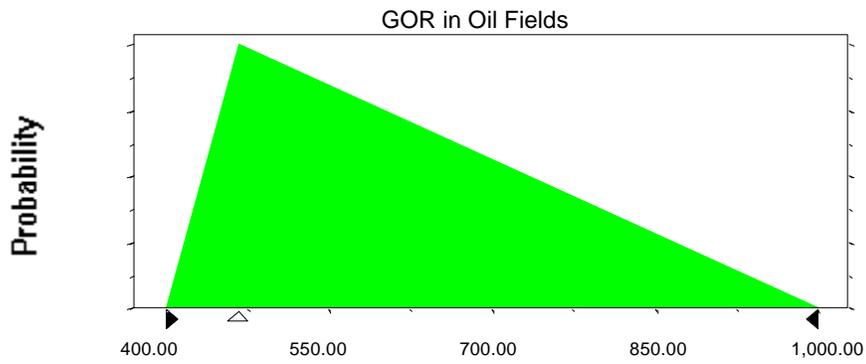
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	400.00
Likeliest	466.67
Maximum	1,000.00

Selected range is from 400.00 to 1,000.00

Mean value in simulation was 621.48



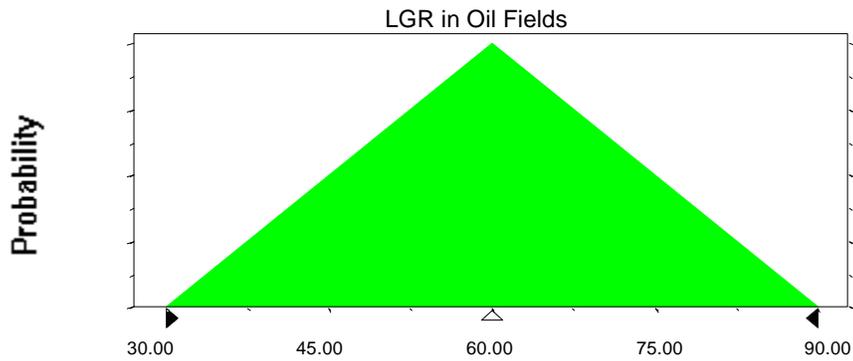
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Assumption: LGR in Oil Fields

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 60.00



End of Assumptions

Simulation started on 7/13/99 at 15:14:28
Simulation stopped on 7/13/99 at 15:32:24