

Andean Fold Belt Structures, Assessment Unit 60590102
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	4	1.00	50	187	450	210	102	398	1,042	462	1	3	9	4	15	44	137	55
Gas Fields	24						956	3,063	5,841	3,193	23	75	153	80	181	483	1,347	580
Total		1.00	50	187	450	210	1,059	3,461	6,882	3,655	24	78	162	84				

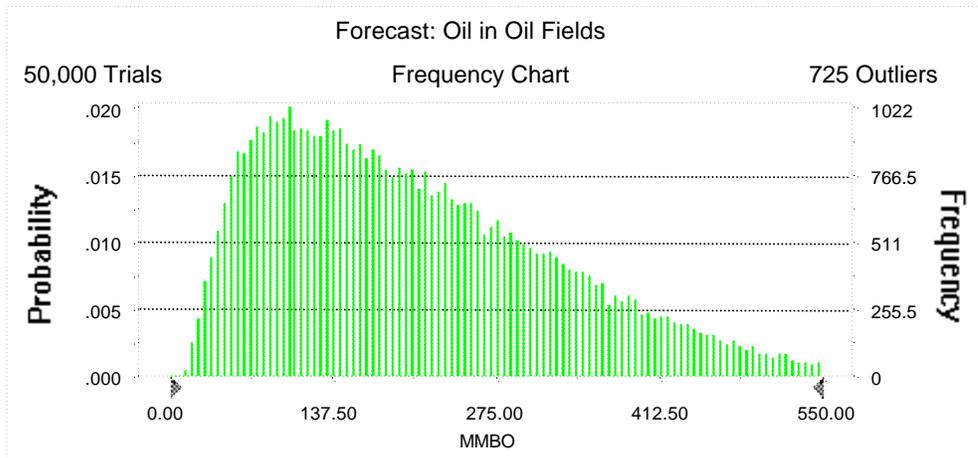
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Forecast: Oil in Oil Fields

Summary:

Display range is from 0.00 to 550.00 MMBO
Entire range is from 9.52 to 869.76 MMBO
After 50,000 trials, the standard error of the mean is 0.57

Statistics:	Value
Trials	50000
Mean	210.34
Median	186.51
Mode	---
Standard Deviation	126.88
Variance	16,099.29
Skewness	0.89
Kurtosis	3.61
Coefficient of Variability	0.60
Range Minimum	9.52
Range Maximum	869.76
Range Width	860.24
Mean Standard Error	0.57



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Forecast: Oil in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	9.52
95%	50.20
90%	66.89
85%	81.54
80%	95.75
75%	109.69
70%	124.47
65%	138.99
60%	154.01
55%	169.96
50%	186.51
45%	204.33
40%	222.52
35%	242.22
30%	263.21
25%	287.53
20%	315.17
15%	347.03
10%	388.09
5%	449.94
0%	869.76

End of Forecast

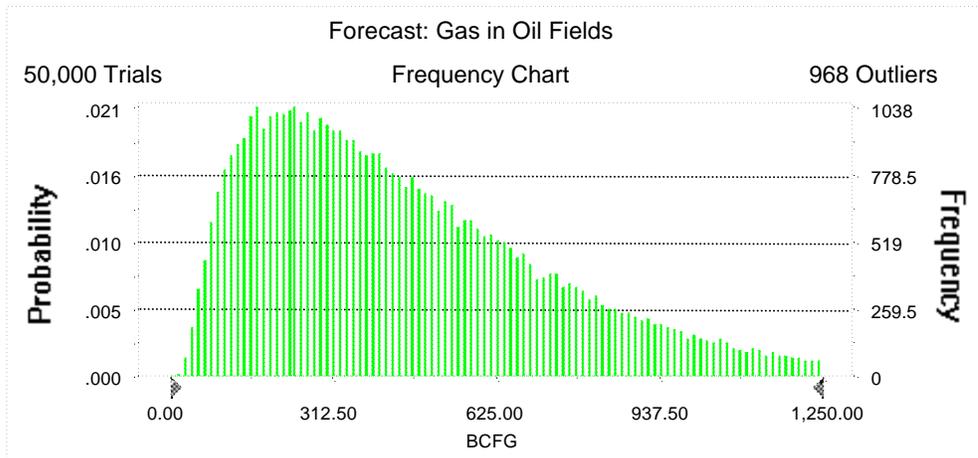
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Forecast: Gas in Oil Fields

Summary:

Display range is from 0.00 to 1,250.00 BCFG
Entire range is from 15.66 to 2,393.57 BCFG
After 50,000 trials, the standard error of the mean is 1.34

Statistics:	Value
Trials	50000
Mean	462.40
Median	397.62
Mode	---
Standard Deviation	300.40
Variance	90,237.61
Skewness	1.16
Kurtosis	4.63
Coefficient of Variability	0.65
Range Minimum	15.66
Range Maximum	2,393.57
Range Width	2,377.90
Mean Standard Error	1.34



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Forecast: Gas in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	15.66
95%	102.11
90%	138.56
85%	170.77
80%	202.18
75%	232.80
70%	263.63
65%	295.14
60%	327.49
55%	361.39
50%	397.62
45%	435.47
40%	476.81
35%	521.57
30%	571.03
25%	625.82
20%	689.17
15%	770.70
10%	876.16
5%	1,041.86
0%	2,393.57

End of Forecast

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Forecast: NGL in Oil Fields

Summary:

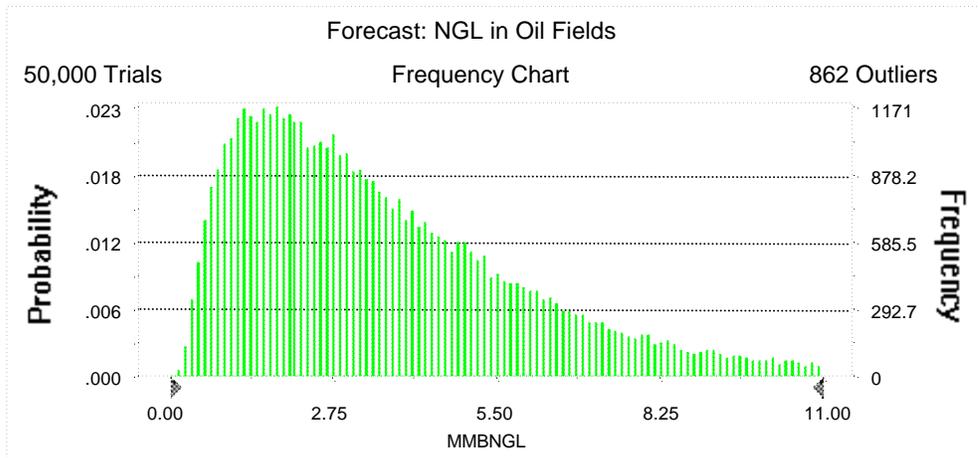
Display range is from 0.00 to 11.00 MMBNGL

Entire range is from 0.10 to 26.32 MMBNGL

After 50,000 trials, the standard error of the mean is 0.01

Statistics:

	<u>Value</u>
Trials	50000
Mean	3.70
Median	3.08
Mode	---
Standard Deviation	2.58
Variance	6.64
Skewness	1.39
Kurtosis	5.72
Coefficient of Variability	0.70
Range Minimum	0.10
Range Maximum	26.32
Range Width	26.22
Mean Standard Error	0.01



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Forecast: NGL in Oil Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.10
95%	0.77
90%	1.05
85%	1.30
80%	1.54
75%	1.78
70%	2.02
65%	2.26
60%	2.53
55%	2.81
50%	3.08
45%	3.40
40%	3.73
35%	4.11
30%	4.53
25%	5.00
20%	5.55
15%	6.23
10%	7.16
5%	8.73
0%	26.32

End of Forecast

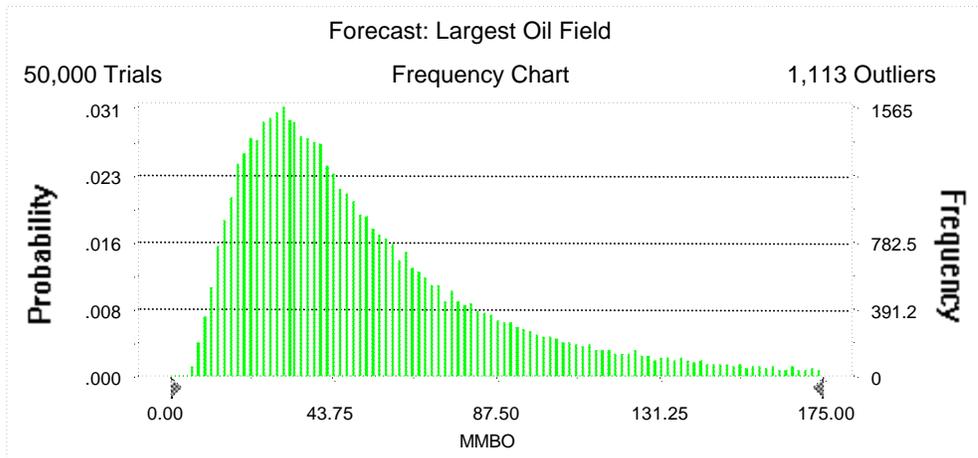
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Forecast: Largest Oil Field

Summary:

Display range is from 0.00 to 175.00 MMBO
Entire range is from 5.06 to 249.84 MMBO
After 50,000 trials, the standard error of the mean is 0.18

Statistics:	Value
Trials	50000
Mean	55.36
Median	43.82
Mode	---
Standard Deviation	39.64
Variance	1,571.30
Skewness	1.81
Kurtosis	6.92
Coefficient of Variability	0.72
Range Minimum	5.06
Range Maximum	249.84
Range Width	244.78
Mean Standard Error	0.18



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Forecast: Largest Oil Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	5.06
95%	15.27
90%	19.13
85%	22.44
80%	25.53
75%	28.40
70%	31.23
65%	34.15
60%	37.24
55%	40.43
50%	43.82
45%	47.70
40%	52.02
35%	56.89
30%	62.55
25%	69.40
20%	78.03
15%	89.56
10%	106.58
5%	137.39
0%	249.84

End of Forecast

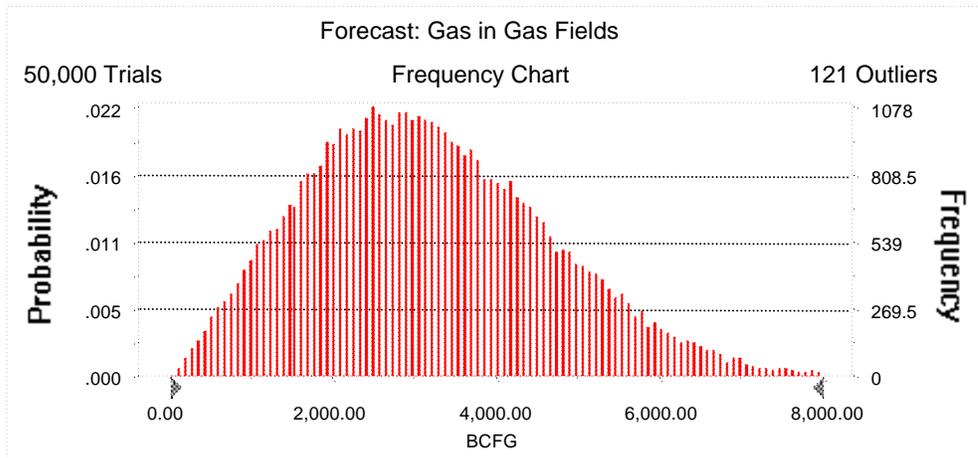
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Forecast: Gas in Gas Fields

Summary:

Display range is from 0.00 to 8,000.00 BCFG
Entire range is from 77.93 to 10,978.36 BCFG
After 50,000 trials, the standard error of the mean is 6.68

Statistics:	<u>Value</u>
Trials	50000
Mean	3,192.52
Median	3,063.13
Mode	---
Standard Deviation	1,494.62
Variance	2,233,881.71
Skewness	0.48
Kurtosis	3.03
Coefficient of Variability	0.47
Range Minimum	77.93
Range Maximum	10,978.36
Range Width	10,900.43
Mean Standard Error	6.68



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Forecast: Gas in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	77.93
95%	956.41
90%	1,330.84
85%	1,622.67
80%	1,869.96
75%	2,089.59
70%	2,291.58
65%	2,488.90
60%	2,674.51
55%	2,873.49
50%	3,063.13
45%	3,258.03
40%	3,457.88
35%	3,679.34
30%	3,912.42
25%	4,171.29
20%	4,448.73
15%	4,785.95
10%	5,215.19
5%	5,840.55
0%	10,978.36

End of Forecast

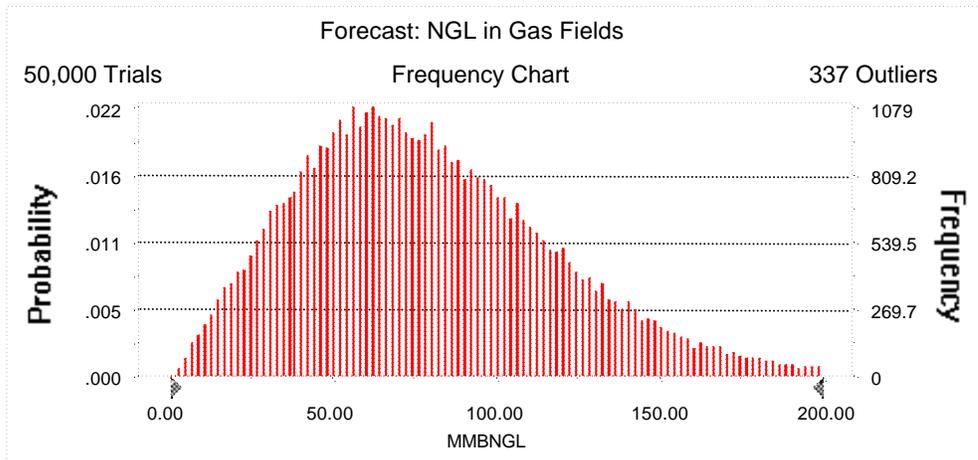
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Forecast: NGL in Gas Fields

Summary:

Display range is from 0.00 to 200.00 MMBNGL
 Entire range is from 1.62 to 318.91 MMBNGL
 After 50,000 trials, the standard error of the mean is 0.18

Statistics:	<u>Value</u>
Trials	50000
Mean	79.81
Median	74.86
Mode	---
Standard Deviation	40.09
Variance	1,606.92
Skewness	0.71
Kurtosis	3.57
Coefficient of Variability	0.50
Range Minimum	1.62
Range Maximum	318.91
Range Width	317.29
Mean Standard Error	0.18



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Forecast: NGL in Gas Fields (cont'd)

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	1.62
95%	22.87
90%	31.82
85%	39.03
80%	44.97
75%	50.47
70%	55.51
65%	60.28
60%	64.99
55%	69.84
50%	74.86
45%	80.07
40%	85.30
35%	91.07
30%	97.33
25%	104.10
20%	111.98
15%	121.35
10%	133.71
5%	153.02
0%	318.91

End of Forecast

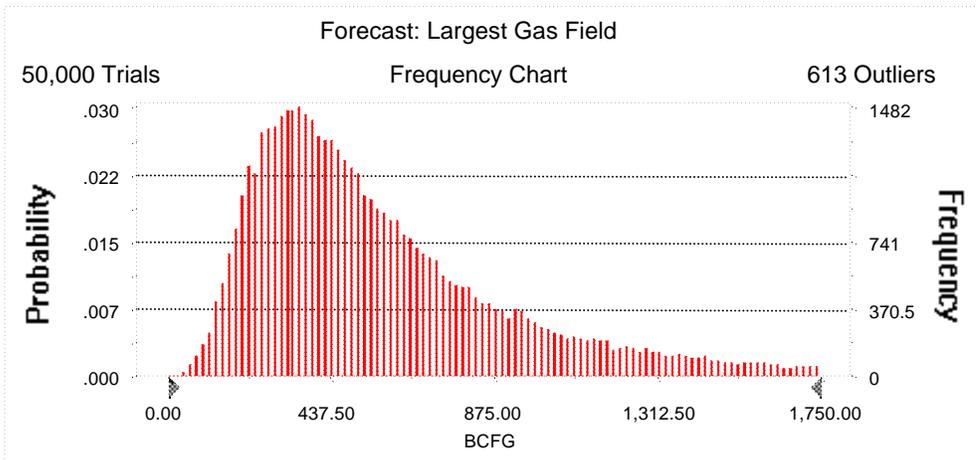
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Forecast: Largest Gas Field

Summary:

Display range is from 0.00 to 1,750.00 BCFG
 Entire range is from 32.67 to 1,999.63 BCFG
 After 50,000 trials, the standard error of the mean is 1.61

Statistics:	<u>Value</u>
Trials	50000
Mean	580.46
Median	482.83
Mode	---
Standard Deviation	360.83
Variance	130,200.61
Skewness	1.37
Kurtosis	4.80
Coefficient of Variability	0.62
Range Minimum	32.67
Range Maximum	1,999.63
Range Width	1,966.96
Mean Standard Error	1.61



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Forecast: Largest Gas Field (cont'd)

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	32.67
95%	180.73
90%	224.55
85%	260.23
80%	292.36
75%	322.89
70%	352.77
65%	382.56
60%	414.19
55%	447.60
50%	482.83
45%	520.79
40%	564.75
35%	613.91
30%	669.21
25%	734.49
20%	819.62
15%	932.83
10%	1,089.94
5%	1,347.43
0%	1,999.63

End of Forecast

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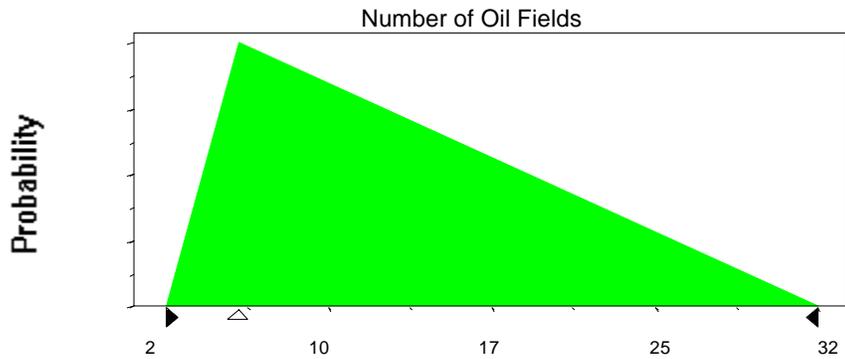
Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:

Minimum	2
Likeliest	5
Maximum	32

Selected range is from 2 to 32
Mean value in simulation was 13



Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:

Mean	12.35
Standard Deviation	22.23

Shifted parameters

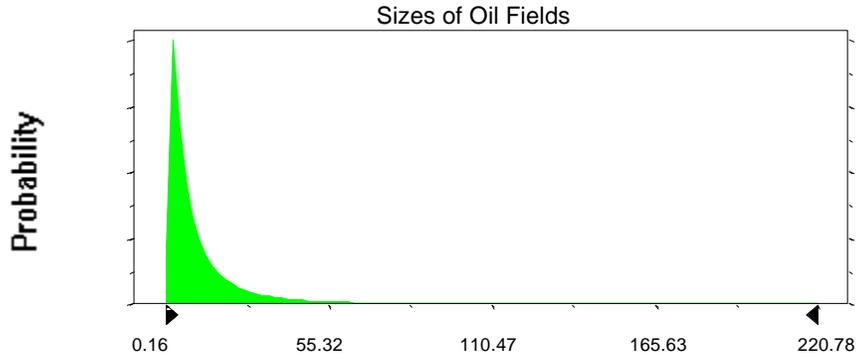
16.35
22.23

Selected range is from 0.00 to 246.00
Mean value in simulation was 11.97

4.00 to 250.00
15.97

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Assumption: Sizes of Oil Fields (cont'd)



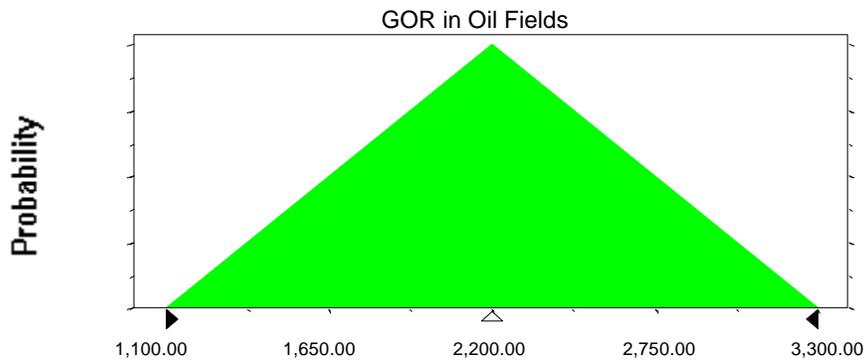
Assumption: GOR in Oil Fields

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 2,198.88



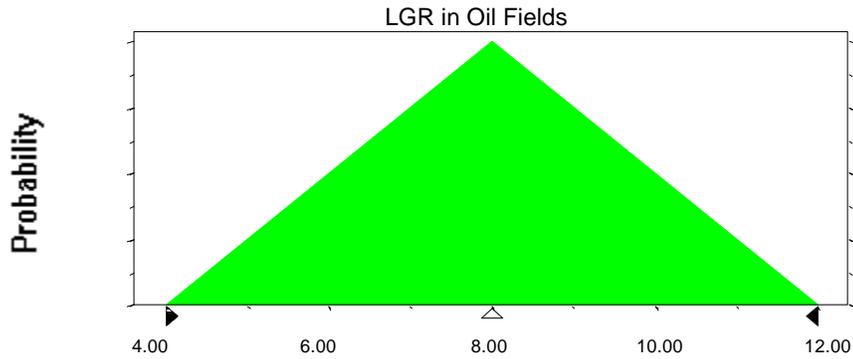
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Assumption: LGR in Oil Fields

Triangular distribution with parameters:

Minimum	4.00
Likeliest	8.00
Maximum	12.00

Selected range is from 4.00 to 12.00
Mean value in simulation was 8.01



Assumption: Number of Gas Fields

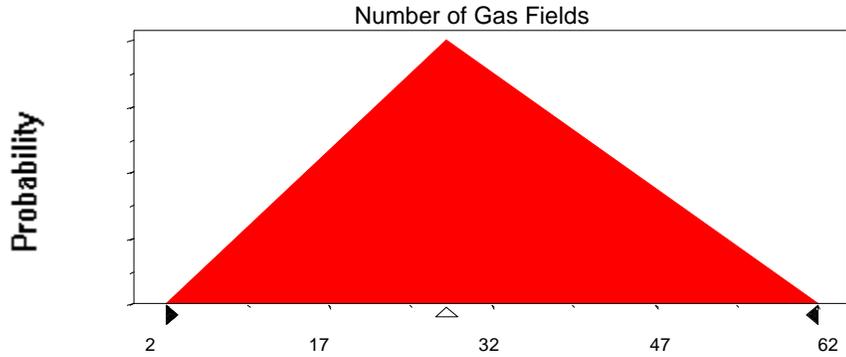
Triangular distribution with parameters:

Minimum	2
Likeliest	28
Maximum	62

Selected range is from 2 to 62
Mean value in simulation was 31

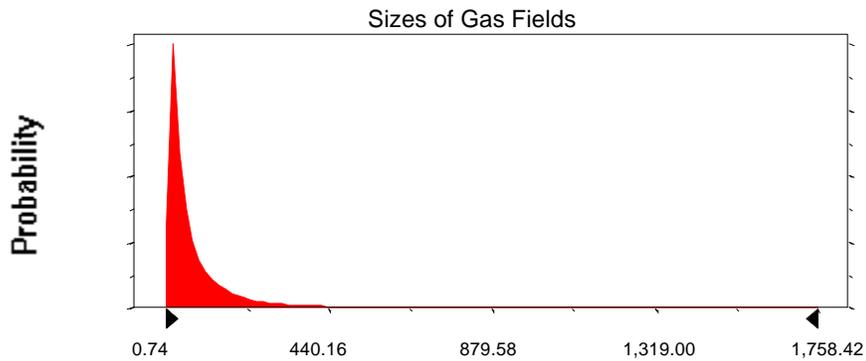
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Assumption: Number of Gas Fields (cont'd)



Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters
Mean	83.40	107.4
Standard Deviation	174.27	174.27
Selected range is from 0.00 to 1,976.00		24.00 to 2,000.00
Mean value in simulation was 79.35		103.35



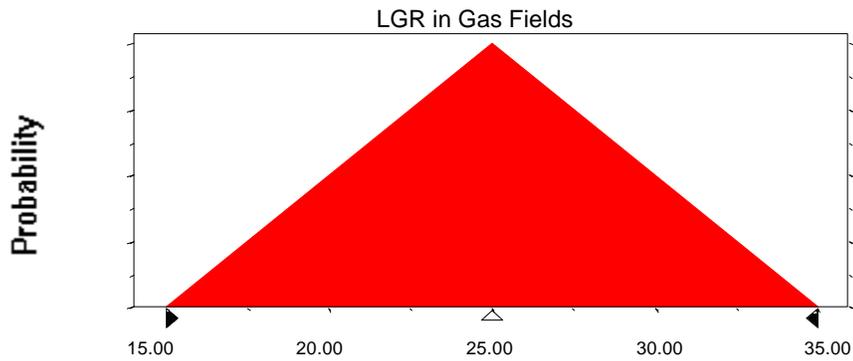
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Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	15.00
Likeliest	25.00
Maximum	35.00

Selected range is from 15.00 to 35.00
Mean value in simulation was 25.00



End of Assumptions

Simulation started on 2/25/99 at 15:10:26
Simulation stopped on 2/25/99 at 15:41:24