

**Mesozoic Sandstone Reservoirs, Assessment Unit 11500101**  
**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	3	1.00	132	669	1,994	814	14	72	223	89	0	1	5	2	45	205	897	298
Gas Fields	18						0	0	0	0	0	0	0	0	NA	NA	NA	NA
Total		1.00	132	669	1,994	814	14	72	223	89	0	1	5	2				

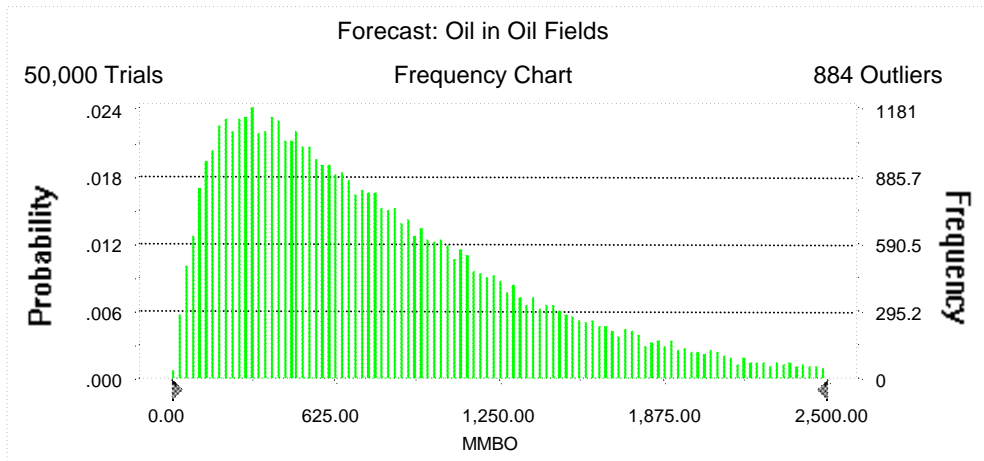
**11500101**  
**Mesozoic Sandstone Reservoirs**  
**Monte Carlo Results**

**Forecast: Oil in Oil Fields**

Summary:

Display range is from 0.00 to 2,500.00 MMBO  
Entire range is from 6.79 to 6,529.21 MMBO  
After 50,000 trials, the standard error of the mean is 2.70

Statistics:	Value
Trials	50000
Mean	814.38
Median	669.31
Mode	---
Standard Deviation	604.21
Variance	365,072.26
Skewness	1.39
Kurtosis	5.69
Coefficient of Variability	0.74
Range Minimum	6.79
Range Maximum	6,529.21
Range Width	6,522.42
Mean Standard Error	2.70



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**Forecast: Oil in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	6.79
95%	131.74
90%	193.10
85%	248.94
80%	304.14
75%	360.31
70%	415.78
65%	475.07
60%	534.74
55%	600.15
50%	669.31
45%	743.35
40%	822.06
35%	908.92
30%	1,006.06
25%	1,114.87
20%	1,245.55
15%	1,414.84
10%	1,638.39
5%	1,993.59
0%	6,529.21

End of Forecast

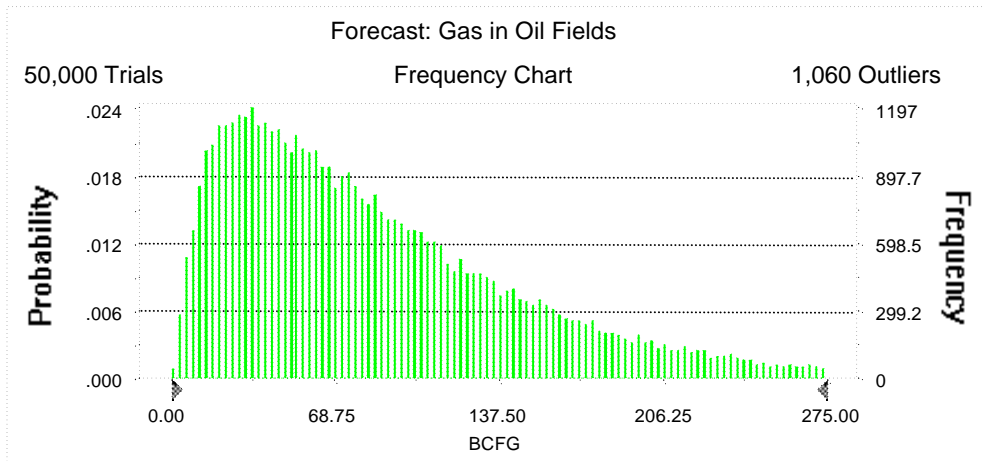
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**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 275.00 BCFG  
Entire range is from 0.74 to 802.21 BCFG  
After 50,000 trials, the standard error of the mean is 0.31

Statistics:	<u>Value</u>
Trials	50000
Mean	89.46
Median	72.50
Mode	---
Standard Deviation	68.53
Variance	4,695.82
Skewness	1.56
Kurtosis	6.82
Coefficient of Variability	0.77
Range Minimum	0.74
Range Maximum	802.21
Range Width	801.47
Mean Standard Error	0.31



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**Forecast: Gas in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>BCFG</u>
100%	0.74
95%	14.08
90%	20.68
85%	26.76
80%	32.66
75%	38.63
70%	44.85
65%	51.36
60%	57.99
55%	64.95
50%	72.50
45%	80.38
40%	89.12
35%	98.85
30%	109.43
25%	122.01
20%	136.76
15%	155.33
10%	180.60
5%	223.26
0%	802.21

End of Forecast

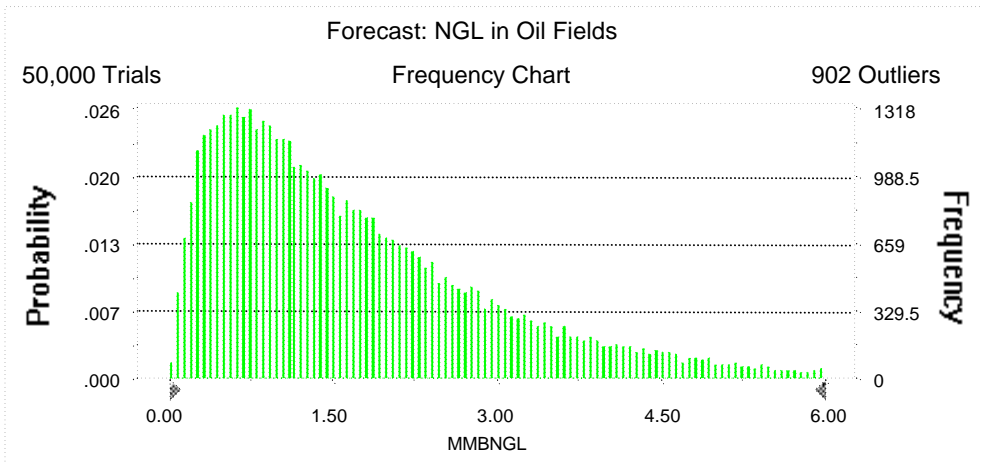
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**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 6.00 MMBNGL  
Entire range is from 0.01 to 20.75 MMBNGL  
After 50,000 trials, the standard error of the mean is 0.01

Statistics:	<u>Value</u>
Trials	50000
Mean	1.79
Median	1.41
Mode	---
Standard Deviation	1.45
Variance	2.09
Skewness	1.79
Kurtosis	8.40
Coefficient of Variability	0.81
Range Minimum	0.01
Range Maximum	20.75
Range Width	20.73
Mean Standard Error	0.01



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**Forecast: NGL in Oil Fields (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBNGL</u>
100%	0.01
95%	0.26
90%	0.39
85%	0.51
80%	0.63
75%	0.74
70%	0.86
65%	0.99
60%	1.11
55%	1.26
50%	1.41
45%	1.57
40%	1.75
35%	1.94
30%	2.16
25%	2.42
20%	2.73
15%	3.12
10%	3.67
5%	4.60
0%	20.75

End of Forecast

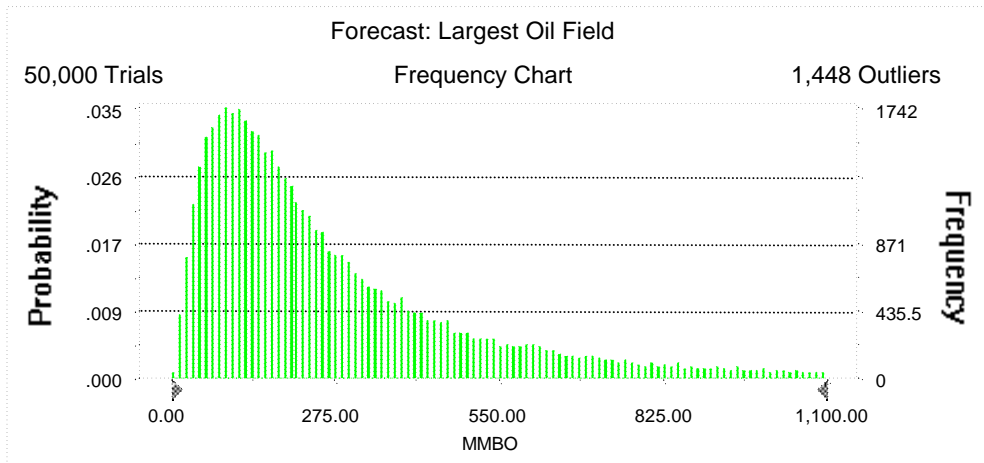
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**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 1,100.00 MMBO  
Entire range is from 3.46 to 1,799.25 MMBO  
After 50,000 trials, the standard error of the mean is 1.28

Statistics:	<u>Value</u>
Trials	50000
Mean	298.47
Median	204.89
Mode	---
Standard Deviation	285.18
Variance	81,324.82
Skewness	2.16
Kurtosis	8.54
Coefficient of Variability	0.96
Range Minimum	3.46
Range Maximum	1,799.25
Range Width	1,795.79
Mean Standard Error	1.28





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**Forecast: Largest Oil Field (cont'd)**

Percentiles:

<u>Percentile</u>	<u>MMBO</u>
100%	3.46
95%	45.11
90%	64.07
85%	81.02
80%	96.71
75%	112.87
70%	128.87
65%	146.11
60%	164.42
55%	183.61
50%	204.89
45%	229.24
40%	256.69
35%	289.42
30%	328.57
25%	377.43
20%	439.18
15%	525.28
10%	651.54
5%	897.25
0%	1,799.25

End of Forecast

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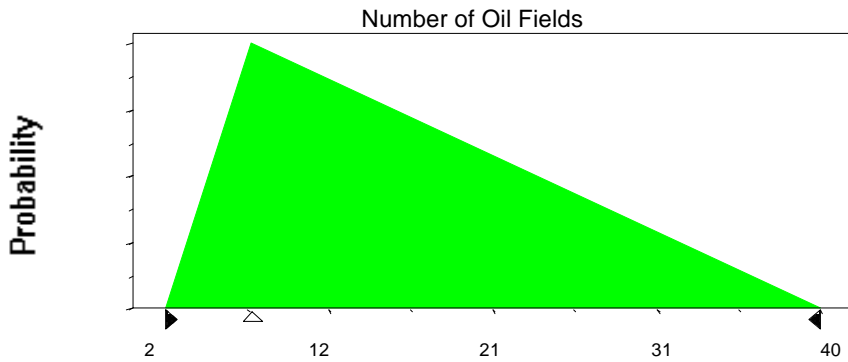
**Assumptions**

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

Minimum	2
Likeliest	7
Maximum	40

Selected range is from 2 to 40  
Mean value in simulation was 16



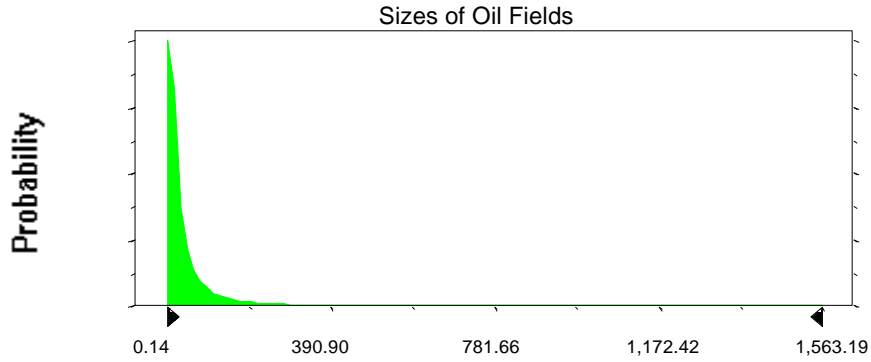
**Assumption: Sizes of Oil Fields**

Lognormal distribution with parameters:		Shifted parameters
Mean	49.77	52.77
Standard Deviation	157.47	157.47

Selected range is from 0.00 to 1,797.00                      3.00 to 1,800.00  
Mean value in simulation was 47.02                                      50.02

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Assumption: Sizes of Oil Fields (cont'd)



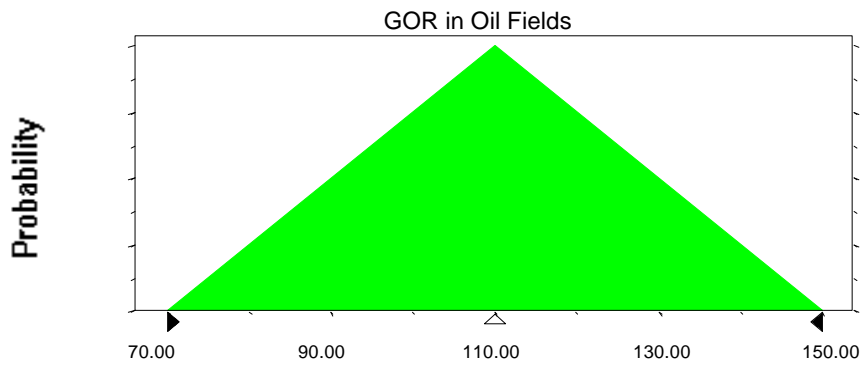
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	70.00
Likeliest	110.00
Maximum	150.00

Selected range is from 70.00 to 150.00

Mean value in simulation was 109.93



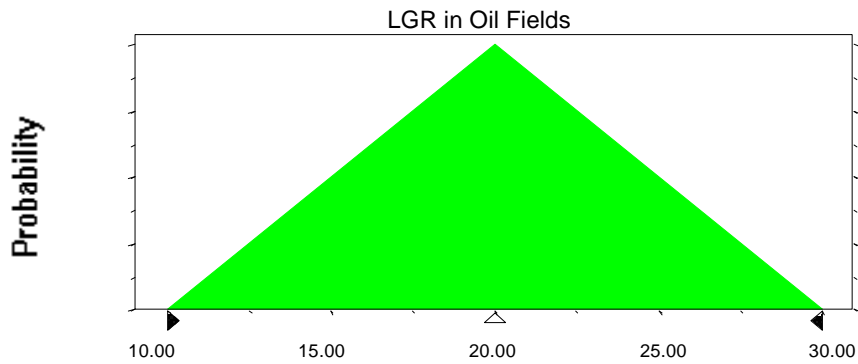
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**Assumption: LGR in Oil Fields**

Triangular distribution with parameters:

Minimum	10.00
Likeliest	20.00
Maximum	30.00

Selected range is from 10.00 to 30.00  
Mean value in simulation was 19.99



End of Assumptions

Simulation started on 12/30/99 at 14:11:54  
Simulation stopped on 12/30/99 at 14:27:46