

**Tamabra-Like Debris-Flow-Breccia Limestone of the Golden Lane, Assessment Unit 53050104**  
**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        | 104                    | 476 | 1,291 | 557  | 197        | 925 | 2,670 | 1,113 | 11           | 54  | 167 | 67   | 29  | 131 | 564 | 188  |
| Gas Fields | 6   |             | NA                     | NA  | NA    | NA   | 0          | 0   | 0     | 0     | 0            | 0   | 0   | 0    | NA  | NA  | NA  | NA   |
| Total      |     | 1.00        | 104                    | 476 | 1,291 | 557  | 197        | 925 | 2,670 | 1,113 | 11           | 54  | 167 | 67   |   |     |     |      |

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**Tamabra-Like Debris-Flow-Breccia Limestone of the Golden Lane**  
**Monte Carlo Results**

**Forecast: Oil in Oil Fields**

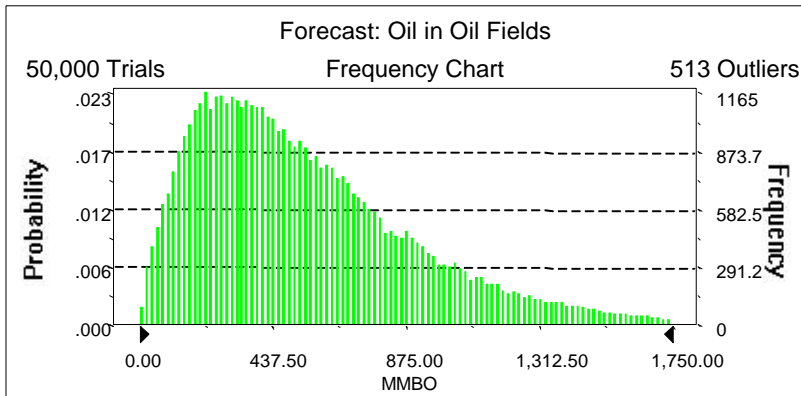
Summary:

Display range is from 0.00 to 1,750.00 MMBO

Entire range is from 3.29 to 3,237.46 MMBO

After 50,000 trials, the standard error of the mean is 1.68

| Statistics:                | <u>Value</u> |
|----------------------------|--------------|
| Trials                     | 50000        |
| Mean                       | 556.70       |
| Median                     | 476.29       |
| Mode                       | ---          |
| Standard Deviation         | 376.45       |
| Variance                   | 141,713.84   |
| Skewness                   | 1.22         |
| Kurtosis                   | 4.98         |
| Coefficient of Variability | 0.68         |
| Range Minimum              | 3.29         |
| Range Maximum              | 3,237.46     |
| Range Width                | 3,234.17     |
| Mean Standard Error        | 1.68         |



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**Monte Carlo Results**

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

Percentiles:

| <u>Percentile</u> | <u>MMBO</u> |
|-------------------|-------------|
| 100%              | 3.29        |
| 95%               | 104.36      |
| 90%               | 155.39      |
| 85%               | 197.28      |
| 80%               | 235.79      |
| 75%               | 274.26      |
| 70%               | 313.00      |
| 65%               | 352.57      |
| 60%               | 392.26      |
| 55%               | 432.18      |
| 50%               | 476.29      |
| 45%               | 523.05      |
| 40%               | 572.76      |
| 35%               | 626.27      |
| 30%               | 683.82      |
| 25%               | 750.87      |
| 20%               | 833.25      |
| 15%               | 932.14      |
| 10%               | 1,067.76    |
| 5%                | 1,290.73    |
| 0%                | 3,237.46    |

End of Forecast

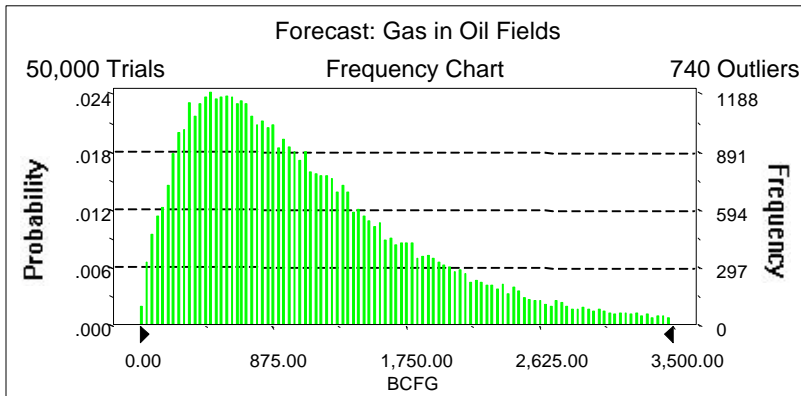
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**Monte Carlo Results**

**Forecast: Gas in Oil Fields**

Summary:

Display range is from 0.00 to 3,500.00 BCFG  
Entire range is from 5.34 to 7,598.99 BCFG  
After 50,000 trials, the standard error of the mean is 3.59

| Statistics:                | <u>Value</u> |
|----------------------------|--------------|
| Trials                     | 50000        |
| Mean                       | 1,113.12     |
| Median                     | 925.01       |
| Mode                       | ---          |
| Standard Deviation         | 801.68       |
| Variance                   | 642,685.56   |
| Skewness                   | 1.45         |
| Kurtosis                   | 6.10         |
| Coefficient of Variability | 0.72         |
| Range Minimum              | 5.34         |
| Range Maximum              | 7,598.99     |
| Range Width                | 7,593.65     |
| Mean Standard Error        | 3.59         |



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**Monte Carlo Results**

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

Percentiles:

| <u>Percentile</u> | <u>BCFG</u> |
|-------------------|-------------|
| 100%              | 5.34        |
| 95%               | 196.82      |
| 90%               | 293.26      |
| 85%               | 373.49      |
| 80%               | 450.53      |
| 75%               | 525.01      |
| 70%               | 599.11      |
| 65%               | 674.71      |
| 60%               | 753.22      |
| 55%               | 838.05      |
| 50%               | 925.01      |
| 45%               | 1,020.42    |
| 40%               | 1,119.83    |
| 35%               | 1,232.07    |
| 30%               | 1,352.29    |
| 25%               | 1,495.13    |
| 20%               | 1,669.93    |
| 15%               | 1,892.64    |
| 10%               | 2,179.79    |
| 5%                | 2,669.83    |
| 0%                | 7,598.99    |

End of Forecast

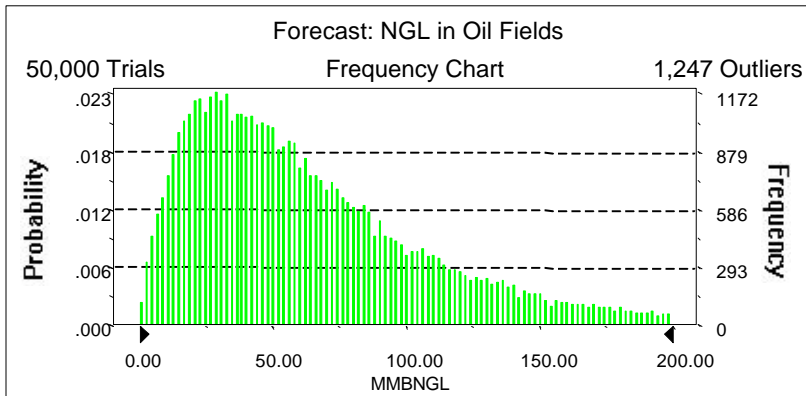
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**Monte Carlo Results**

**Forecast: NGL in Oil Fields**

Summary:

Display range is from 0.00 to 200.00 MMBNGL  
 Entire range is from 0.30 to 617.98 MMBNGL  
 After 50,000 trials, the standard error of the mean is 0.23

| Statistics:                | <u>Value</u> |
|----------------------------|--------------|
| Trials                     | 50000        |
| Mean                       | 66.84        |
| Median                     | 54.14        |
| Mode                       | ---          |
| Standard Deviation         | 51.18        |
| Variance                   | 2,619.44     |
| Skewness                   | 1.71         |
| Kurtosis                   | 7.67         |
| Coefficient of Variability | 0.77         |
| Range Minimum              | 0.30         |
| Range Maximum              | 617.98       |
| Range Width                | 617.68       |
| Mean Standard Error        | 0.23         |



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**Monte Carlo Results**

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

Percentiles:

| <u>Percentile</u> | <u>MMBNGL</u> |
|-------------------|---------------|
| 100%              | 0.30          |
| 95%               | 11.15         |
| 90%               | 16.69         |
| 85%               | 21.30         |
| 80%               | 25.80         |
| 75%               | 30.12         |
| 70%               | 34.51         |
| 65%               | 39.18         |
| 60%               | 43.99         |
| 55%               | 48.91         |
| 50%               | 54.14         |
| 45%               | 59.55         |
| 40%               | 65.79         |
| 35%               | 72.70         |
| 30%               | 80.22         |
| 25%               | 88.98         |
| 20%               | 100.06        |
| 15%               | 113.92        |
| 10%               | 133.66        |
| 5%                | 166.79        |
| 0%                | 617.98        |

End of Forecast

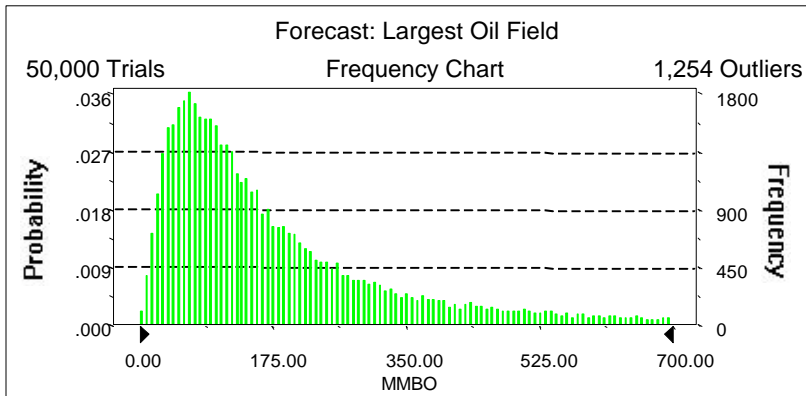
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Monte Carlo Results

**Forecast: Largest Oil Field**

Summary:

Display range is from 0.00 to 700.00 MMBO  
Entire range is from 1.86 to 999.82 MMBO  
After 50,000 trials, the standard error of the mean is 0.77

| Statistics:                | Value     |
|----------------------------|-----------|
| Trials                     | 50000     |
| Mean                       | 188.38    |
| Median                     | 131.19    |
| Mode                       | ---       |
| Standard Deviation         | 172.62    |
| Variance                   | 29,798.71 |
| Skewness                   | 1.92      |
| Kurtosis                   | 7.01      |
| Coefficient of Variability | 0.92      |
| Range Minimum              | 1.86      |
| Range Maximum              | 999.82    |
| Range Width                | 997.97    |
| Mean Standard Error        | 0.77      |





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**Monte Carlo Results**

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

Percentiles:

| <u>Percentile</u> | <u>MMBO</u> |
|-------------------|-------------|
| 100%              | 1.86        |
| 95%               | 29.43       |
| 90%               | 41.58       |
| 85%               | 52.62       |
| 80%               | 62.60       |
| 75%               | 72.41       |
| 70%               | 83.17       |
| 65%               | 94.16       |
| 60%               | 105.24      |
| 55%               | 117.71      |
| 50%               | 131.19      |
| 45%               | 146.94      |
| 40%               | 164.43      |
| 35%               | 185.63      |
| 30%               | 209.59      |
| 25%               | 239.90      |
| 20%               | 279.25      |
| 15%               | 333.63      |
| 10%               | 418.60      |
| 5%                | 563.70      |
| 0%                | 999.82      |

End of Forecast

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Monte Carlo Results

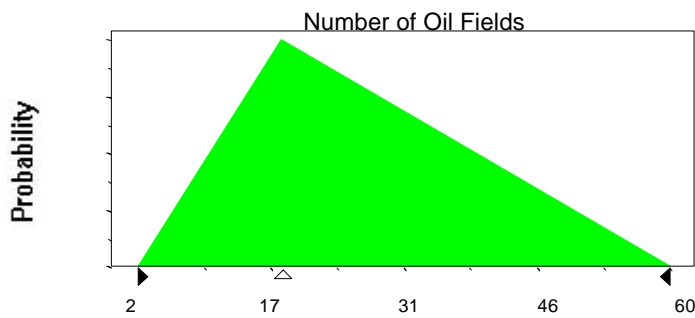
Assumptions

**Assumption: Number of Oil Fields**

Triangular distribution with parameters:

|           |    |
|-----------|----|
| Minimum   | 2  |
| Likeliest | 18 |
| Maximum   | 60 |

Selected range is from 2 to 60  
Mean value in simulation was 27



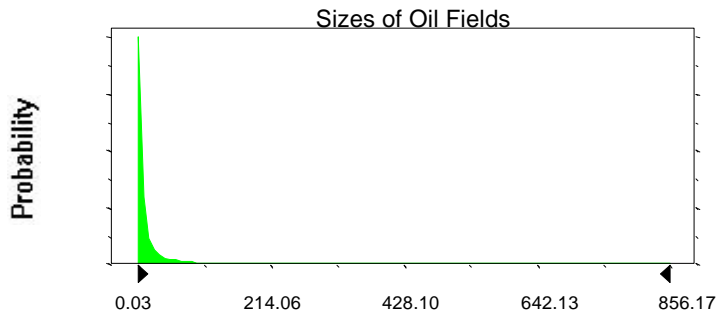
**Assumption: Sizes of Oil Fields**

| Lognormal distribution with parameters: | Shifted parameters |       |
|---|--------------------|-------|
| Mean                                    | 21.73              | 22.73 |
| Standard Deviation                      | 91.95              | 91.95 |

Selected range is from 0.00 to 999.00                      1.00 to 1,000.00  
Mean value in simulation was 20.32                              21.32

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Monte Carlo Results

Assumption: Sizes of Oil Fields (cont'd)

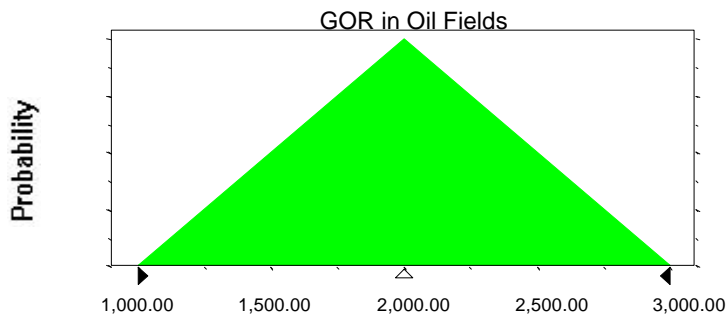


Assumption: GOR in Oil Fields

Triangular distribution with parameters:

|           |          |
|-----------|----------|
| Minimum   | 1,000.00 |
| Likeliest | 2,000.00 |
| Maximum   | 3,000.00 |

Selected range is from 1,000.00 to 3,000.00  
Mean value in simulation was 1,999.49



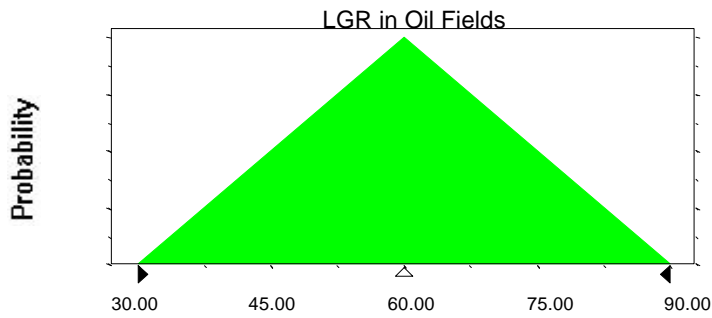
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**Assumption: LGR in Oil Fields**

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 60.04



End of Assumptions

Simulation started on 12/2/99 at 13:17:26  
Simulation stopped on 12/2/99 at 13:37:44