Southern Permian Basin-U.K. Onshore, Assessment Unit 40360101
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]

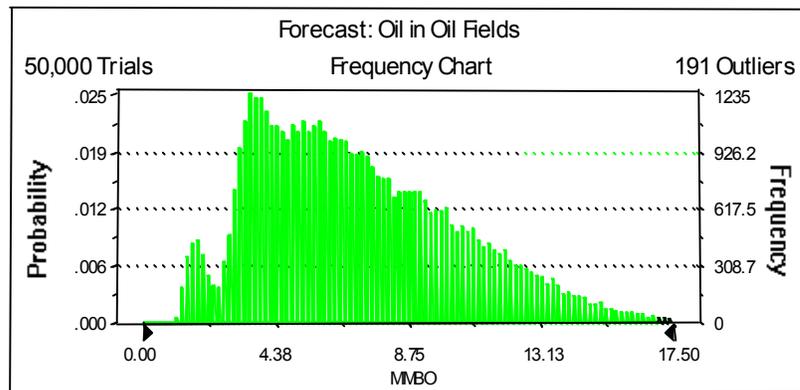| Field Type | MFS | Prob. (0-1) | Undiscovered Resources | | | | | | | | | | | | Largest Undiscovered Field (MMBO or BCFG) | | | |
			Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)							
			F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
Oil Fields	1	1.00	3	7	13	7	3	8	17	9	0	0	1	1	2	3	5	3
Gas Fields	6						9	21	39	22	0	1	2	1	8	11	18	12
Total		1.00	3	7	13	7	11	29	56	31	1	1	3	1				

Forecast: Oil in Oil Fields

Summary:
    Display range is from 0.00 to 17.50 MMBO
    Entire range is from 1.12 to 23.01 MMBO
    After 50,000 trials, the standard error of the mean is 0.02

Statistics:	Value
Trials	50000
Mean	7.13
Median	6.59
Mode	---
Standard Deviation	3.36
Variance	11.32
Skewness	0.67
Kurtosis	3.09
Coefficient of Variability	0.47
Range Minimum	1.12
Range Maximum	23.01
Range Width	21.89
Mean Standard Error	0.02

Forecast: Oil in Oil Fields

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

Percentile	MMBO
100%	1.12
95%	2.65
90%	3.34
85%	3.71
80%	4.08
75%	4.48
70%	4.91
65%	5.32
60%	5.74
55%	6.15
50%	6.59
45%	7.06
40%	7.54
35%	8.08
30%	8.69
25%	9.32
20%	10.03
15%	10.86
10%	11.90
5%	13.36
0%	23.01

End of Forecast

Forecast: Gas in Oil Fields

Summary:
Display range is from 0.00 to 22.50 BCFG
Entire range is from 0.85 to 37.06 BCFG
After 50,000 trials, the standard error of the mean is 0.02

Statistics:	Value
Trials	50000
Mean	8.57
Median	7.73
Mode	---
Standard Deviation	4.48
Variance	20.10
Skewness	0.94
Kurtosis	3.93
Coefficient of Variability	0.52
Range Minimum	0.85
Range Maximum	37.06
Range Width	36.21
Mean Standard Error	0.02
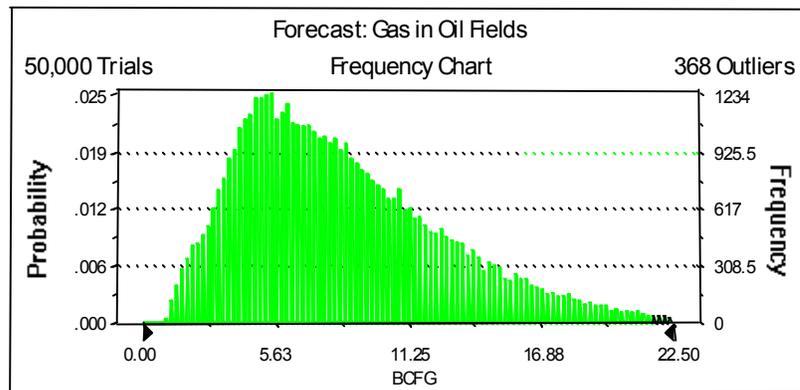
Forecast: Gas in Oil Fields

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	0.85
95%	2.78
90%	3.61
85%	4.21
80%	4.72
75%	5.18
70%	5.64
65%	6.14
60%	6.65
55%	7.18
50%	7.73
45%	8.30
40%	8.91
35%	9.57
30%	10.31
25%	11.14
20%	12.11
15%	13.29
10%	14.81
5%	17.15
0%	37.06

End of Forecast

Forecast: NGL in Oil Fields

Summary:

Display range is from 0.00 to 1.50 MMBNGL

Entire range is from 0.04 to 2.62 MMBNGL

After 50,000 trials, the standard error of the mean is 0.00

Statistics:	Value
Trials	50000
Mean	0.51
Median	0.45
Mode	---
Standard Deviation	0.29
Variance	0.09
Skewness	1.18
Kurtosis	4.83
Coefficient of Variability	0.57
Range Minimum	0.04
Range Maximum	2.62
Range Width	2.58
Mean Standard Error	0.00
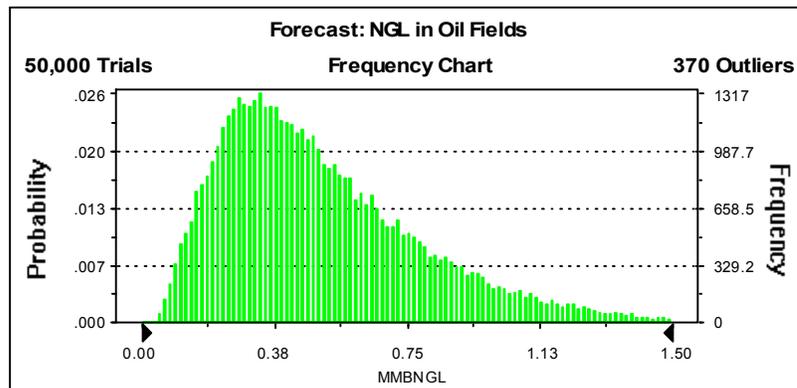
Forecast: NGL in Oil Fields

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	0.04
95%	0.15
90%	0.20
85%	0.24
80%	0.27
75%	0.30
70%	0.33
65%	0.36
60%	0.39
55%	0.42
50%	0.45
45%	0.49
40%	0.53
35%	0.57
30%	0.62
25%	0.67
20%	0.73
15%	0.81
10%	0.91
5%	1.08
0%	2.62

End of Forecast

Forecast: Largest Oil Field

Summary:
    Display range is from 1.00 to 5.50 MMBO
    Entire range is from 1.12 to 7.98 MMBO
    After 50,000 trials, the standard error of the mean is 0.00

Statistics:	Value
Trials	50000
Mean	2.88
Median	2.68
Mode	---
Standard Deviation	0.98
Variance	0.97
Skewness	1.39
Kurtosis	5.75
Coefficient of Variability	0.34
Range Minimum	1.12
Range Maximum	7.98
Range Width	6.86
Mean Standard Error	0.00
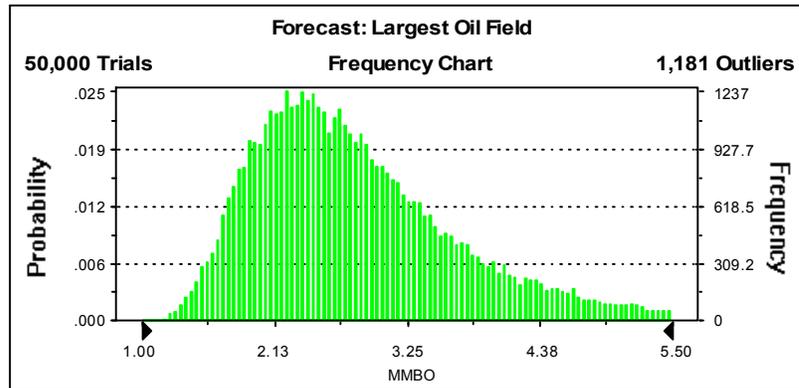
Forecast: Largest Oil Field

Forecast: Largest Oil Field (cont'd)

Percentiles:

Percentile	MMBO
100%	1.12
95%	1.71
90%	1.86
85%	1.98
80%	2.09
75%	2.19
70%	2.29
65%	2.38
60%	2.48
55%	2.57
50%	2.68
45%	2.79
40%	2.90
35%	3.03
30%	3.17
25%	3.33
20%	3.53
15%	3.79
10%	4.16
5%	4.79
0%	7.98

End of Forecast

Forecast: Gas in Gas Fields

Summary:
Display range is from 5.00 to 50.00 BCFG
Entire range is from 6.27 to 69.12 BCFG
After 50,000 trials, the standard error of the mean is 0.04

Statistics:	Value
Trials	50000
Mean	22.43
Median	21.26
Mode	---
Standard Deviation	9.20
Variance	84.66
Skewness	0.49
Kurtosis	3.08
Coefficient of Variability	0.41
Range Minimum	6.27
Range Maximum	69.12
Range Width	62.85
Mean Standard Error	0.04
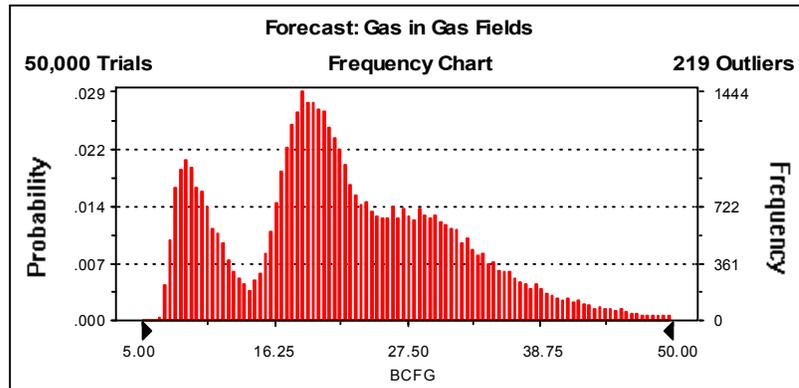
Forecast: Gas in Gas Fields

50,000 Trials — Frequency Chart — 219 Outliers

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	6.27
95%	8.58
90%	9.75
85%	11.32
80%	14.61
75%	16.85
70%	17.88
65%	18.72
60%	19.52
55%	20.35
50%	21.26
45%	22.28
40%	23.63
35%	25.21
30%	26.88
25%	28.57
20%	30.26
15%	32.16
10%	34.70
5%	38.72
0%	69.12

End of Forecast

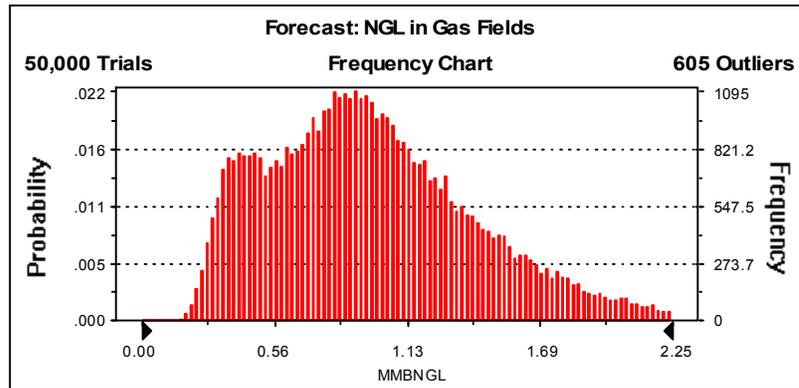**Forecast: NGL in Gas Fields**

Summary:
    Display range is from 0.00 to 2.25 MMBNGL
    Entire range is from 0.16 to 3.82 MMBNGL
    After 50,000 trials, the standard error of the mean is 0.00

Statistics:	Value
Trials	50000
Mean	0.99
Median	0.93
Mode	---
Standard Deviation	0.46
Variance	0.21
Skewness	0.80
Kurtosis	3.80
Coefficient of Variability	0.46
Range Minimum	0.16
Range Maximum	3.82
Range Width	3.66
Mean Standard Error	0.00

Forecast: NGL in Gas Fields
50,000 Trials — Frequency Chart — 605 Outliers

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	0.16
95%	0.35
90%	0.43
85%	0.50
80%	0.57
75%	0.65
70%	0.71
65%	0.77
60%	0.83
55%	0.88
50%	0.93
45%	0.98
40%	1.04
35%	1.10
30%	1.17
25%	1.25
20%	1.34
15%	1.45
10%	1.60
5%	1.82
0%	3.82

End of Forecast

Forecast: Largest Gas Field

Summary:
   Display range is from 5.00 to 22.50 BCFG
   Entire range is from 6.27 to 29.98 BCFG
   After 50,000 trials, the standard error of the mean is 0.01

Statistics:	Value
Trials	50000
Mean	12.16
Median	11.48
Mode	---
Standard Deviation	3.25
Variance	10.57
Skewness	1.42
Kurtosis	5.92
Coefficient of Variability	0.27
Range Minimum	6.27
Range Maximum	29.98
Range Width	23.71
Mean Standard Error	0.01
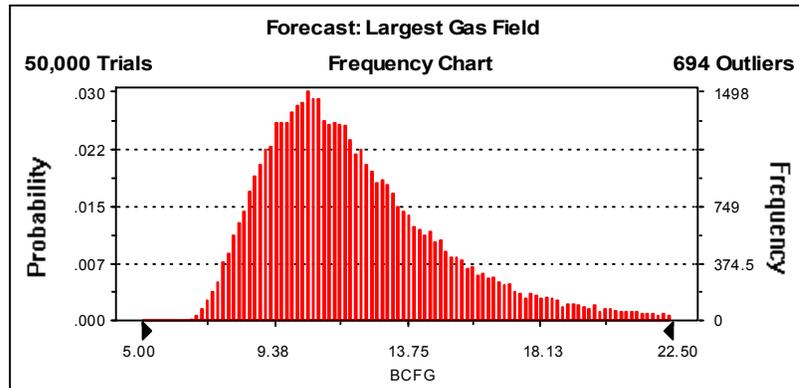
Forecast: Largest Gas Field

50,000 Trials — Frequency Chart — 694 Outliers

Forecast: Largest Gas Field (cont'd)

Percentiles:

Percentile	BCFG
100%	6.27
95%	8.26
90%	8.80
85%	9.21
80%	9.57
75%	9.90
70%	10.22
65%	10.52
60%	10.82
55%	11.14
50%	11.48
45%	11.83
40%	12.21
35%	12.63
30%	13.10
25%	13.65
20%	14.32
15%	15.16
10%	16.35
5%	18.46
0%	29.98

End of Forecast

Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:
Minimum   1
Likeliest   2
Maximum   7

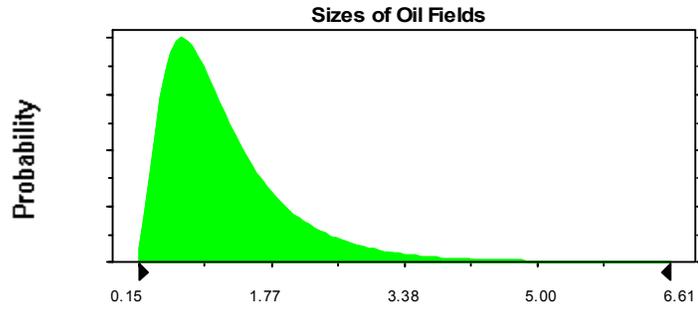Selected range is from 1 to 7
Mean value in simulation was 3

Number of Oil Fields
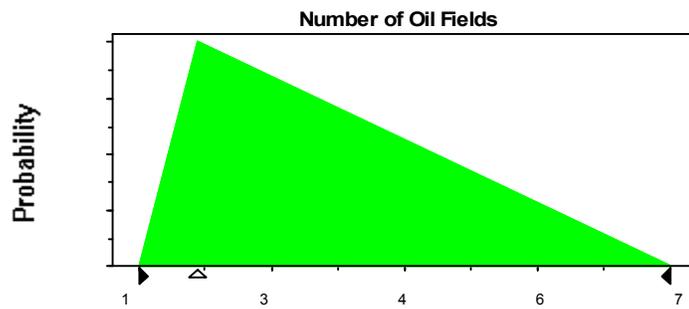
Assumption: Sizes of Oil Fields

Lognormal distribution with parameters:		Shifted parameters	
Mean	1.22		2.22
Standard Deviation	0.85		0.85

Selected range is from 0.00 to 7.00   1.00 to 8.00
Mean value in simulation was 1.21   2.21

Assumption: Sizes of Oil Fields (cont'd)

Sizes of Oil Fields

Probability

| 0.15 | 1.77 | 3.38 | 5.00 | 6.61 |

Assumption: GOR in Oil Fields

Triangular distribution with parameters:
Minimum	600.00
Likeliest	1,200.00
Maximum	1,800.00

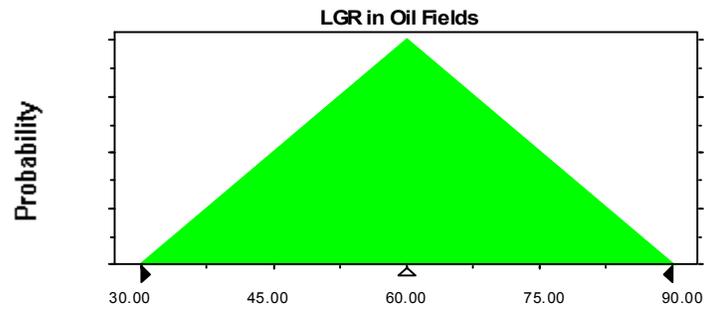Selected range is from 600.00 to 1,800.00
Mean value in simulation was 1,201.50

GOR in Oil Fields

Probability

| 600.00 | 900.00 | 1,200.00 | 1,500.00 | 1,800.00 |
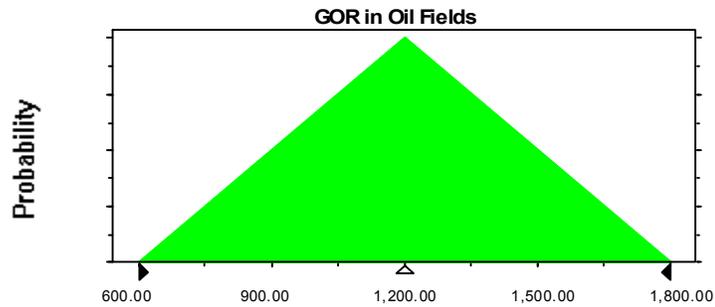
Assumption: LGR in Oil Fields

Triangular distribution with parameters:
Minimum	30.00
Likeliest	60.00
Maximum	90.00

Selected range is from 30.00 to 90.00
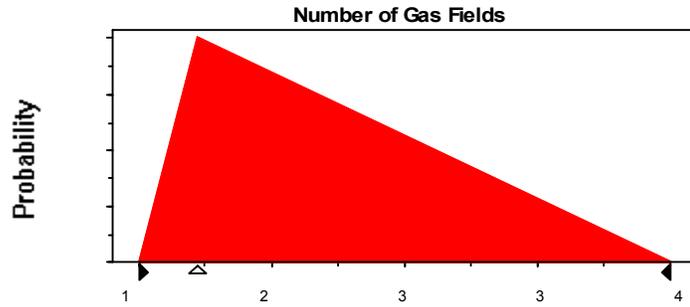Mean value in simulation was 60.00

LGR in Oil Fields

Assumption: Number of Gas Fields

Triangular distribution with parameters:
Minimum	1
Likeliest	1
Maximum	4

Selected range is from 1 to 4
Mean value in simulation was 2

Assumption: Number of Gas Fields (cont'd)

Number of Gas Fields

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters	
Mean	4.73		10.73
Standard Deviation	2.99		2.99

Selected range is from 0.00 to 24.00   6.00 to 30.00
Mean value in simulation was 4.71   10.71
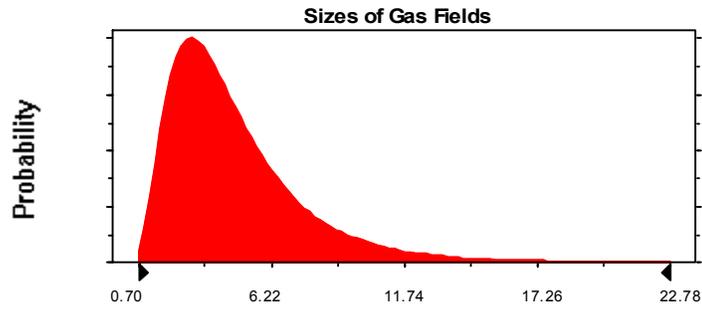
Sizes of Gas Fields

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 43.97

LGR in Gas Fields
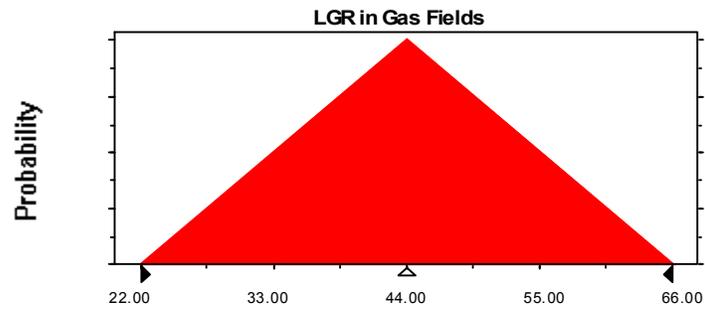
End of Assumptions

Simulation started on 12/2/98 at 13:54:40
Simulation stopped on 12/2/98 at 14:59:12