Natih-Fiqa Structural/Stratigraphic, Assessment Unit 20160201
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	62	319	858	371	30	157	441	186	1	8	22	9	22	89	328	119
Gas Fields	6						27	130	491	177	1	6	25	9	15	61	311	98
Total		1.00	62	319	858	371	57	287	933	363	3	14	47	18				

Forecast: Oil in Oil Fields

Summary:
    Display range is from 0.00 to 1,100.00 MMBO
    Entire range is from 1.26 to 2,195.20 MMBO
    After 50,000 trials, the standard error of the mean is 1.13

Statistics:	Value
Trials	50000
Mean	371.45
Median	319.09
Mode	---
Standard Deviation	253.39
Variance	64,205.73
Skewness	1.09
Kurtosis	4.41
Coefficient of Variability	0.68
Range Minimum	1.26
Range Maximum	2,195.20
Range Width	2,193.94
Mean Standard Error	1.13

Forecast: Oil in Oil Fields

Forecast: Oil in Oil Fields (cont'd)

Percentiles:

Percentile	MMBO
100%	1.26
95%	62.10
90%	93.78
85%	121.58
80%	149.00
75%	175.68
70%	203.59
65%	230.65
60%	258.18
55%	287.78
50%	319.09
45%	352.03
40%	388.41
35%	426.14
30%	466.76
25%	512.04
20%	567.63
15%	634.22
10%	720.80
5%	858.42
0%	2,195.20

End of Forecast

Forecast: Gas in Oil Fields

Summary:
Display range is from 0.00 to 550.00 BCFG
Entire range is from 0.57 to 1,236.28 BCFG
After 50,000 trials, the standard error of the mean is 0.59

Statistics:	Value
Trials	50000
Mean	186.03
Median	156.75
Mode	---
Standard Deviation	132.19
Variance	17,473.17
Skewness	1.24
Kurtosis	5.03
Coefficient of Variability	0.71
Range Minimum	0.57
Range Maximum	1,236.28
Range Width	1,235.71
Mean Standard Error	0.59
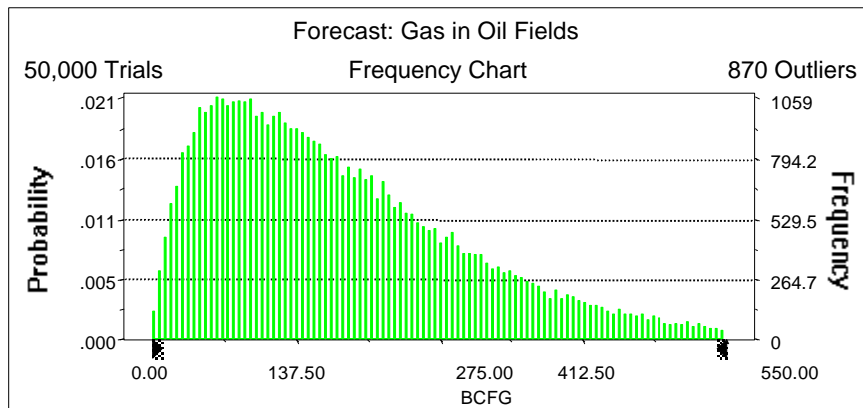
Forecast: Gas in Oil Fields

Forecast: Gas in Oil Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	0.57
95%	29.94
90%	45.48
85%	59.21
80%	72.08
75%	85.46
70%	98.59
65%	112.78
60%	126.76
55%	141.56
50%	156.75
45%	173.58
40%	191.60
35%	210.56
30%	231.45
25%	255.81
20%	284.77
15%	318.94
10%	365.23
5%	441.23
0%	1,236.28

End of Forecast

Forecast: NGL in Oil Fields

Summary:
Display range is from 0.00 to 27.50 MMBNGL
Entire range is from 0.03 to 67.90 MMBNGL
After 50,000 trials, the standard error of the mean is 0.03

Statistics:	Value
Trials	50000
Mean	9.30
Median	7.81
Mode	---
Standard Deviation	6.68
Variance	44.57
Skewness	1.29
Kurtosis	5.30
Coefficient of Variability	0.72
Range Minimum	0.03
Range Maximum	67.90
Range Width	67.87
Mean Standard Error	0.03
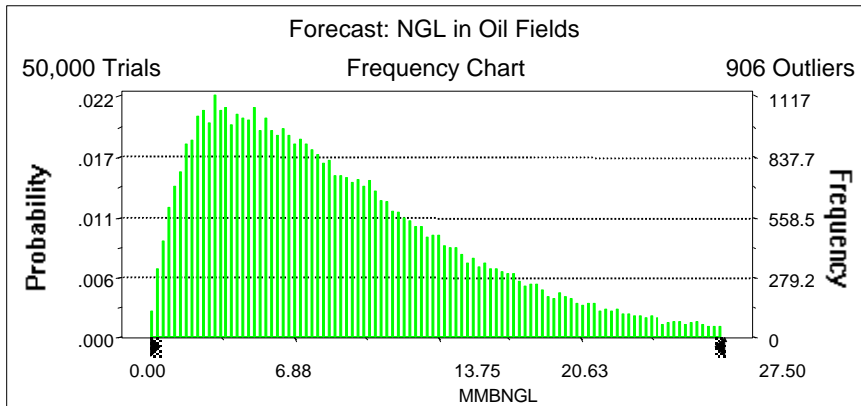
Forecast: NGL in Oil Fields

Forecast: NGL in Oil Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	0.03
95%	1.49
90%	2.26
85%	2.94
80%	3.57
75%	4.24
70%	4.93
65%	5.60
60%	6.31
55%	7.05
50%	7.81
45%	8.64
40%	9.55
35%	10.51
30%	11.55
25%	12.77
20%	14.19
15%	16.02
10%	18.34
5%	22.22
0%	67.90

End of Forecast

Forecast: Largest Oil Field

Summary:
   Display range is from 0.00 to 400.00 MMBO
   Entire range is from 1.26 to 599.94 MMBO
   After 50,000 trials, the standard error of the mean is 0.44

Statistics:	Value
Trials	50000
Mean	118.91
Median	89.18
Mode	---
Standard Deviation	98.86
Variance	9,772.78
Skewness	1.86
Kurtosis	7.01
Coefficient of Variability	0.83
Range Minimum	1.26
Range Maximum	599.94
Range Width	598.68
Mean Standard Error	0.44
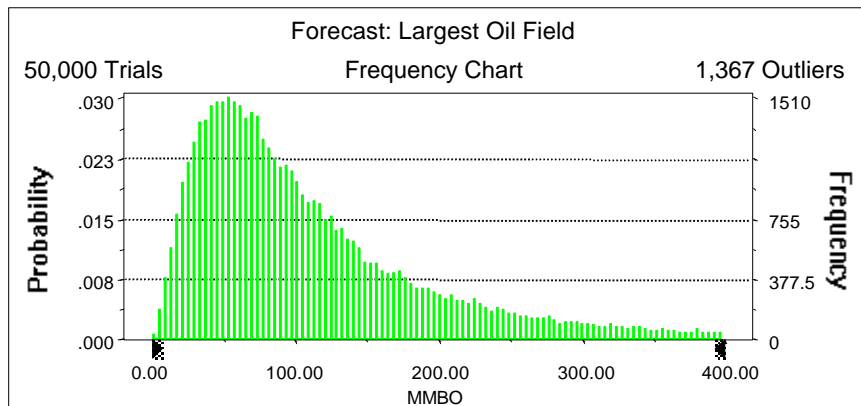
Forecast: Largest Oil Field

50,000 Trials   Frequency Chart   1,367 Outliers

Forecast: Largest Oil Field (cont'd)

Percentiles:

Percentile	MMBO
100%	1.26
95%	22.06
90%	31.03
85%	38.52
80%	45.44
75%	52.09
70%	58.74
65%	65.67
60%	72.76
55%	80.51
50%	89.18
45%	98.43
40%	108.98
35%	120.84
30%	134.40
25%	151.19
20%	173.45
15%	203.17
10%	246.51
5%	327.96
0%	599.94

End of Forecast

Forecast: Gas in Gas Fields

Summary:
Display range is from 0.00 to 600.00 BCFG
Entire range is from 6.15 to 2,021.89 BCFG
After 50,000 trials, the standard error of the mean is 0.72

Statistics:	Value
Trials	50000
Mean	176.91
Median	130.03
Mode	---
Standard Deviation	161.58
Variance	26,108.57
Skewness	2.34
Kurtosis	11.36
Coefficient of Variability	0.91
Range Minimum	6.15
Range Maximum	2,021.89
Range Width	2,015.74
Mean Standard Error	0.72
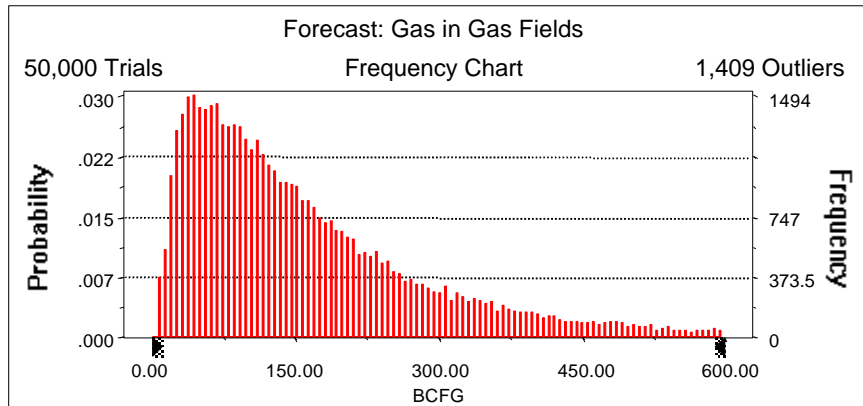
Forecast: Gas in Gas Fields

Forecast: Gas in Gas Fields (cont'd)

Percentiles:

Percentile	BCFG
100%	6.15
95%	26.79
90%	37.75
85%	47.67
80%	58.22
75%	68.59
70%	79.72
65%	91.33
60%	103.21
55%	116.07
50%	130.03
45%	145.52
40%	162.24
35%	181.34
30%	202.69
25%	228.90
20%	260.87
15%	306.69
10%	370.54
5%	491.50
0%	2,021.89

End of Forecast

Forecast: NGL in Gas Fields

Summary:
Display range is from 0.00 to 35.00 MMBNGL
Entire range is from 0.26 to 107.41 MMBNGL
After 50,000 trials, the standard error of the mean is 0.04

Statistics:	Value
Trials	50000
Mean	8.85
Median	6.47
Mode	---
Standard Deviation	8.16
Variance	66.63
Skewness	2.38
Kurtosis	11.71
Coefficient of Variability	0.92
Range Minimum	0.26
Range Maximum	107.41
Range Width	107.15
Mean Standard Error	0.04
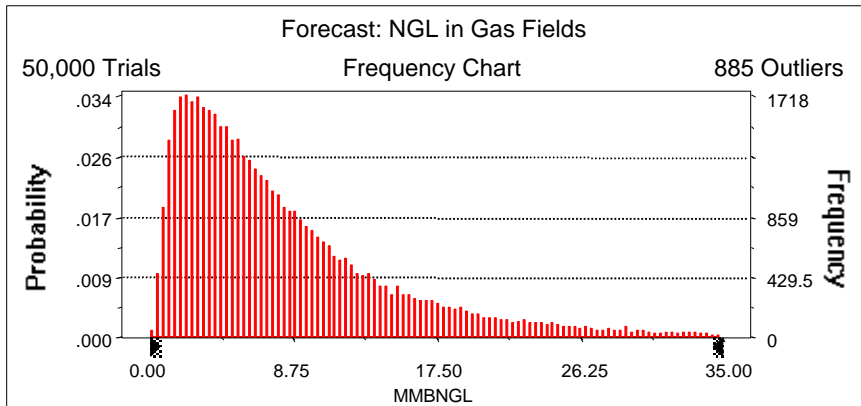
Forecast: NGL in Gas Fields

Forecast: NGL in Gas Fields (cont'd)

Percentiles:

Percentile	MMBNGL
100%	0.26
95%	1.33
90%	1.88
85%	2.37
80%	2.90
75%	3.42
70%	3.96
65%	4.53
60%	5.13
55%	5.77
50%	6.47
45%	7.23
40%	8.08
35%	9.03
30%	10.11
25%	11.41
20%	13.08
15%	15.33
10%	18.59
5%	24.80
0%	107.41

End of Forecast

Forecast: Largest Gas Field

Summary:
Display range is from 0.00 to 400.00 BCFG
Entire range is from 6.15 to 999.25 BCFG
After 50,000 trials, the standard error of the mean is 0.50

Statistics:	Value
Trials	50000
Mean	98.14
Median	61.39
Mode	---
Standard Deviation	112.58
Variance	12,673.58
Skewness	3.22
Kurtosis	17.03
Coefficient of Variability	1.15
Range Minimum	6.15
Range Maximum	999.25
Range Width	993.10
Mean Standard Error	0.50
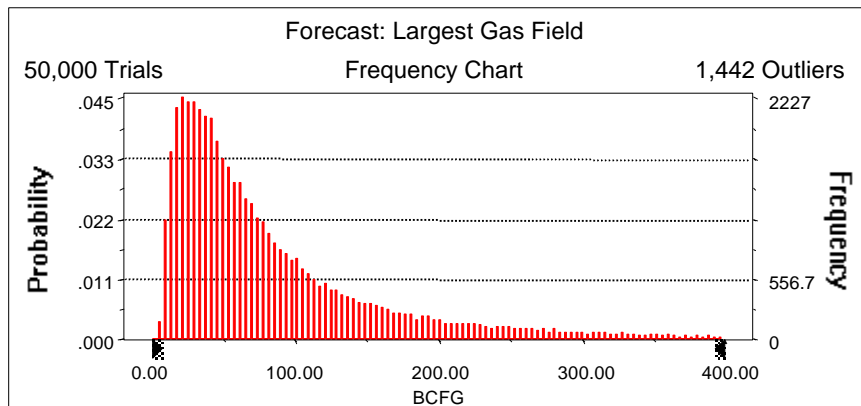
Forecast: Largest Gas Field

Forecast: Largest Gas Field (cont'd)

Percentiles:

Percentile	BCFG
100%	6.15
95%	14.94
90%	19.76
85%	24.25
80%	28.86
75%	33.35
70%	38.25
65%	43.08
60%	48.50
55%	54.54
50%	61.39
45%	68.81
40%	77.52
35%	87.74
30%	100.33
25%	115.95
20%	137.30
15%	166.73
10%	214.80
5%	310.51
0%	999.25

End of Forecast

Assumptions

Assumption: Number of Oil Fields

Triangular distribution with parameters:
Minimum	1
Likeliest	8
Maximum	40

Selected range is from 1 to 40
Mean value in simulation was 16

Number of Oil Fields
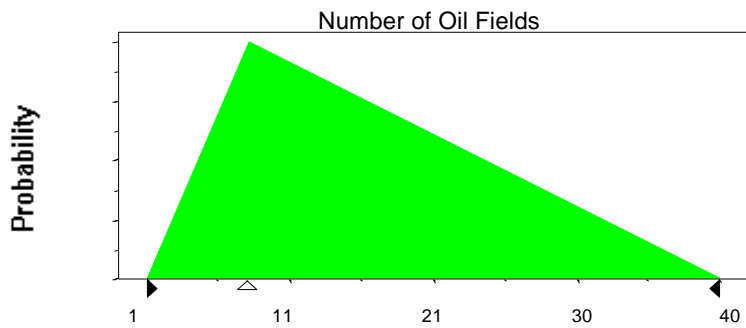
Assumption: Sizes of Oil Fields

Lognormal distribution with parameters: Shifted parameters

Mean	22.65	23.65
Standard Deviation	52.30	52.3

Selected range is from 0.00 to 599.00   1.00 to 600.00
Mean value in simulation was 21.75   22.75

Assumption: Sizes of Oil Fields (cont'd)

Sizes of Oil Fields

| 0.15 | 132.63 | 265.11 | 397.58 | 530.06 |
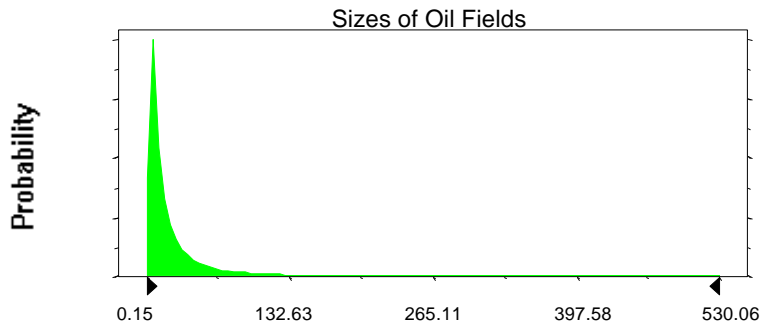
Assumption: GOR in Oil Fields

Triangular distribution with parameters:

Minimum	300.00
Likeliest	500.00
Maximum	700.00

Selected range is from 300.00 to 700.00
Mean value in simulation was 500.53

GOR in Oil Fields

| 300.00 | 400.00 | 500.00 | 600.00 | 700.00 |
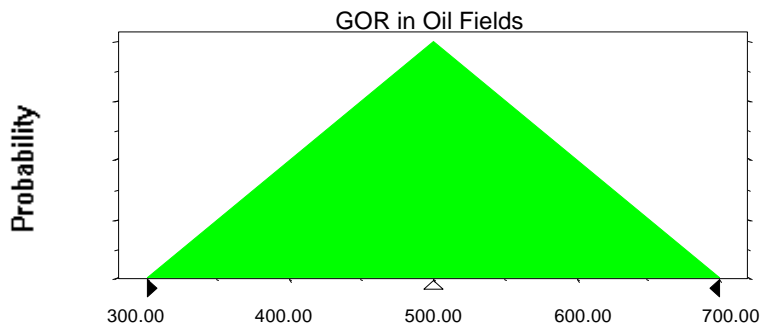
Assumption: LGR in Oil Fields

Triangular distribution with parameters:
Minimum   40.00
Likeliest   50.00
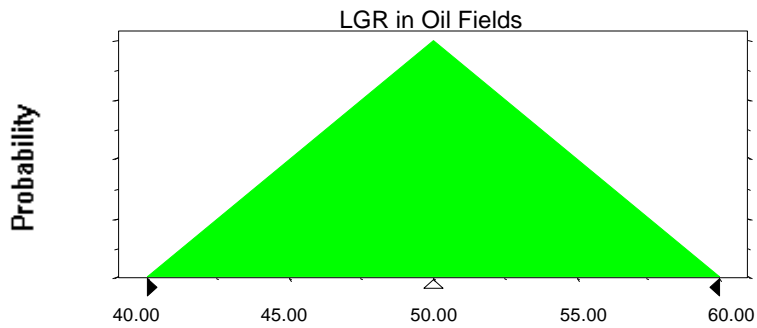Maximum   60.00

Selected range is from 40.00 to 60.00
Mean value in simulation was 50.01

Assumption: Number of Gas Fields

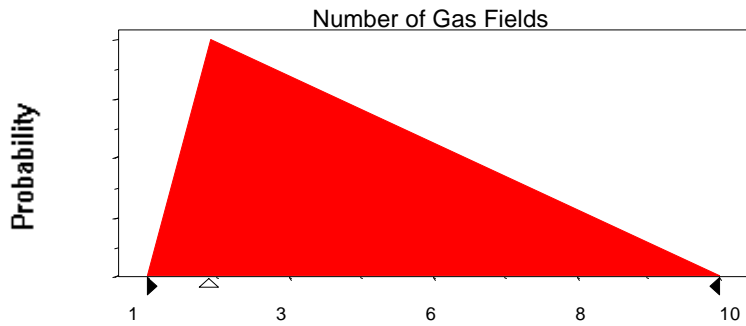Triangular distribution with parameters:
Minimum   1
Likeliest   2
Maximum   10
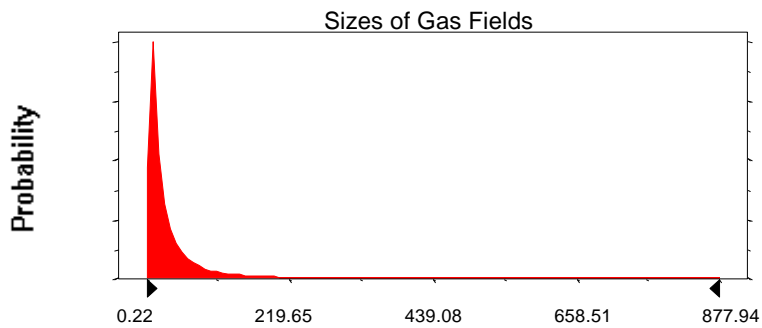
Selected range is from 1 to 10
Mean value in simulation was 4

Assumption: Number of Gas Fields (cont'd)

Number of Gas Fields

Assumption: Sizes of Gas Fields

Lognormal distribution with parameters:		Shifted parameters	
Mean	36.26		42.26
Standard Deviation	86.61		86.61

Selected range is from 0.00 to 994.00		6.00 to 1,000.00	
Mean value in simulation was 34.92		40.92	

Sizes of Gas Fields

Assumption: LGR in Gas Fields

Triangular distribution with parameters:

Minimum	40.00
Likeliest	50.00
Maximum	60.00

Selected range is from 40.00 to 60.00
Mean value in simulation was 50.00

LGR in Gas Fields
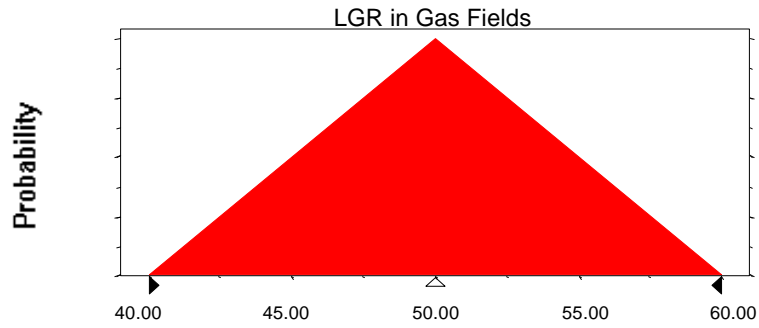
End of Assumptions

Simulation started on 12/9/98 at 13:18:50
Simulation stopped on 12/9/98 at 13:36:58