Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No. Row name	St	Activity	Slack	Lower bound	Activity	Obj coef	Obj value at	Limiting
		Marginal	Upper bound	range	range	break	point	variable

No.	Row name	St	Activity	Slack Lower bound	Activity	Obj coef	Obj value at Limiting
1	Constraint_1	NU	.	. -Inf	-1663.66255	-16.19260	8.65806e+06 Constraint_84
			16.19260	. 11694.69959	+Inf		8.87437e+06 Constraint_62
2	Constraint_10						
		NU	.	. -Inf	-9300.00000	-15.55088	8.54037e+06 Constraint_35
			15.55088	. 1340.74074	+Inf		8.70585e+06 Constraint_64
3	Constraint_11						
		BS	62.45942	2437.54058 -Inf	-Inf	-27.50000	8.68328e+06 Oa1
			.	2500.00000 3086.21797	8.08591		8.6855e+06 Constraint_40
4	Constraint_12						
		BS	.	2500.00000 -Inf	.	-11.18782	8.685e+06 Xwa2
			.	2500.00000 .	3.48426	8.685e+06	RMa12
5	Constraint_13						
		BS	.	2500.00000 -Inf	.	-7.66496	8.685e+06 Xga3
			.	2500.00000 2523.84666	5.11685		8.685e+06 RMa13
6	Constraint_14						
		BS	.	2500.00000 -Inf	-Inf	-28.87500	8.685e+06 Oa4

| | | . | 2500.00000 | . | 4.53127 | 8.685e+06 |
Xfa4

   7 Constraint_15
           BS   .   2500.00000   -Inf   .   -7.66496
8.685e+06 Xga5
                      .   2500.00000   2910.19080   5.11685
8.685e+06 RMa15

   8 Constraint_16
           NU   3800.00000   .   -Inf   -Inf   -27.50000   -Inf
                   27.50000   3800.00000   6862.33333   +Inf
8.76921e+06 Ob1

   9 Constraint_17
           NU   3800.00000   .   -Inf   -Inf   -27.50000   -Inf
                   27.50000   3800.00000   6854.00617   +Inf
8.76898e+06 Ob2

   10 Constraint_18
           NU   3800.00000   .   -Inf   -Inf   -30.25000   -Inf
                   30.25000   3800.00000   6451.65930   +Inf
8.76521e+06 Ob3

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

  No. Row name   St   Activity   Slack Lower bound   Activity   Obj coef   Obj value at Limiting
                               Marginal   Upper bound   range   range   break   point variable
------ ------------ -- ------------ ------------ ------------- ------------- ------------ ------------ ------------
   11 Constraint_19
           NU   3800.00000   .   -Inf   -Inf   -30.25000   -Inf
                   30.25000   3800.00000   6704.95882   +Inf
8.77287e+06 Ob4

   12 Constraint_2 NU   .   .   -Inf   -1663.66255   -14.94260
8.66014e+06 Constraint_84
                   14.94260   .   11694.69959   +Inf

8.85975e+06 Constraint_62

   13 Constraint_20
              NU   3800.00000   .   -Inf   -Inf   -30.25000   -Inf
                              30.25000   3800.00000   6709.88235   +Inf
8.77302e+06 Ob5

   14 Constraint_21
              NL   70.00000   .   70.00000   .   -Inf
8.73322e+06 Constraint_41
                              -688.87868   +Inf   108.52392   688.87868
8.65846e+06 Constraint_84

   15 Constraint_22
              NL   200.00000   .   200.00000   148.02356   -Inf
8.76772e+06 Constraint_62
                              -1591.58552   +Inf   207.39406   1591.58552
8.67323e+06 Constraint_84

   16 Constraint_23
              BS   403.33333   -263.33333   140.00000   338.88380
-90.68267   8.64842e+06 Ifa1
                              .   +Inf   403.33333   25.62656
8.69533e+06 Constraint_37

   17 Constraint_24
              NL   20000.00000   .   20000.00000   18696.39794   -Inf
8.69085e+06 Constraint_49
                              -4.48880   +Inf   26029.83071   4.48880
8.65793e+06 Constraint_84

   18 Constraint_25
              NL   36000.00000   .   36000.00000   35812.34568   -Inf
8.68773e+06 Constraint_49
                              -14.53665   +Inf   36867.99785   14.53665
8.67238e+06 Constraint_84

   19 Constraint_26
              BS   64166.66667   -32666.66667   31500.00000   63777.77778   .
8.685e+06 Af1
                              .   +Inf   64166.66667   .21486   8.69878e+06
RMa12

   20 Constraint_27

```
           NL   29600.00000        .       29600.00000        .          -Inf
8.81734e+06 Constraint_86
                              -4.47088       +Inf   34385.10296     4.47088
8.6636e+06 Constraint_29
```

Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No. Row name	St	Activity	Slack	Lower bound	Activity	Obj coef	Obj value at Limiting
		Marginal	Upper bound	range	range	break	point variable

```
------ ----------- -- ------------ ------------ ------------- -------------
------------- ------------- ------------
   21 Constraint_28
           NL   35400.00000        .       35400.00000   29298.41761       -Inf
8.77397e+06 Constraint_62
                             -14.58249       +Inf   38398.66452    14.58249
8.64127e+06 Constraint_29

   22 Constraint_29
           BS   42853.23103   -5953.23103   36900.00000   42464.34214        .
8.685e+06 Af2
                               .           +Inf   42853.23103      .03611  8.68655e+06
Ifa2

   23 Constraint_3 NU       .           .          -Inf        .        -16.65449
8.685e+06 Constraint_50
                             16.65449        .           .          +Inf    8.685e+06
Constraint_67

   24 Constraint_30
           NL   30400.00000        .       30400.00000   22864.49400       -Inf
8.71869e+06 Constraint_63
                              -4.47088       +Inf   38234.04255     4.47088
8.64997e+06 Constraint_32

   25 Constraint_31
           NL   29400.00000        .       29400.00000   28315.25926       -Inf
8.70082e+06 Constraint_63
                             -14.58249       +Inf   34309.33333    14.58249
```

8.61341e+06 Constraint_32

   26 Constraint_32
         BS   52046.47059   -9746.47059   42300.00000   51657.58170   .
8.685e+06 Af3
                                .   +Inf   53769.70162   .02309   8.6862e+06
Iga3

   27 Constraint_33
         NL   32000.00000   .   32000.00000   27032.59005   -Inf
8.70721e+06 Constraint_64
                    -4.47088   +Inf   39914.89362   4.47088
8.64961e+06 Constraint_35

   28 Constraint_34
         NL   28800.00000   .   28800.00000   28084.93827   -Inf
8.69543e+06 Constraint_64
                  -14.58249   +Inf   33760.00000   14.58249
8.61267e+06 Constraint_35

   29 Constraint_35
         BS   51247.05882   -9847.05882   41400.00000   50858.16993   .
8.685e+06 Af4
                                  .   +Inf   51247.05882   .02309   8.68618e+06
Iga4

   30 Constraint_36
         BS   8.79710   61.20290   -Inf   8.79710   -26.87639
8.68476e+06 Constraint_37
                           .   70.00000   229.95557   95.49311
8.68584e+06 Ifa1

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

| No. Row name | St | Activity | Slack | Lower bound | Activity | Obj coef | Obj value at Limiting |
		Marginal	Upper bound	range	range	break	point variable

31 Constraint_37

| | NU | . | . | -Inf | . | -21.83004 | 8.685e+06 |

Constraint_47

| | | | 21.83004 | . | 8.14751 | +Inf | 8.68518e+06 |

Constraint_49

32 Constraint_38

| | NU | . | . | -Inf | -200.00000 | -147.31301 | |

8.65554e+06 Constraint_43

| | | | 147.31301 | . | 8.99259 | +Inf | 8.68632e+06 |

Xga1

33 Constraint_39

| | BS | 7.23332 | 62.76668 | -Inf | . | -.20000 | |

8.685e+06 Igb2

| | | | . | 70.00000 | 7.23332 | 6.50000 | |

8.68504e+06 Ifa2

34 Constraint_4 NU   .   .   -Inf   -1627.49597   -15.62177

8.65957e+06 Constraint_84

| | | | 15.62177 | . | 351.85185 | +Inf | 8.69049e+06 |

Constraint_49

35 Constraint_40

| | NU | . | . | -Inf | -216.82887 | -90.89990 | |

8.66529e+06 Constraint_11

| | | | 90.89990 | . | . | +Inf | 8.685e+06 |

RMa21

36 Constraint_41

| | BS | -70.00000 | 70.00000 | -Inf | -108.52392 | -688.87868 | |

8.73322e+06 Constraint_21

| | | | . | . | -70.00000 | 21.83004 | 8.68347e+06 |

Constraint_37

37 Constraint_42

| | BS | . | 70.00000 | -Inf | . | -50.29706 | 8.685e+06 |

Xfa4

| | | | . | 70.00000 | 7.23332 | 5.50000 | 8.685e+06 |

Iga3

38 Constraint_43

| | BS | -200.00000 | 200.00000 | -Inf | -207.39406 | -1591.58552 | |

9.00331e+06 Constraint_22

| | | | | . | . | 50.00000 | 147.31301 | 8.65554e+06 |
Constraint_38

```
   39 Constraint_44
           BS   -403.33333    403.33333      -Inf   -403.33333    -25.62656
8.69533e+06 Constraint_37
                                 .          .    -170.44307    84.63094   8.65086e+06
Constraint_40

   40 Constraint_45
           BS      .        70.00000       -Inf       .          -Inf    8.685e+06
                              .        70.00000        .         5.50000    8.685e+06
Iga4
```

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No.	Row name	St	Activity	Slack	Lower bound	Activity	Obj coef	Obj value at	Limiting
			Marginal	Upper bound	range	range	break	point	variable

```
   41 Constraint_46
           NU    50.00000        .         -Inf        .       -147.11301
8.67764e+06 Igb1
                        147.11301    50.00000    51.56379        +Inf
8.68523e+06 Constraint_49

   42 Constraint_47
           BS      .          .         -Inf        .        -29.06320    8.685e+06
Xwa2
                              .          .       37.68644    10.36783    8.685e+06
Iwa2

   43 Constraint_48
           BS      .        50.00000       -Inf        .          -Inf    8.685e+06
                              .        50.00000     7.23332     .20000    8.685e+06
Igb2

   44 Constraint_49
```

		BS	-1.56379	1.56379	-Inf	-8.79710	-.20000
8.685e+06 Igb2							
			.	.	49.28273	22.63088	8.68496e+06
Constraint_61							

45 Constraint_5 NU			.	.	-Inf	.	-16.48180
8.685e+06 Constraint_85							
			16.48180	.	11152.71488	+Inf	8.86881e+06
Constraint_62							

46 Constraint_50							
		BS	.	.	-Inf	.	-38.67528	8.685e+06
RMa12							
			.	.	62.76668	6.50000	8.685e+06
Ifa2							

47 Constraint_51							
		BS	.	50.00000	-Inf	.	-Inf	8.685e+06
			.	50.00000	9.03951	5.70000	8.685e+06
Igb3							

48 Constraint_52							
		BS	.	50.00000	-Inf	.	-Inf	8.685e+06
			.	50.00000	5.95885	5.70000	
8.685e+06 Igb4							

49 Constraint_53							
		BS	-125.00000	125.00000	-Inf	-125.00000	-10.36783
8.68629e+06 Iwa2							
			.	.	-125.00000	29.06320	8.68136e+06
Xwa2							

50 Constraint_54							
		BS	.	70000.00000	-Inf	.	-Inf	8.685e+06
			.	70000.00000	5.88e+06	.	8.685e+06
Af1							

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No. Row name	St	Activity	Slack	Lower bound	Activity	Obj coef

					Obj value at	Limiting
		Marginal	Upper bound	range	range	break	point variable

```
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```

51	Constraint_55						
	NU	140000.00000	.	-Inf	138336.33745	-14.94260	8.66014e+06 Constraint_84
		14.94260	140000.00000	151694.69959	+Inf		8.85975e+06 Constraint_62
52	Constraint_56						
	NU	140000.00000	.	-Inf	138372.50403	-15.62177	8.65957e+06 Constraint_84
		15.62177	140000.00000	140351.85185	+Inf		8.69049e+06 Constraint_49
53	Constraint_57						
	NU	140000.00000	.	-Inf	134377.50403	-15.55088	8.59756e+06 Constraint_29
		15.55088	140000.00000	151440.46699	+Inf		8.86291e+06 Constraint_62
54	Constraint_58						
	NU	140000.00000	.	-Inf	130795.00000	-15.55088	8.54185e+06 Constraint_32
		15.55088	140000.00000	142033.88889	+Inf		8.71663e+06 Constraint_63
55	Constraint_59						
	NU	140000.00000	.	-Inf	130700.00000	-15.55088	8.54037e+06 Constraint_35
		15.55088	140000.00000	141340.74074	+Inf		8.70585e+06 Constraint_64
56	Constraint_6	NU	.	.	-Inf	-5622.49597	-15.55088 8.59756e+06 Constraint_29
		15.55088	.	11440.46699	+Inf		8.86291e+06 Constraint_62
57	Constraint_60						
	NU	5000.00000	.	-Inf	4257.04261	-12.27385	8.67588e+06 Constraint_62
		12.27385	5000.00000	5105.69150	+Inf		

8.6863e+06 Constraint_84

   58 Constraint_61
              NU   5000.00000   .   -Inf   4977.64706   -1.58323
8.68496e+06 Constraint_49
                                   1.58323   5000.00000   5103.39386   +Inf
8.68516e+06 Constraint_84

   59 Constraint_62
              BS   4273.19386   726.80614   -Inf   4169.80000   -.38477
8.68335e+06 Iga3
                                        .   5000.00000   +Inf   .   8.685e+06
Constraint_70

   60 Constraint_63
              BS   4870.78824   129.21176   -Inf   4870.78824   -.38477
8.68312e+06 Iga4
                                        .   5000.00000   +Inf   .   8.685e+06
Constraint_72

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No. Row name	St	Activity	Slack Lower bound	Activity	Obj coef Obj value at Limiting
		Marginal	Upper bound	range	range break point variable

   61 Constraint_64
              BS   4914.82353   85.17647   -Inf   4914.82353   -16.33191
8.60473e+06 Xwa5
                                        .   5000.00000   +Inf   .   8.685e+06
Constraint_74

   62 Constraint_65
              NU   .   .   -Inf   -742.95739   -14.92385
8.67391e+06 Constraint_62
                                  14.92385   .   .   +Inf   8.685e+06
RMa21

63 Constraint_66
                NU   .   .   -Inf   -742.95739   -12.27385

8.67588e+06 Constraint_62
                                    12.27385   .   105.69150   +Inf   8.6863e+06

Constraint_84

    64 Constraint_67
                BS   .   .   -Inf   -22.35294   -4.23323   8.685e+06

RMa22
                                    .   .   106.06154   3.33408   8.685e+06

RMa12

    65 Constraint_68
                NU   .   .   -Inf   -22.35294   -1.58323

8.68496e+06 Constraint_49
                                    1.58323   .   103.39386   +Inf   8.68516e+06

Constraint_84

    66 Constraint_69
                NU   .   .   -Inf   -726.80614   -2.65000

8.68307e+06 Constraint_62
                                    2.65000   .   .   +Inf   8.685e+06

RMa23

    67 Constraint_7 NU   .   .   -Inf   -9205.00000   -16.80088

8.53035e+06 Constraint_32
                                    16.80088   .   .   +Inf   8.685e+06

RMa14

    68 Constraint_70
                NU   .   .   -Inf   -726.80614   .   8.685e+06

Constraint_62
                                    .   .   4273.19386   +Inf   8.685e+06

RMb23

    69 Constraint_71
                NU   .   .   -Inf   -129.21176   -2.65000

8.68466e+06 Constraint_63
                                    2.65000   .   .   +Inf   8.685e+06

RMa24

    70 Constraint_72
                NU   .   .   -Inf   -129.21176   .   8.685e+06

Constraint_63

| | | | 4870.78824 | +Inf | 8.685e+06 |

RMb24

Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No.	Row name	St	Activity	Slack	Lower bound	Activity	Obj coef	Obj value at Limiting
			Marginal	Upper bound	range	range	break	point variable
71	Constraint_73							
		NU	.	.	-Inf	-85.17647	-2.65000	8.68477e+06 Constraint_64
			2.65000	.	.	+Inf	8.685e+06	RMa25
72	Constraint_74							
		NU	.	.	-Inf	-85.17647	.	8.685e+06 Constraint_64
			.	.	4914.82353	+Inf	8.685e+06	RMb25
73	Constraint_8	NU	.	.	-Inf	-9205.00000	-15.55088	8.54185e+06 Constraint_32
			15.55088	.	2033.88889	+Inf		8.71663e+06 Constraint_63
74	Constraint_81							
		BS	-289.14706	289.14706	-Inf	-298.72056	-4.15556	8.6862e+06 Iga3
			.	.	-289.14706	4.15556	8.6838e+06	Iga4
75	Constraint_82							
		BS	-356.48148	356.48148	-Inf	-356.48148	-34.11767	8.69716e+06 Xwa2
			.	.	-306.48148	7.00000	8.6825e+06	Ifb2

76 Constraint_83
             BS   .   .   -Inf   .   -10.36783   8.685e+06 Iwa2
                               .   .   29.90689   7.50000   8.685e+06
Iwa3

    77 Constraint_84
             BS   -7.23332   7.23332   -Inf   -8.79710   -22.63088
8.68516e+06 Constraint_61
                              20000   8.685e+06 Igb2

    78 Constraint_85
             BS   .   .   -Inf   .   -6.50000   8.685e+06 Ifa2
                               .   .   33.07351   6.50000   8.685e+06
Constraint_91

    79 Constraint_86
             BS   -185.00000   185.00000   -Inf   -185.00000   -7.50000
8.68639e+06 Iwa3
                               .   .   -185.00000   10.36783   8.68308e+06
Iwa2

    80 Constraint_87
             BS   -287.76668   287.76668   -Inf   -295.00000   -.20000
8.68506e+06 Igb2
                               .   .   -286.20290   22.63088   8.67849e+06
Constraint_61

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

 No. Row name   St   Activity   Slack Lower bound   Activity   Obj coef Obj value at Limiting
                          Marginal Upper bound   range   range   break point variable
------ ------------ -- ------------ ------------ ------------- -------------
------------- ------------ ------------
    81 Constraint_88
             BS   -238.07351   238.07351   -Inf   -288.07351   -7.00000
8.68666e+06 Ifb2
                               .   .   -228.50000   4.15556   8.68401e+06

Iga3

```
    82 Constraint_89
              BS      .        .          -Inf      .        -7.50000    8.685e+06 Iwa3
                                .        .          31.04631    7.50000    8.685e+06
Iwa4

    83 Constraint_9 NU      .        .          -Inf      .        -16.48180
8.685e+06 RMa25
                                16.48180    .        1307.01826      +Inf   8.70654e+06
Constraint_64

    84 Constraint_90
              BS      .        .          -Inf    -7.23332    -5.50000    8.685e+06
Iga3
                                .        .          5.95885    5.50000    8.685e+06
Iga4

    85 Constraint_91
              NU      .        .          -Inf      .        -6.50000    8.685e+06
Constraint_85
                                6.50000    .        .            +Inf    8.685e+06 Ifa3

    86 Constraint_92
              BS   -190.00000    190.00000      -Inf   -190.00000    -7.50000
8.68642e+06 Iwa4
                                .        .          -190.00000    7.50000   8.68357e+06
Iwa3

    87 Constraint_93
              BS   -245.00000    245.00000      -Inf   -245.00000    -5.50000
8.68635e+06 Iga4
                                .        .          -237.76668    5.50000   8.68365e+06
Iga3

    88 Constraint_94
              BS   -298.43621    298.43621      -Inf   -300.00000    -22.63088
8.69175e+06 Constraint_61
                                .        .          -291.20290    .20000   8.68494e+06
Igb2
```

GLPK 5.0 – SENSITIVITY ANALYSIS REPORT

Problem:
Objective: OBJ = 8684997.831 (MAXimum)

```
   No. Column name  St      Activity      Obj coef   Lower bound      Activity      Obj coef  Obj value at  Limiting
                             Marginal   Upper bound       range          range     break point  variable
------ ----------- -- ------------ ------------ ------------  ------------ ------------ ------------ ------------

     1 Ifa1        NL       .          -6.50000       .            .           -Inf    8.685e+06
Constraint_50
                           -97.39990       +Inf      60.00474     90.89990
8.67915e+06 Constraint_36

     2 Ifa2        NL       .          -6.50000       .            .           -Inf    8.685e+06
Constraint_85
                            -6.50000       +Inf       .            .         8.685e+06
Constraint_50

     3 Ifa3        BS       .          -6.50000       .         -51.71348    -56.79706
8.685e+06 Xfa4
                             .             +Inf       .            .         8.685e+06
Constraint_91

     4 Ifa4        NL       .          -6.50000       .            .           -Inf    8.685e+06
Ifa3
                           -13.00000       +Inf       .          6.50000    8.685e+06
Constraint_85

     5 Ifb1        NL       .          -7.00000       .         -1.56379        -Inf
8.68524e+06 Constraint_49
                          -154.11301       +Inf      50.00000    147.11301
8.67729e+06 Igb1

     6 Ifb2        NL       .          -7.00000       .        -33.07351        -Inf
8.68523e+06 Constraint_29
                            -7.00000       +Inf      50.00000       .        8.68465e+06
Constraint_48

     7 Ifb3        NL       .          -7.00000       .        -54.14706        -Inf
8.68538e+06 Constraint_32
                            -7.00000       +Inf      33.07351       .        8.68477e+06
Constraint_29
```

8 lfb4   NL   .   -7.00000   .   -54.70588   -Inf
8.68538e+06 Constraint_35
                                       -7.00000   +Inf   50.00000   .   8.68465e+06
Constraint_52

       9 lga1   BS   8.79710   -5.50000   .   6.72021   -300.90168
8.6824e+06 Xwa1
                                        .   +Inf   8.79710   110.76460 8.68602e+06
Constraint_37

      10 lga2   BS   7.23332   -5.50000   .   .   -5.70000
8.685e+06 lgb2
                                        .   +Inf   8.79710   17.13088 8.68516e+06
Constraint_61

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

   No. Column name St   Activity   Obj coef Lower bound   Activity   Obj coef Obj value at Limiting
                                Marginal Upper bound   range   range   break point variable
------ ----------- -- ------------ ------------ ------------ ------------- ------------- ------------- ------------
      11 lga3   NL   .   -5.50000   .   .   -Inf   8.685e+06
Constraint_90
                                       -5.50000   +Inf   7.23332   .   8.68496e+06
Constraint_84

      12 lga4   NL   .   -5.50000   .   -9.03951   -Inf
8.68505e+06 Constraint_63
                                       -5.50000   +Inf   .   .   8.685e+06
Constraint_90

      13 lgb1   BS   50.00000   -5.70000   .   -27.42310   -131.28298
8.67872e+06 lwb1
                                        .   +Inf   50.00000   +Inf   +Inf

      14 lgb2   NL   .   -5.70000   .   -1.56379   -Inf
8.685e+06 Constraint_49

| | | -.20000 | +Inf | 7.23332 | -5.50000 |
8.685e+06 Constraint_84

| | 15 lgb3 | NL | . | -5.70000 | . | -40.91111 | -Inf |
8.68523e+06 Constraint_32

| | | -5.70000 | +Inf | 9.03951 | . | 8.68495e+06 |
Constraint_63

| | 16 lgb4 | NL | . | -5.70000 | . | -9.03951 | -Inf |
8.68505e+06 Constraint_63

| | | -5.70000 | +Inf | 5.95885 | . | 8.68496e+06 |
Constraint_64

| | 17 lwa1 | BS | . | -7.50000 | . | . | -29.33004 |
8.685e+06 Constraint_37

| | | . | +Inf | 8.14751 | 67.80127 | 8.685e+06 |
Xwa1

| | 18 lwa2 | NL | . | -7.50000 | . | . | -Inf | 8.685e+06 |
Constraint_83

| | | -10.36783 | +Inf | . | 2.86783 | 8.685e+06 |
Constraint_47

| | 19 lwa3 | NL | . | -7.50000 | . | . | -Inf | 8.685e+06 |
Constraint_89

| | | -7.50000 | +Inf | . | . | 8.685e+06 |
Constraint_83

| | 20 lwa4 | NL | . | -7.50000 | . | -47.09691 | -Inf |
8.68535e+06 Constraint_63

| | | -7.50000 | +Inf | . | . | 8.685e+06 |
Constraint_89

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No. Column name	St	Activity	Obj coef	Lower bound	Activity	Obj coef	Obj value at Limiting
		Marginal	Upper bound	range	range	break point variable
------ ------------ -- ------------- ------------- ------------- -------------

```
------------ ------------ -----------
  21 Iwb1       NL      .       -7.80000      .        -1.93522        -Inf
8.68524e+06 Constraint_49
                          -125.58298       +Inf     50.00000    117.78298
8.67872e+06 Igb1

  22 Iwb2       NL      .       -7.80000      .        -8.14751        -Inf
8.68508e+06 Constraint_49
                          -10.66783        +Inf     37.68644     2.86783
8.6846e+06 Constraint_84

  23 Iwb3       NL      .       -7.80000      .       -48.96277        -Inf
8.68538e+06 Constraint_32
                          -7.80000         +Inf     29.90689     .      8.68476e+06
Constraint_29

  24 Iwb4       NL      .       -7.80000      .       -47.09691        -Inf
8.68537e+06 Constraint_63
                          -7.80000         +Inf     31.04631     .      8.68476e+06
Constraint_64

  25 Oa1        NL      .      -27.50000      .      -2437.54058       -Inf
8.75203e+06 Constraint_11
                          -27.50000        +Inf     +Inf      .        -Inf

  26 Oa2        NL      .      -27.50000      .      -2500.00000       -Inf
8.75375e+06 Constraint_12
                          -27.50000        +Inf     +Inf      .        -Inf

  27 Oa3        NL      .      -28.87500      .      -2500.00000       -Inf
8.75719e+06 Constraint_13
                          -28.87500        +Inf     +Inf      .        -Inf

  28 Oa4        NL      .      -28.87500      .      -2500.00000       -Inf
8.75719e+06 Constraint_14
                          -28.87500        +Inf     +Inf      .        -Inf

  29 Oa5        NL      .      -28.87500      .      -2500.00000       -Inf
8.75719e+06 Constraint_15
                          -28.87500        +Inf     +Inf      .        -Inf

  30 Ob1        BS   3062.33333   -27.50000      .       593.69649
-35.48405   8.66055e+06 Constraint_40
                                .        +Inf     +Inf      .      8.76921e+06
```

Constraint_16

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

```
   No. Column name St     Activity     Obj coef  Lower bound      Activity      Obj coef  Obj value at  Limiting
                          Marginal   Upper bound       range         range  break point  variable
------ ------------ -- ------------ ------------ ------------  ------------ ------------ ------------ ------------
    31 Ob2       BS   3054.00617    -27.50000        .       3044.26471    -31.13291  8.6739e+06 Constraint_61
                                         .           +Inf    3054.00617     -7.12931  8.74721e+06 Xwa2

    32 Ob3       BS   2651.65930    -30.25000        .       2606.60000    -31.13291  8.68266e+06 Iga3
                                         .           +Inf    2661.40077    -26.61709  8.69463e+06 Constraint_61

    33 Ob4       BS   2904.95882    -30.25000        .       2904.95882    -31.13291  8.68243e+06 Iga4
                                         .           +Inf    2950.01812    -29.36709  8.68756e+06 Iga3

    34 Ob5       BS   2909.88235    -30.25000        .        410.14732    -35.36739  8.67011e+06 RMa15
                                         .           +Inf    2909.88235    -29.36709  8.68757e+06 Iga4

    35 RMa11     BS   2023.33333     -1.25000        .        359.67078     -8.32371  8.67069e+06 Constraint_22
                                         .           +Inf   41614.67892      -.75217  8.68601e+06 Constraint_40

    36 RMa12     NL       .          -1.25000        .            .           -Inf    8.685e+06 Constraint_50
                                     -.21728         +Inf         .         -1.03272  8.685e+06 Constraint_67
```

37 RMa13	NL	.	-1.25000	.	.	-Inf	8.685e+06
Constraint_85							
			-.31908	+Inf	40090.09009	-.93092	
8.67221e+06 Constraint_13							

38 RMa14	BS	.	-1.25000	.	.	-Inf	8.685e+06
			.	+Inf	.	-.96743	8.685e+06 Xfa4

39 RMa15	NL	.	-1.25000	.	.	-Inf	8.685e+06
RMa25							
			-.31908	+Inf	40090.09009	-.93092	
8.67221e+06 Constraint_15							

40 RMa21	BS	.	-2.65000	.	.	-Inf	8.685e+06
			.	+Inf	2515.21490	5.18620	8.685e+06
Constraint_40							

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No.	Column name	St	Activity	Obj coef	Lower bound	Activity	Obj coef	Obj value at	Limiting
			Marginal	Upper bound	range	range	break point	variable
------	-----------	--	-----------	-----------	-----------	-----------	-----------	-------------	-----------
41 RMa22	NL	.	-2.65000	.	.	-Inf	8.685e+06
Constraint_67							
			-4.23323	+Inf	22.35294	1.58323	
8.6849e+06 Constraint_49							

42 RMa23	BS	.	-2.65000	.	.	-6.35377	
8.685e+06 Xga3							
			.	+Inf	726.80614	.	8.685e+06
Constraint_69							

43 RMa24	BS	.	-2.65000	.	.	-Inf	8.685e+06
			.	+Inf	129.21176	.	8.685e+06
Constraint_71							

44 RMa25   BS   .   -2.65000   .   .   -6.35377
8.685e+06 Xga5

                                        .   +Inf   85.17647   .   8.685e+06
Constraint_73

    45 Xfa1   BS   .   2964.50000   .   .   -Inf   8.685e+06
                                        .   +Inf   216.82887   3055.39990
8.685e+06 Constraint_40

    46 Xfa2   BS   .   2964.50000   .   .   2937.83377
8.685e+06 Xwa2

                                        .   +Inf   .   3003.17528   8.685e+06
RMa12

    47 Xfa3   BS   .   2964.50000   .   .   2945.03205
8.685e+06 Xwa3

                                        .   +Inf   225.22523   3021.29706   8.685e+06
RMa13

    48 Xfa4   NL   .   2964.50000   .   .   -Inf
8.685e+06 Constraint_85

                                     -50.29706   +Inf   .   3014.79706   8.685e+06
Ifa3

    49 Xfa5   BS   .   2964.50000   .   .   2945.03205
8.685e+06 Xwa5

                                        .   +Inf   225.22523   3021.29706   8.685e+06
RMa15

    50 Xfb1   BS   403.33333   2964.30000   .   170.44307
2879.66906   8.65086e+06 Constraint_40

                                        .   +Inf   403.33333   2989.92656
8.69533e+06 Constraint_37

Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No. Column name	St	Activity	Obj coef	Lower bound	Activity	Obj coef	Obj value at	Limiting
		Marginal	Upper bound	range	range	break		

point variable

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   51 Xfb2      BS    356.48148   2964.30000      .        356.48148
2952.12907   8.68066e+06 Iwa2
                              .         +Inf    356.48148   2998.41767
8.69716e+06 Xwa2

   52 Xfb3      BS    238.07351   2964.30000      .        228.50000
2960.14444   8.68401e+06 Iga3
                              .         +Inf    238.07351   2976.47093
8.6879e+06 Iwa2

   53 Xfb4      BS    289.14706   2964.30000      .        289.14706
2960.14444    8.6838e+06 Iga4
                              .         +Inf    298.72056   2968.45556
8.6862e+06 Iga3

   54 Xfb5      BS    284.70588   2964.30000      .         48.88182
2910.05562   8.66955e+06 RMa15
                              .         +Inf    284.70588   2968.45556
8.68618e+06 Iga4

   55 Xga1      BS      8.79710   1985.40000      .          6.72021   1689.99832
8.6824e+06 Xwa1
                              .         +Inf      8.79710   2101.66460  8.68602e+06
Constraint_37

   56 Xga2      NL      .        1985.40000      .          .          -Inf
8.685e+06 Constraint_67
                    -100.73518      +Inf      .       2086.13518   8.685e+06
Constraint_50

   57 Xga3      NL      .        1985.40000      .         -7.23332       -Inf
8.6854e+06 Constraint_84
                     -55.51495      +Inf      .       2040.91495   8.685e+06
Constraint_85

   58 Xga4      NL      .        1985.40000      .          .          -Inf
8.685e+06 Constraint_90
                    -128.90441      +Inf   245.00000   2114.30441
8.65342e+06 Constraint_93

   59 Xga5      NL      .        1985.40000      .       -122.61846      -Inf
```

8.6918e+06 Constraint_64

                                  -55.51495   +Inf   .   2040.91495   8.685e+06
RMa25

   60 Xgb1   BS   250.00000   1985.00000   .   200.00000
1859.41702   8.6536e+06 Iwb1
                                  .   +Inf   257.39406   3576.58552
9.08289e+06 Constraint_22

Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No. Column name	St	Activity	Obj coef	Lower bound	Activity	Obj coef	Obj value at	Limiting
		Marginal		Upper bound	range	range	break point	variable

   61 Xgb2   BS   248.43621   1985.00000   .   248.43621
1936.11271   8.67285e+06 RMa12
                                  .   +Inf   250.00000   2007.63088
8.69062e+06 Constraint_61

   62 Xgb3   BS   287.76668   1985.00000   .   286.20290
1962.36912   8.67849e+06 Constraint_61
                                  .   +Inf   295.00000   1990.50000
8.68658e+06 Iga3

   63 Xgb4   BS   245.00000   1985.00000   .   237.76668
1979.50000   8.68365e+06 Iga3
                                  .   +Inf   245.00000   1990.50000
8.68635e+06 Iga4

   64 Xgb5   BS   240.00000   1985.00000   .   240.00000
1979.50000   8.68368e+06 Iga4
                                  .   +Inf   281.33333   3734.89853
9.10497e+06 Constraint_34

   65 Xwa1   NL   .   2483.70000   .   .   -Inf
8.685e+06 Constraint_47
                                  -75.30127   +Inf   8.14751   2559.00127

8.68438e+06 Constraint_49

```
   66 Xwa2        NL      .      2483.70000      .        .          -Inf
8.685e+06 Constraint_67
                            -29.06320      +Inf      .      2512.76320    8.685e+06
Constraint_50

   67 Xwa3        NL      .      2483.70000      .        .          -Inf
8.685e+06 Constraint_83
                            -21.21788      +Inf      .      2504.91788    8.685e+06
Constraint_85

   68 Xwa4        NL      .      2483.70000      .        .          -Inf
8.685e+06 Constraint_89
                            -83.12029      +Inf    190.00000   2566.82029
8.6692e+06 Constraint_92

   69 Xwa5        NL      .      2483.70000      .      -65.56236      -Inf
8.68639e+06 Constraint_64
                            -21.21788      +Inf      .      2504.91788    8.685e+06
RMa25

   70 Xwb1        BS    70.00000   2483.50000      .      70.00000
2461.66996   8.68347e+06 Constraint_37
                               .          +Inf    120.00000   2609.08298
8.69379e+06 Iwb1
```

Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No.	Column name	St	Activity	Obj coef	Lower bound	Activity	Obj coef	Obj value at	Limiting
			Marginal	Upper bound	range	range	break	point	variable

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   71 Xwb2        BS   125.00000   2483.50000      .      125.00000
2454.43680   8.68136e+06 Xwa2
                               .          +Inf    125.00000   2493.86783
8.68629e+06 Iwa2
```

72 Xwb3   BS   185.00000   2483.50000   .   185.00000
2473.13217   8.68308e+06 Iwa2
                                  .   +Inf   185.00000   2491.00000
8.68639e+06 Iwa3

73 Xwb4   BS   190.00000   2483.50000   .   190.00000
2476.00000   8.68357e+06 Iwa3
                                  .   +Inf   190.00000   2491.00000
8.68642e+06 Iwa4

74 Xwb5   BS   200.00000   2483.50000   .   200.00000
2476.00000   8.6835e+06 Iwa4
                                  .   +Inf   249.46809   3198.84088
8.82807e+06 Constraint_33

75 RMb15   BS 140000.00000   .   .   99909.90991   -.31908
8.64033e+06 RMa15
                                  .   +Inf 140000.00000   +Inf   +Inf

76 RMb11   BS 137976.66667   .   .   98385.32108   -.49783
8.61631e+06 Constraint_40
                                  .   +Inf 139640.32922   7.07371
9.66101e+06 Constraint_22

77 Aw1   NL   .   .   .   -1303.60206   -Inf
8.69085e+06 Constraint_49
                              -4.48880   +Inf   437.50000   4.48880
8.68303e+06 Constraint_54

78 Ag1   NL   .   .   .   -187.65432   -Inf   8.68773e+06
Constraint_49
                             -14.53665   +Inf   583.33333   14.53665
8.67652e+06 Constraint_54

79 Af1   NL   .   .   .   -Inf   -Inf   8.685e+06
                                  .   +Inf   388.88889   .   8.685e+06
Constraint_54

80 Aw2   NL   .   .   .   -29600.00000   -Inf
8.81734e+06 Constraint_86
                              -4.47088   +Inf   437.50000   4.47088
8.68304e+06 Constraint_54

Problem:
Objective: OBJ = 8684997.831 (MAXimum)

No. Column name	St	Activity	Obj coef	Lower bound	Activity range	Obj coef range	Obj value at break point	Limiting variable
		Marginal		Upper bound				
81 Ag2	NL	.	.	.	-6101.58239	-Inf	8.77397e+06	Constraint_62
		-14.58249		+Inf	583.33333	14.58249	8.67649e+06	Constraint_54
82 Af2	NL	.	.	.	-Inf	-Inf	8.685e+06	
		.		+Inf	388.88889	.	8.685e+06	Constraint_54
83 Aw3	NL	.	.	.	-7535.50600	-Inf	8.71869e+06	Constraint_63
		-4.47088		+Inf	437.50000	4.47088	8.68304e+06	Constraint_54
84 Ag3	NL	.	.	.	-1084.74074	-Inf	8.70082e+06	Constraint_63
		-14.58249		+Inf	583.33333	14.58249	8.67649e+06	Constraint_54
85 Af3	NL	.	.	.	-Inf	-Inf	8.685e+06	
		.		+Inf	388.88889	.	8.685e+06	Constraint_54
86 Aw4	NL	.	.	.	-4967.40995	-Inf	8.70721e+06	Constraint_64
		-4.47088		+Inf	437.50000	4.47088	8.68304e+06	Constraint_54
87 Ag4	NL	.	.	.	-715.06173	-Inf	8.69543e+06	Constraint_64
		-14.58249		+Inf	583.33333	14.58249		

8.67649e+06 Constraint_54

```
    88 Af4          NL      .          .          .              -Inf        -Inf     8.685e+06
                                   .                +Inf     388.88889      .         8.685e+06
Constraint_54

    89 RMb12      BS  140000.00000      .          .       140000.00000      -.21728
8.65458e+06 RMa12
                                   .                +Inf  140000.00000       +Inf      +Inf

    90 RMb13      BS  140000.00000      .          .        99909.90991      -.31908
8.64033e+06 RMa13
                                   .                +Inf  140000.00000       +Inf      +Inf
```

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Problem:
Objective: OBJ = 8684997.831 (MAXimum)

```
   No. Column name  St    Activity     Obj coef  Lower bound     Activity      Obj
coef  Obj value at Limiting
                                  Marginal  Upper bound       range        range   break
point variable
------ ------------ -- ------------ ------------ ------------  -------------
------------- ------------- ------------
    91 RMb14      BS  140000.00000      .          .       140000.00000      -.28257
8.64544e+06 Xfa4
                                   .                +Inf  140000.00000       +Inf      +Inf

    92 RMb21      BS   5000.00000      .          .         2484.78510      -7.83620
8.64582e+06 Constraint_40
                                   .                +Inf    5000.00000       +Inf      +Inf

    93 RMb22      BS   5000.00000      .          .         4977.64706      -1.58323
8.67708e+06 Constraint_61
                                   .                +Inf    5000.00000       +Inf      +Inf

    94 RMb23      BS   4273.19386      .          .         4169.80000      -.38477
8.68335e+06 Iga3
                                   .                +Inf    5000.00000       .        8.685e+06
Constraint_70

    95 RMb24      BS   4870.78824      .          .         4870.78824      -.38477
```

8.68312e+06 lga4

| | | . | +Inf | 5000.00000 | . | 8.685e+06 |
| Constraint_72 | | | | | | |

| | 96 RMb25 | BS | 4914.82353 | . | . | 2367.92369 | -5.02263 |
| 8.66031e+06 RMa15 | | | | | | | |

| | | . | +Inf | 5000.00000 | . | 8.685e+06 |
| Constraint_74 | | | | | | |

End of report