



**SURAT KETERANGAN**  
**MELAKUKAN KEGIATAN PENGABDIAN KEPADA MASYARAKAT**  
**INSTITUT TEKNOLOGI NASIONAL**  
**No. 447/C.02.01/LP2M/VII/2018**

Yang bertanda tangan di bawah ini,

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Jabatan : Kepala  
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Menerangkan bahwa,

| Nama                         | NPP    | Jabatan     |
|------------------------------|--------|-------------|
| Kamaludin, Ir., M.T., M.Kom. | 930806 | Tenaga Ahli |

Telah melakukan kegiatan Pengabdian kepada Masyarakat sebagai berikut,

Nama Kegiatan : Perhitungan Struktur atas SMK Merdeka Bandung oleh Nifta Multi Jasa  
Tempat : SMK Merdeka Bandung  
Waktu : 01 November 2017 - 30 Juni 2018  
Sumber Dana : Yayasan SMK Merdeka Bandung

Demikian surat keterangan ini dibuat untuk dapat dipergunakan sebagaimana mestinya.

Bandung, 12 Juli 2018

Lembaga Penelitian dan Pengabdian  
kepada Masyarakat (LP2M) Itenas  
Kepala,

**Dr. Tarsisius Kristyadi, S.T., M.T.**  
NPP 960604

# PERHITUNGAN STRUKTUR BETON BERTULANG GEDUNG SMK MERDEKA

# Perhitungan Struktur Beton Bertulang Gedung SMK Merdeka

## 1. Kosep Perhitungan Strukur

Struktur pada gedung SMK ini diperlukan untuk mampu menahan gaya-gaya akibat beban-beban yang terjadi atau akibat beban-beban layan operasiona saat struktur gedung Merdeka dioperasikan. Konsep perhitungan struktur yaitu dimana kuat rencana setiap komponen struktur tidak boleh kurang dari kekuatan kapasitas material yang dibutuhkan dan ditentukan berdasarkan kombinasi pembebanan yang memenuhi persamaan berikut :

$$R_u \leq \Phi R_n$$

$R_u$  = kekuatan yang dibutuhkan (Konsep LRFD)

$R_n$  = kekuatan nominal

$\Phi$  = faktor tahanan ( $< 1.0$ ) (SNI: faktor reduksi)

Hasil analisis struktur yang diperoleh dari berbagai kombinasi pembebanan pada sap 2000 dinyatakan  $R_u$  sedangkan  $R_n$  dinyatakan data yang diperoleh kekuatan material dengan menggunakan beberapa aplikasi yang mendukung disain komponen struktur gedung SMK Merdeka.

## 2. Peraturan dan Standar yang Digunakan

Kriteria Perencanaan pada analisis struktur ini ditetapkan berdasarkan:

- SNI 03-2847-2002, Tata Cara Perhitungan Struktur Beton untuk Bangunan Gedung
- SNI 03-1726-2012, Standar Perencanaan Ketahanan Gempa untuk Struktur Bangunan Gedung.
- SNI 03-1729-2002, Tata Cara Perencanaan Struktur Baja untuk Bangunan Gedung,
- SNI 07-2052-2002, Baja Tulangan Beton.
- SNI-1727-2002, Tata Cara Perencanaan Pembebanan Untuk Rumah dan Gedung.

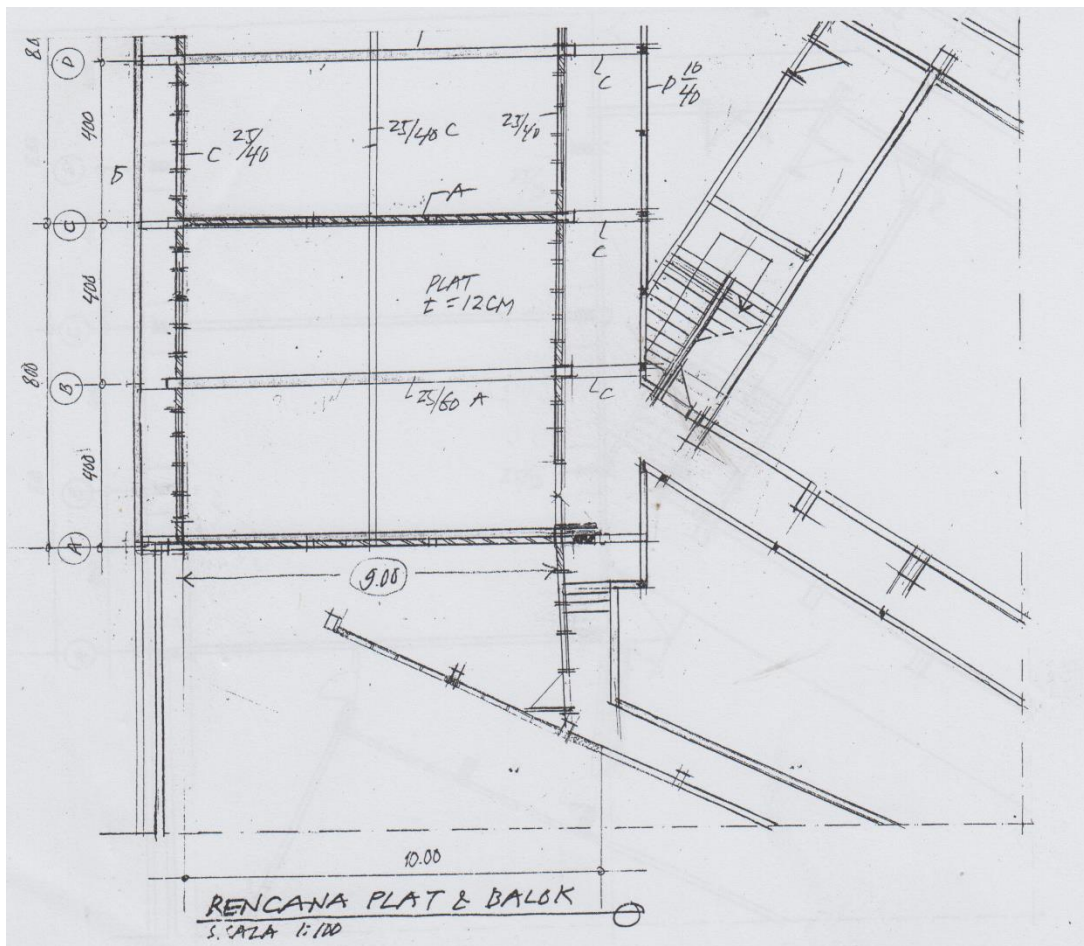
### 3. Kombinasi Pembebanan

Agar struktur dan komponennya aman maka harus dirancang sedemikian rupa sehingga kuat rencananya sama atau melebihi pengaruh beban-beban terfaktor dengan kombinasi-kombinasi sebagai berikut :

- 1,4 DL
- 1,2 DL + 1,6 LL + 0,5 ( L<sub>r</sub> atau S atau R)
- 1,2 DL + 1,6 (L<sub>r</sub> atau S atau R) + (L atau 0,5 W)
- 1,2 DL + 1,0 W + 0,5 (L<sub>r</sub> atau S atau R)
- 1,2 DL + 1,0 E + L + 0,2 S
- 0,9 DL + 1,0 W
- 0,9 DL + 1,0 E

### 4. Data Teknis Struktur

Layout dan deskripsi yang ditinjau tergambar pada gambar dibawah ini sebagai berikut .



Gambar 1 Tampak dan Data Teknis Gedung SMK Merdeka

Data teknis sebagai berikut :

Panjang Balok 1 adalah 10 meter

Panjang Balok 2 adalah 4 meter

Tinggi Kolom 3,6 meter 35x50

Kedalaman Pondasi 2,5 meter dengan telapan 1,2 x 1,2 meter

Dimensi Balok 1 35x65

Dimensi Balok 2 25x45

Dimensi Balok Anak 20x40

## 5. Analisa Beban Struktur

### A. Beban Mati

Beban mati elemen struktural dihitung secara otomatis oleh program SAP 2000 dengan setelah mendefinisikan penampang elemen struktur dan material struktur. Adapun bila beban mati adalah non-struktural maka dapat dihitung sebagai beban mati tambahan (*Super imposed dead load*) dengan cara menginputkan beban secara manual pada program SAP 2000.

Acuan dalam menentukan beban mati adalah berat volume material sebagai berikut:

- |                    |                           |
|--------------------|---------------------------|
| 1. Beton Bertulang | = 24,00 kN/m <sup>3</sup> |
| 2. Baja            | = 78,50 kN/m <sup>3</sup> |
| 3. Kayu            | = 10,00 kN/m <sup>3</sup> |
| 4. Pasir           | = 20,00 kN/m <sup>3</sup> |
| 5. Aspal           | = 22,40 kN/m <sup>3</sup> |
| 6. Bata Ringan     | = 06,50 kN/m <sup>3</sup> |

Beban Tamban

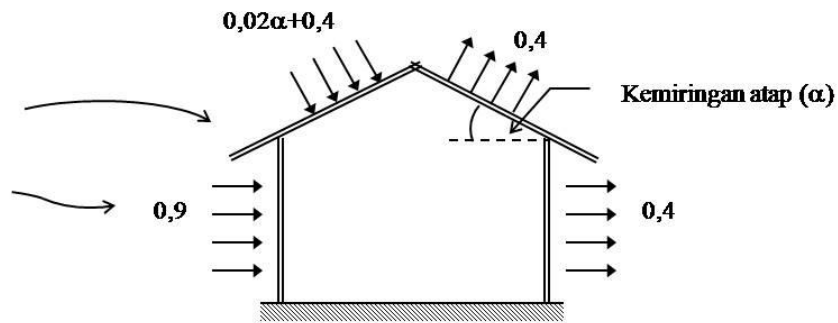
|        |                        |
|--------|------------------------|
| Lantai | = 50 kg/m <sup>2</sup> |
|--------|------------------------|

### B. Beban Hidup

Beban hidup yang bekerja pada atap (beban operasional) sebesar 100 kg/ titik pada titik tertentu. Beban Hidup di lantai diambil sebesar 250 kg/m<sup>2</sup>.

### C. Beban Angin

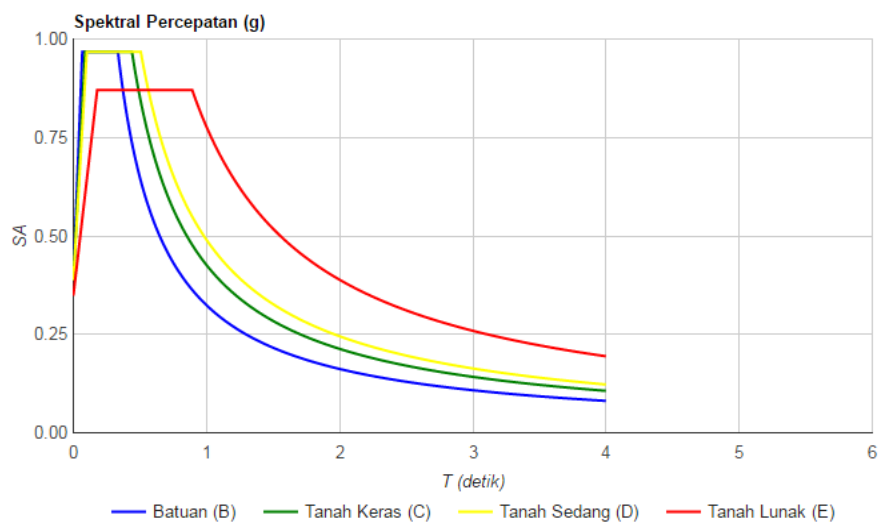
Beban angin yang dimodelkan dalam desain struktur ini adalah beban angin yang bekerja pada struktur diambil sebesar  $0,250 \text{ kN/m}^2$ .



Gambar 2 Beban Angin pada atap

### D. Beban Gempa

Beban gempa struktur didapatkan dari analisis respon spektrum. Adapun grafik *respon spectrum* mengacu pada SNI 1726:2012 dimana percepatan gempa sesuai dengan peta gempa dari web [http://puskim.pu.go.id/Aplikasi/desain\\_spektra\\_indonesia\\_2011/](http://puskim.pu.go.id/Aplikasi/desain_spektra_indonesia_2011/)



Gambar 3 Respon Spektrum Bandung

Parameter Gempa:

Kelas Tanah : Tanah Keras (Hasil Penyelidikan Tanah)

Faktor Keutamaan Gempa : 1,0

**Tabel 1** Parameter Gempa dan Nilai Respon Spektrum

| Batuan    |        | Tanah Keras |        | Tanah Sedang |        | Tanah Lunak |        |
|-----------|--------|-------------|--------|--------------|--------|-------------|--------|
| T (detik) | SA (g) | T (detik)   | SA (g) | T (detik)    | SA (g) | T (detik)   | SA (g) |
| 0         | 0,387  | 0           | 0,387  | 0            | 0,387  | 0           | 0,348  |
| 0,067     | 0,967  | 0,088       | 0,967  | 0,101        | 0,967  | 0,179       | 0,87   |
| 0,335     | 0,967  | 0,44        | 0,967  | 0,507        | 0,967  | 0,893       | 0,87   |
| 0,435     | 0,605  | 0,54        | 0,665  | 0,607        | 0,693  | 0,993       | 0,711  |
| 0,535     | 0,51   | 0,64        | 0,575  | 0,707        | 0,607  | 1,093       | 0,651  |
| 0,635     | 0,441  | 0,74        | 0,507  | 0,807        | 0,54   | 1,193       | 0,601  |
| 0,735     | 0,388  | 0,84        | 0,453  | 0,907        | 0,487  | 1,293       | 0,558  |
| 0,835     | 0,346  | 0,94        | 0,409  | 1,007        | 0,443  | 1,393       | 0,52   |
| 0,935     | 0,313  | 1,04        | 0,373  | 1,107        | 0,406  | 1,493       | 0,488  |
| 1,035     | 0,285  | 1,14        | 0,343  | 1,207        | 0,375  | 1,593       | 0,459  |
| 1,135     | 0,262  | 1,24        | 0,318  | 1,307        | 0,348  | 1,693       | 0,433  |
| 1,235     | 0,243  | 1,34        | 0,296  | 1,407        | 0,325  | 1,793       | 0,41   |
| 1,335     | 0,226  | 1,44        | 0,276  | 1,507        | 0,305  | 1,893       | 0,39   |
| 1,435     | 0,211  | 1,54        | 0,259  | 1,607        | 0,287  | 1,993       | 0,371  |
| 1,535     | 0,198  | 1,64        | 0,245  | 1,707        | 0,271  | 2,093       | 0,354  |
| 1,635     | 0,187  | 1,74        | 0,231  | 1,807        | 0,257  | 2,193       | 0,339  |
| 1,735     | 0,176  | 1,84        | 0,219  | 1,907        | 0,244  | 2,293       | 0,325  |
| 1,835     | 0,167  | 1,94        | 0,209  | 2,007        | 0,233  | 2,393       | 0,312  |
| 1,935     | 0,159  | 2,04        | 0,199  | 2,107        | 0,222  | 2,493       | 0,3    |
| 2,035     | 0,152  | 2,14        | 0,19   | 2,207        | 0,213  | 2,593       | 0,289  |
| 2,135     | 0,145  | 2,24        | 0,182  | 2,307        | 0,204  | 2,693       | 0,278  |
| 2,235     | 0,139  | 2,34        | 0,174  | 2,407        | 0,196  | 2,793       | 0,269  |
| 2,335     | 0,133  | 2,44        | 0,168  | 2,507        | 0,188  | 2,893       | 0,26   |
| 2,435     | 0,128  | 2,54        | 0,161  | 2,607        | 0,181  | 2,993       | 0,251  |
| 2,535     | 0,123  | 2,64        | 0,155  | 2,707        | 0,175  | 3,093       | 0,243  |
| 2,635     | 0,118  | 2,74        | 0,15   | 2,807        | 0,169  | 3,193       | 0,236  |
| 2,735     | 0,114  | 2,84        | 0,145  | 2,907        | 0,163  | 3,293       | 0,229  |
| 2,835     | 0,11   | 2,94        | 0,14   | 3,007        | 0,158  | 3,393       | 0,222  |
| 2,935     | 0,107  | 3,04        | 0,136  | 3,107        | 0,153  | 3,493       | 0,216  |
| 3,035     | 0,103  | 3,14        | 0,131  | 3,207        | 0,148  | 3,593       | 0,21   |
| 3,135     | 0,1    | 3,24        | 0,127  | 3,307        | 0,144  | 3,693       | 0,205  |
| 3,235     | 0,097  | 3,34        | 0,124  | 3,407        | 0,14   | 3,793       | 0,2    |
| 3,335     | 0,094  | 3,44        | 0,12   | 3,507        | 0,136  | 3,893       | 0,195  |
| 3,435     | 0,092  | 3,54        | 0,117  | 3,607        | 0,132  | 4           | 0,194  |
| 3,535     | 0,089  | 3,64        | 0,114  | 3,707        | 0,129  | -           | -      |
| 3,635     | 0,087  | 3,74        | 0,111  | 3,807        | 0,126  | -           | -      |
| 3,735     | 0,084  | 3,84        | 0,108  | 4            | 0,123  | -           | -      |
| 3,835     | 0,082  | 4           | 0,106  | -            | -      | -           | -      |
| 4         | 0,081  | -           | -      | -            | -      | -           | -      |

| Batuan     |       | Tanah Keras |       | Tanah Sedang |       | Tanah Lunak |       |
|------------|-------|-------------|-------|--------------|-------|-------------|-------|
| Variabel   | Nilai | Variabel    | Nilai | Variabel     | Nilai | Variabel    | Nilai |
| PGA (g)    | 0.577 | PGA (g)     | 0.577 | PGA (g)      | 0.577 | PGA (g)     | 0.577 |
| SS (g)     | 1.450 | SS (g)      | 1.450 | SS (g)       | 1.450 | SS (g)      | 1.450 |
| S1 (g)     | 0.486 | S1 (g)      | 0.486 | S1 (g)       | 0.486 | S1 (g)      | 0.486 |
| CRS        | 0.977 | CRS         | 0.977 | CRS          | 0.977 | CRS         | 0.977 |
| CR1        | 0.905 | CR1         | 0.905 | CR1          | 0.905 | CR1         | 0.905 |
| FPGA       | 1.000 | FPGA        | 1.000 | FPGA         | 1.000 | FPGA        | 0.900 |
| FA         | 1.000 | FA          | 1.000 | FA           | 1.000 | FA          | 0.900 |
| FV         | 1.000 | FV          | 1.314 | FV           | 1.514 | FV          | 2.400 |
| PSA (g)    | 0.577 | PSA (g)     | 0.577 | PSA (g)      | 0.577 | PSA (g)     | 0.519 |
| SMS (g)    | 1.450 | SMS (g)     | 1.450 | SMS (g)      | 1.450 | SMS (g)     | 1.305 |
| SM1 (g)    | 0.486 | SM1 (g)     | 0.638 | SM1 (g)      | 0.736 | SM1 (g)     | 1.166 |
| SDS (g)    | 0.967 | SDS (g)     | 0.967 | SDS (g)      | 0.967 | SDS (g)     | 0.870 |
| SD1 (g)    | 0.324 | SD1 (g)     | 0.426 | SD1 (g)      | 0.490 | SD1 (g)     | 0.777 |
| T0 (detik) | 0.067 | T0 (detik)  | 0.088 | T0 (detik)   | 0.101 | T0 (detik)  | 0.179 |
| TS (detik) | 0.335 | TS (detik)  | 0.440 | TS (detik)   | 0.507 | TS (detik)  | 0.893 |

## 6. Material yang digunakan

Materian yang digunakan sebagai berikut ::

- ✓ Beton Memiliki Sifat Mekanis Minimal  $f_c=25$  Mpa

Tabel 2 Mutu Beton

| Mutu Beton | Fc (MPa) |  | Fc (MPa) | Mutu Beton |
|------------|----------|--|----------|------------|
| K- 100     | f'c 8,3  |  | f'c 8    | K- 96,4    |
| K- 125     | f'c 10,4 |  | f'c 10   | K- 120     |
| K- 150     | f'c 12,5 |  | f'c 12   | K- 145     |
| K- 175     | f'c 14,5 |  | f'c 15   | K- 181     |
| K- 200     | f'c 16,6 |  | f'c 16   | K- 193     |
| K- 225     | f'c 18,7 |  | f'c 20   | K- 241     |
| K- 250     | f'c 20,8 |  | f'c 22   | K- 265     |
| K- 275     | f'c 22,8 |  | f'c 25   | K- 301     |
| K- 300     | f'c 24,9 |  | f'c 28   | K- 337     |
| K- 325     | f'c 27,0 |  | f'c 30   | K- 361     |
| K- 350     | f'c 29,1 |  | f'c 32   | K- 386     |
| K- 375     | f'c 31,1 |  | f'c 35   | K- 422     |
| K- 400     | f'c 33,2 |  | f'c 40   | K- 482     |

The screenshot shows a software window titled "Material Property Data". It contains several sections for inputting material properties:

- General Data:**
  - Material Name and Display Color: K-300 (with a blue color swatch)
  - Material Type: Concrete (dropdown menu)
  - Material Notes: Modify/Show Notes...
- Weight and Mass:**
  - Weight per Unit Volume: 2,354E-05
  - Mass per Unit Volume: 2,400E-09
- Units:**
  - Units: N, mm, C (dropdown menu)
- Isotropic Property Data:**
  - Modulus of Elasticity, E: 23500
  - Poisson's Ratio, U: 0,2
  - Coefficient of Thermal Expansion, A: 1,170E-05
  - Shear Modulus, G: 9038,4615
- Other Properties for Concrete Materials:**
  - Specified Concrete Compressive Strength, f'c: 20,6843
  - ☐ Lightweight Concrete
  - Shear Strength Reduction Factor: (empty field)
- Switch To Advanced Property Display:** (checkbox, currently unchecked)
- Buttons:** OK, Cancel

Gambar 4 Input Material Beton



- ✓ Baja BJ 37 iliki Sifat Mekanis minimal  $f_u = 370$  MPa dan  $f_y = 240$  Mpa

Tabel 3 Mutu Baja

| Jenis Baja | Tegangan putus minimum, $f_u$<br>(MPa) | Tegangan leleh minimum, $y f$<br>(MPa) | Peregangan minimum<br>(%) |
|------------|----------------------------------------|----------------------------------------|---------------------------|
| BJ 34      | 340                                    | 210                                    | 22                        |
| BJ 37      | 370                                    | 240                                    | 20                        |
| BJ 41      | 410                                    | 250                                    | 18                        |
| BJ 50      | 500                                    | 290                                    | 16                        |
| BJ 55      | 550                                    | 410                                    | 13                        |

**Material Property Data**

General Data

Material Name and Display Color: BJ37 ■

Material Type: Steel

Material Notes: [Modify/Show Notes...](#)

Weight and Mass

Weight per Unit Volume: 7,698E-05

Mass per Unit Volume: 7,850E-09

Units: N, mm, C

Isotropic Property Data

Modulus of Elasticity, E: 200000

Poisson's Ratio, U: 0,3

Coefficient of Thermal Expansion, A: 1,170E-05

Shear Modulus, G: 76923,08

Other Properties for Steel Materials

Minimum Yield Stress,  $F_y$ : 240

Minimum Tensile Stress,  $F_u$ : 400

Effective Yield Stress,  $F_{ye}$ : 370

Effective Tensile Stress,  $F_{ue}$ : 440

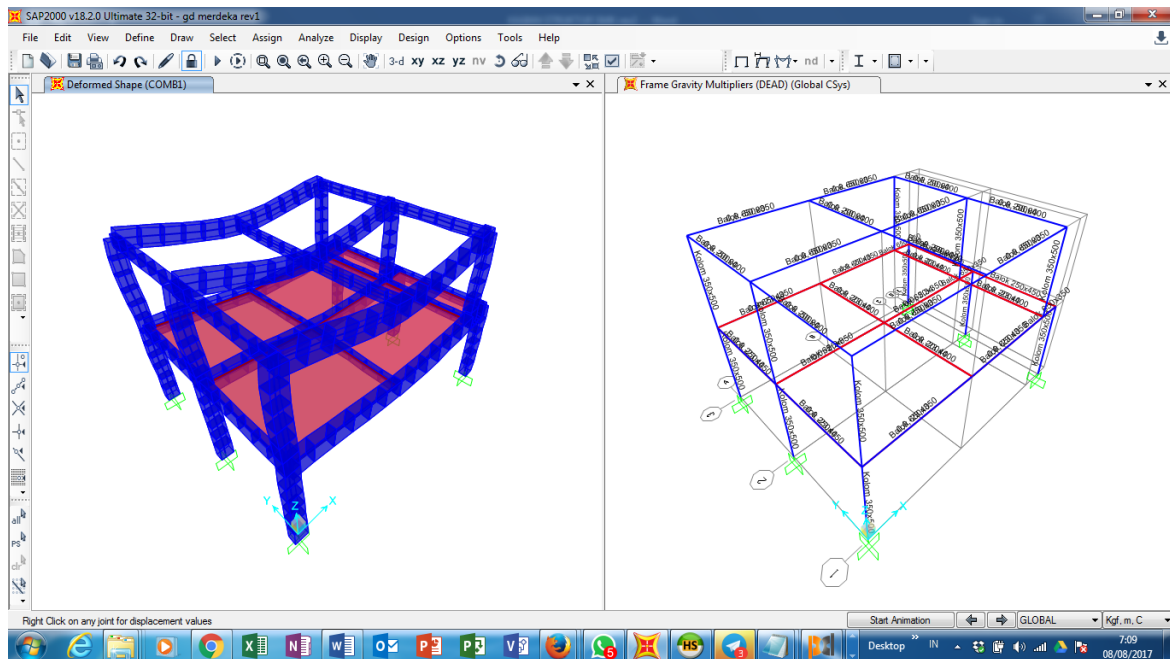
☐ Switch To Advanced Property Display

OK Cancel

Gambar 5 Input Data Material Baja

## 7. Model Struktur

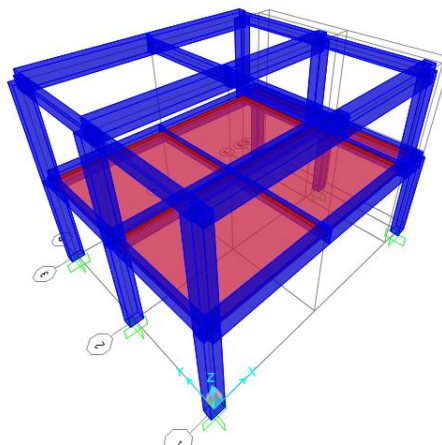
Struktur gedung LIMBAH dimodelkan seperti pada gambar berikut..



Gambar 6 Model Struktur Gedung Limbah

### Input Beban

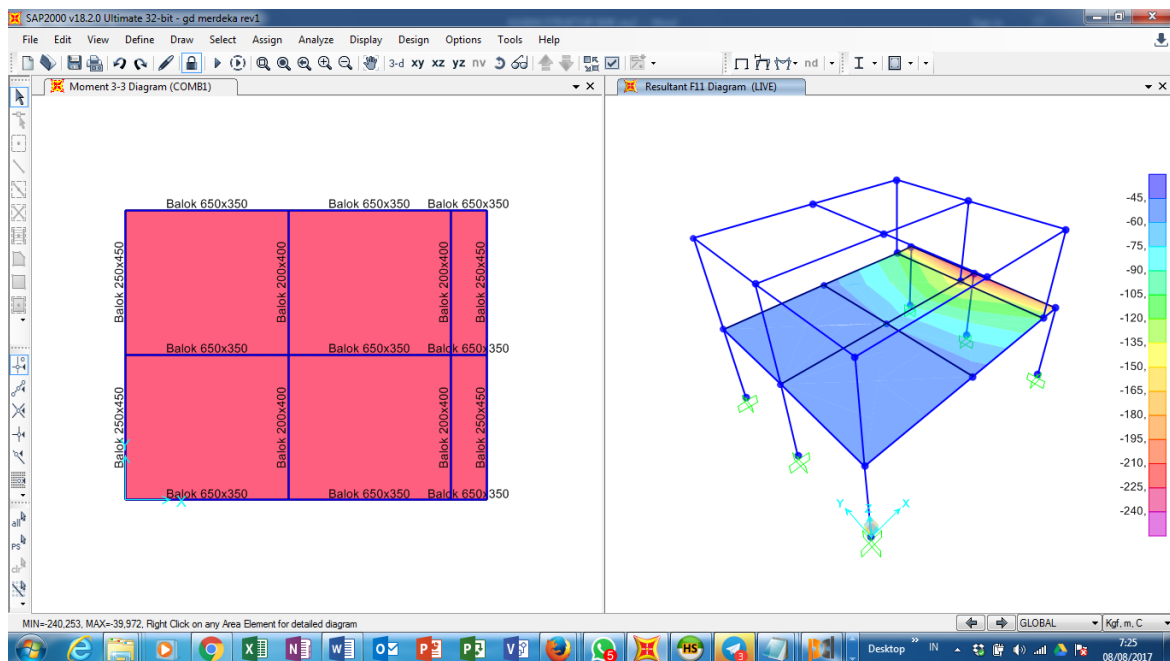
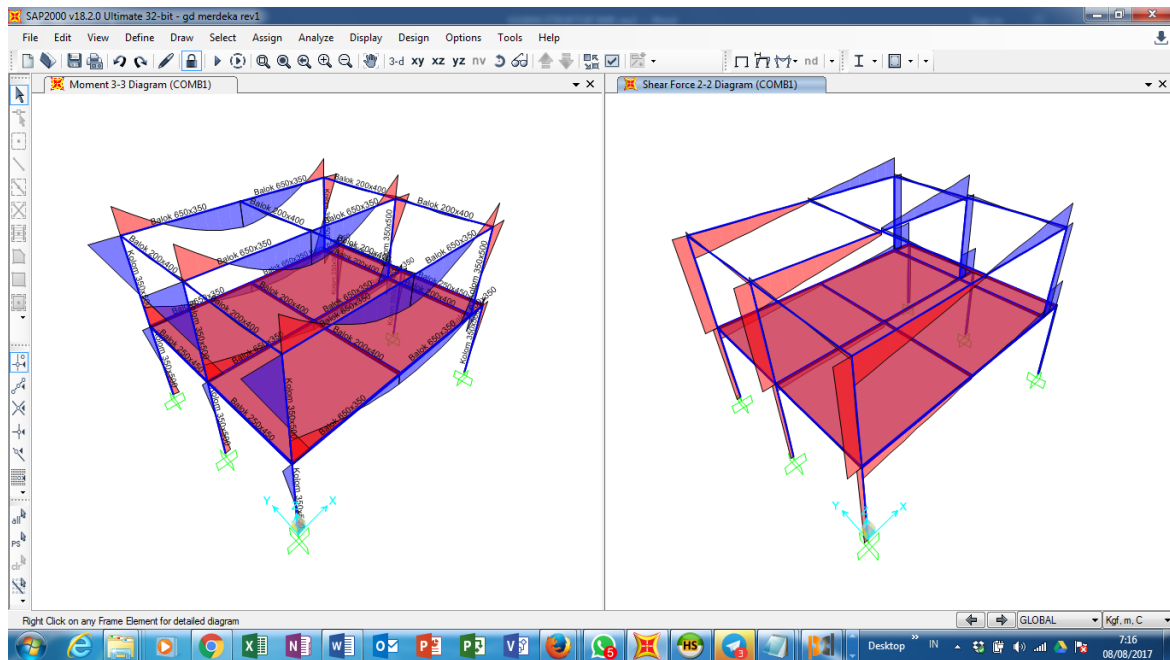
Dibawah ini merupakan gambar input beban-beban pada program SAP 2000. **Yang telah didefinisikan** di setiap titik pada bab diatas.



Gambar 7 Input beban pada gedung limbah

## Gaya-gaya Dalam

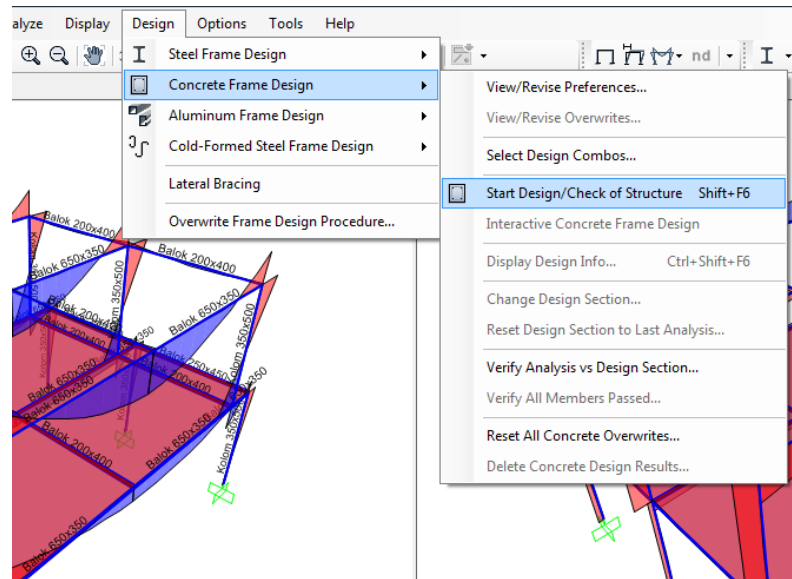
Gaya dalam untuk struktur diperlihatkan pada gambar dibawah ini merupakan gaya dalam Momen, Lintang dan gaya aksial.



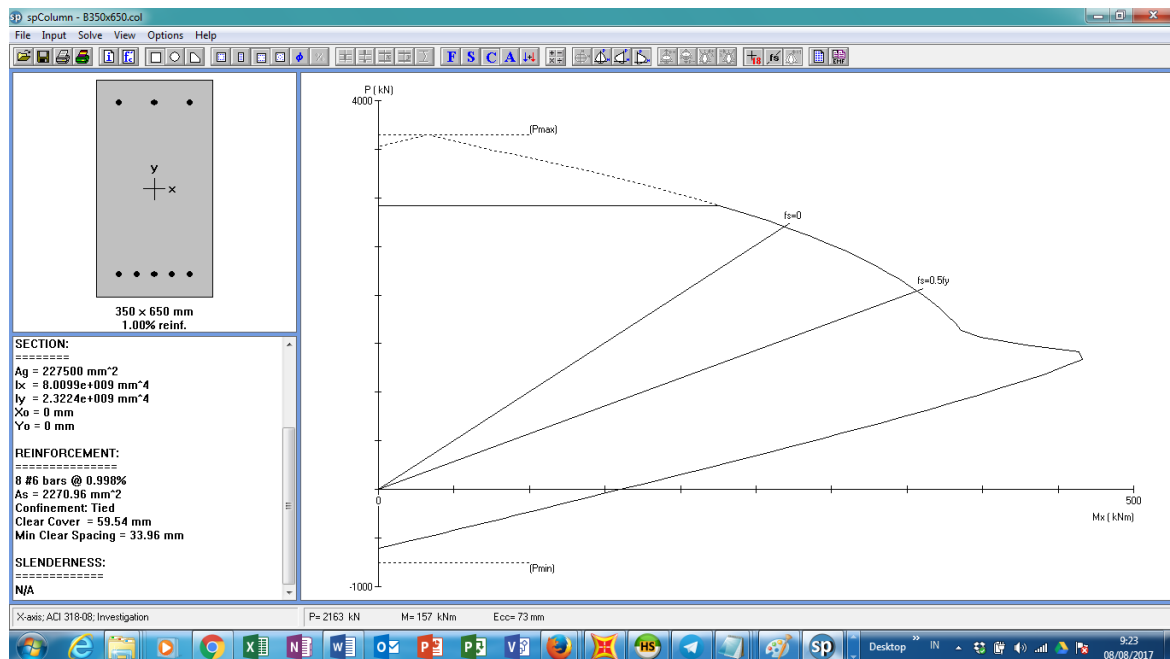
Gambar 8 Gaya dalam yang terjadi pada gedung SMK

## 8. Disain Penulangan Struktur

Disain penulangan dilakukan dengan menggunakan software SAP 2000 dengan mengakses menu disain yang tergambar dibawah ini.



Gambar 9 Akses untuk Disain Penulangan



Gambar 10 disain Penulangan

## 9. Kesimpulan

1. Material yang digunakan Baja mutu 37 dan benton  $f'c25$ , Baja Tulang BJ37 untuk sengkang dan BJ34 untuk tulangan memanjang.
2. Tulangan Balok Utama (Balok 1) 350x650 mm dengan tulangan 5 buah D19 sisi bawah dan 3 buah sisi atas pada bagian tengah bentang dan untuk tumpuan sisi atas 5 buah D19 dan sisi bawah 3 buah D19. Untuk sengkang D10-75 mm pada  $\frac{1}{4}$  bentang dan D10-200 pada tengah bentang berlaku untuk semua balok.
3. Tulangan Balok Melintang (Balok 2) 250x450 mm dengan tulangan 4 buah D16 sisi bawah dan 3 buah sisi atas pada bagian tengah bentang dan untuk tumpuan sisi atas 4 buah D16 dan sisi bawah 3 buah D16. Untuk sengkang D10-75 mm pada  $\frac{1}{4}$  bentang dan D10-200 pada tengah bentang berlaku untuk semua balok.
4. Tulangan Balok Anak (Balok 3) 350x650 mm dengan tulangan 3 buah D16 sisi bawah dan 2 buah sisi atas pada bagian tengah bentang dan untuk tumpuan sisi atas 3 buah D16 dan sisi bawah 2 buah D16. Untuk sengkang D10-75 mm pada  $\frac{1}{4}$  bentang dan D10-200 pada tengah bentang berlaku untuk semua balok.
5. Tulangan Kolom (Balok 1) 350x500 mm dengan tulangan 4 buah D19 sisi kiri dan 4 buah sisi kanan. Untuk sengkang D10-75 mm pada  $\frac{1}{4}$  bentang dan D10-200 pada tengah bentang berlaku untuk semua balok.
6. Rasio kapasitas penampang antar 0,6-0,99, sehingga cukup memadai menahan beban layan yang ada.

## Lampiran Hasil Perhitungan

STRUCTUREPOINT - spColumn v4.50 (TM)  
Page 1  
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    oooooo    oo    oooooo    oooooo    ooo    oooooo  o  oo  oo    oo  oo    oo (TM)

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                                spColumn v4.50 (TM)
                        Computer program for the Strength Design of Reinforced Concrete Sections
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                        All rights reserved
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General Information:  
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File Name: D:\Arsip Kerja 2017\Dropbox\Arsip Kerja Dropbox 2017\Struktur\gd merdeka ... \B350x650.col  
 Project: SMK  
 Column: 1 Engineer: KM  
 Code: ACI 318-08 Units: Metric

Run Option: Investigation Slenderness: Not considered  
 Run Axis: X-axis Column Type: Architectural

#### Material Properties:

=====  
 f'c = 25 MPa fy = 370 MPa  
 Ec = 23500 MPa Es = 200000 MPa  
 Ultimate strain = 0.003 mm/mm  
 Betal = 0.85

#### Section:

=====  
 Rectangular: Width = 350 mm Depth = 650 mm  
 Gross section area, Ag = 227500 mm^2  
 Ix = 8.0099e+009 mm^4 Iy = 2.3224e+009 mm^4  
 rx = 187.639 mm ry = 101.036 mm  
 Xo = 0 mm Yo = 0 mm

#### Reinforcement:

=====  
 Bar Set: ASTM A615  

| Size | Diam (mm) | Area (mm^2) | Size | Diam (mm) | Area (mm^2) | Size | Diam (mm) | Area (mm^2) |
|------|-----------|-------------|------|-----------|-------------|------|-----------|-------------|
| # 3  | 10        | 71          | # 4  | 13        | 129         | # 5  | 16        | 200         |
| # 6  | 19        | 284         | # 7  | 22        | 387         | # 8  | 25        | 510         |
| # 9  | 29        | 645         | # 10 | 32        | 819         | # 11 | 36        | 1006        |
| # 14 | 43        | 1452        | # 18 | 57        | 2581        |      |           |             |

Confinement: Tied; #3 ties with #10 bars, #4 with larger bars.  
 phi(a) = 0.8, phi(b) = 0.9, phi(c) = 0.65

Layout: Rectangular  
 Pattern: Sides Different (Cover to transverse reinforcement)  
 Total steel area: As = 2271 mm^2 at rho = 1.00% (Note: rho < 1.0%)  
 Minimum clear spacing = 34 mm

|            | Top   | Bottom | Left  | Right |
|------------|-------|--------|-------|-------|
| Bars       | 3 # 6 | 5 # 6  | 0 # 6 | 0 # 6 |
| Cover (mm) | 50    | 50     | 50    | 50    |

#### Control Points:

=====  

| Bending about       | Axial Load P<br>kN | X-Moment<br>kNm | Y-Moment<br>kNm | NA depth<br>mm | Dt depth<br>mm | eps_t    | Phi   |
|---------------------|--------------------|-----------------|-----------------|----------------|----------------|----------|-------|
| X @ Max compression | 3651.6             | 32.94           | -0.00           | 1516           | 581            | -0.00185 | 0.650 |
| @ Allowable comp.   | 2921.3             | 225.95          | -0.00           | 628            | 581            | -0.00022 | 0.650 |
| @ fs = 0.0          | 2704.8             | 268.46          | 0.00            | 581            | 581            | -0.00000 | 0.650 |
| @ fs = 0.5*fy       | 2040.8             | 356.80          | -0.00           | 444            | 581            | 0.00092  | 0.650 |
| @ Balanced point    | 1591.0             | 388.72          | -0.00           | 359            | 581            | 0.00185  | 0.650 |
| @ Tension control   | 1399.3             | 474.19          | -0.00           | 218            | 581            | 0.00500  | 0.900 |
| @ Pure bending      | -0.0               | 160.29          | 0.00            | 63             | 581            | 0.02468  | 0.900 |
| @ Max tension       | -756.2             | -48.39          | -0.00           | 0              | 581            | 9.99999  | 0.900 |

STRUCTUREPOINT - spColumn v4.50 (TM)

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15 day trial license. Locking Code: 4-1EFCC. User: KMLDN, itenas  
 08/08/17

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 08:34 AM

|                      | Axial Load P<br>kN | X-Moment<br>kNm | Y-Moment<br>kNm | NA depth<br>mm | Dt depth<br>mm | eps_t    | Phi   |
|----------------------|--------------------|-----------------|-----------------|----------------|----------------|----------|-------|
| -X @ Max compression | 3651.6             | 32.94           | -0.00           | 1516           | 581            | -0.00185 | 0.650 |
| @ Allowable comp.    | 2921.3             | -163.61         | -0.00           | 651            | 581            | -0.00032 | 0.650 |
| @ fs = 0.0           | 2576.1             | -235.52         | 0.00            | 581            | 581            | -0.00000 | 0.650 |
| @ fs = 0.5*fy        | 1843.8             | -341.33         | 0.00            | 444            | 581            | 0.00092  | 0.650 |
| @ Balanced point     | 1325.7             | -390.73         | 0.00            | 359            | 581            | 0.00185  | 0.650 |
| @ Tension control    | 1032.0             | -476.97         | 0.00            | 218            | 581            | 0.00500  | 0.900 |
| @ Pure bending       | -0.0               | -257.81         | 0.00            | 76             | 581            | 0.01996  | 0.900 |
| @ Max tension        | -756.2             | -48.39          | -0.00           | 0              | 581            | 9.99999  | 0.900 |

\*\*\* End of output \*\*\*

**TABLE: Design Forces For Beams**

| Frame | Combo | Station | P    | V2   | V3   | T        | M2       | M3       |
|-------|-------|---------|------|------|------|----------|----------|----------|
| Text  | Text  | mm      | N    | N    | N    | N-mm     | N-mm     | N-mm     |
| 3     | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 4     | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 9     | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 10    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 11    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 12    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 13    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 18    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 19    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 20    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 21    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 22    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 27    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 28    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 29    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 30    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 31    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 32    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 33    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 34    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 35    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 36    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 37    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 38    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 39    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 40    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 41    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 42    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 43    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |



**TABLE: Design Forces For Columns**

| Frame | Combo | Station | P    | V2   | V3   | T        | M2       | M3       |
|-------|-------|---------|------|------|------|----------|----------|----------|
| Text  | Text  | mm      | N    | N    | N    | N-mm     | N-mm     | N-mm     |
| 1     | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 2     | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 6     | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 7     | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 14    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 15    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 16    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 17    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 23    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 24    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 25    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |
| 26    | COMB1 | 12340   | 1230 | 4560 | 7890 | 11230000 | 44560000 | 77890000 |

| TABLE: Element Forces - Frames |         |            |             |           |           |         |             |             |             |           |             |
|--------------------------------|---------|------------|-------------|-----------|-----------|---------|-------------|-------------|-------------|-----------|-------------|
| Frame                          | Station | OutputCase | CaseType    | P         | V2        | V3      | T           | M2          | M3          | FrameElem | ElemStation |
| Text                           | mm      | Text       | Text        | N         | N         | N       | N-mm        | N-mm        | N-mm        | Text      | mm          |
| 1                              | 0       | COMB1      | Combination | 285786,55 | -63766,32 | 4890,43 | -14459,99   | 5793477,82  | -83770094   | 1-1       | 0           |
| 1                              | 1800    | COMB1      | Combination | 278372,72 | -63766,32 | 4890,43 | -14459,99   | -3009296,6  | 31009277,45 | 1-1       | 1800        |
| 1                              | 3600    | COMB1      | Combination | 270958,89 | -63766,32 | 4890,43 | -14459,99   | -11812071   | 145788649   | 1-1       | 3600        |
| 2                              | 0       | COMB1      | Combination | -48340,52 | -56223,66 | 4301,5  | 26958,21    | 11046623,71 | -135235226  | 2-1       | 0           |
| 2                              | 1800    | COMB1      | Combination | -40926,69 | -56223,66 | 4301,5  | 26958,21    | 3303916,37  | -34032643   | 2-1       | 1800        |
| 2                              | 3600    | COMB1      | Combination | -33512,87 | -56223,66 | 4301,5  | 26958,21    | -4438790,97 | 67169940,58 | 2-1       | 3600        |
| 3                              | 0       | COMB1      | Combination | 2221,77   | -22074,94 | -1980,5 | -5478315,92 | -293277,85  | -9031395,8  | 3-1       | 0           |
| 3                              | 200     | COMB1      | Combination | 2221,77   | -19356,54 | -1980,5 | -5478315,92 | 102822,11   | -4888248,22 | 3-1       | 200         |
| 3                              | 200     | COMB1      | Combination | 1645,36   | -22372,05 | -110,16 | -4045996,27 | 111350,46   | -4289654,72 | 3-2       | 0           |
| 3                              | 400     | COMB1      | Combination | 1645,36   | -19653,65 | -110,16 | -4045996,27 | 133383,25   | -87084,87   | 3-2       | 200         |
| 3                              | 400     | COMB1      | Combination | 1049,59   | -20246,47 | 307,75  | -3312450,13 | 137524,2    | 470748,68   | 3-3       | 0           |
| 3                              | 600     | COMB1      | Combination | 1049,59   | -17528,06 | 307,75  | -3312450,13 | 75975,05    | 4248201,58  | 3-3       | 200         |
| 3                              | 600     | COMB1      | Combination | 540,86    | -17603    | 290,04  | -2717520,39 | 84123,75    | 4740251,06  | 3-4       | 0           |
| 3                              | 800     | COMB1      | Combination | 540,86    | -14884,59 | 290,04  | -2717520,39 | 26115,47    | 7989009,87  | 3-4       | 200         |
| 3                              | 800     | COMB1      | Combination | 157,06    | -14681,45 | 193,81  | -2154919,81 | 36836,8     | 8403217,62  | 3-5       | 0           |
| 3                              | 1000    | COMB1      | Combination | 157,06    | -11963,05 | 193,81  | -2154919,81 | -1924,67    | 11067667,9  | 3-5       | 200         |
| 3                              | 1000    | COMB1      | Combination | -102,53   | -11574,22 | 114,38  | -1587825,06 | 8642,27     | 11397384,68 | 3-6       | 0           |
| 3                              | 1200    | COMB1      | Combination | -102,53   | -8855,82  | 114,38  | -1587825,06 | -14234,48   | 13440388,53 | 3-6       | 200         |
| 3                              | 1200    | COMB1      | Combination | -260,52   | -8345,07  | 63,38   | -1009684,92 | -5299,91    | 13681314,41 | 3-7       | 0           |
| 3                              | 1400    | COMB1      | Combination | -260,52   | -5626,66  | 63,38   | -1009684,92 | -17974,96   | 15078487,68 | 3-7       | 200         |

|   |      |       |             |         |          |         |            |            |             |      |     |
|---|------|-------|-------------|---------|----------|---------|------------|------------|-------------|------|-----|
| 3 | 1400 | COMB1 | Combination | -345,8  | -5039,03 | 33,8    | -421655,47 | -11168,15  | 15227857,87 | 3-8  | 0   |
| 3 | 1600 | COMB1 | Combination | -345,8  | -2320,62 | 33,8    | -421655,47 | -17928,39  | 15963823,2  | 3-8  | 200 |
| 3 | 1600 | COMB1 | Combination | -383,98 | -1685,69 | 17,21   | 169307,61  | -13202,2   | 16019911,57 | 3-9  | 0   |
| 3 | 1800 | COMB1 | Combination | -383,98 | 1032,71  | 17,21   | 169307,61  | -16643,29  | 16085209,4  | 3-9  | 200 |
| 3 | 1800 | COMB1 | Combination | -392,85 | 1694,83  | 7,24    | 753303,74  | -13799,07  | 16046978,36 | 3-10 | 0   |
| 3 | 2000 | COMB1 | Combination | -392,85 | 4413,24  | 7,24    | 753303,74  | -15247,15  | 15436171,04 | 3-10 | 200 |
| 3 | 2000 | COMB1 | Combination | -381,74 | 5087,16  | -0,53   | 1318881,2  | -14101,98  | 15303077,31 | 3-11 | 0   |
| 3 | 2200 | COMB1 | Combination | -381,74 | 7805,56  | -0,53   | 1318881,2  | -13995,89  | 14013805,49 | 3-11 | 200 |
| 3 | 2200 | COMB1 | Combination | -351,95 | 8476,67  | -9,67   | 1854251,75 | -14454,47  | 13785724,61 | 3-12 | 0   |
| 3 | 2400 | COMB1 | Combination | -351,95 | 11195,07 | -9,67   | 1854251,75 | -12519,59  | 11818550,37 | 3-12 | 200 |
| 3 | 2400 | COMB1 | Combination | -297,43 | 11845,86 | -23,99  | 2348371,38 | -14567,75  | 11495806,51 | 3-13 | 0   |
| 3 | 2600 | COMB1 | Combination | -297,43 | 14564,27 | -23,99  | 2348371,38 | -9770,34   | 8854793,43  | 3-13 | 200 |
| 3 | 2600 | COMB1 | Combination | -205,6  | 15170    | -48,24  | 2792283,31 | -13382,27  | 8438300,37  | 3-14 | 0   |
| 3 | 2800 | COMB1 | Combination | -205,6  | 17888,4  | -48,24  | 2792283,31 | -3734,5    | 5132460,15  | 3-14 | 200 |
| 3 | 2800 | COMB1 | Combination | -59,39  | 18411,16 | -87,81  | 3180843,15 | -8721,85   | 4624002,81  | 3-15 | 0   |
| 3 | 3000 | COMB1 | Combination | -59,39  | 21129,56 | -87,81  | 3180843,15 | 8839,56    | 669930,7    | 3-15 | 200 |
| 3 | 3000 | COMB1 | Combination | 157,34  | 21508,83 | -144,41 | 3516096,53 | 3177,65    | 72665,68    | 3-16 | 0   |
| 3 | 3200 | COMB1 | Combination | 157,34  | 24227,23 | -144,41 | 3516096,53 | 32060,05   | -4500939,76 | 3-16 | 200 |
| 3 | 3200 | COMB1 | Combination | 450,53  | 24368,82 | -199,32 | 3810196,83 | 27199,81   | -5181684,56 | 3-17 | 0   |
| 3 | 3400 | COMB1 | Combination | 450,53  | 27087,22 | -199,32 | 3810196,83 | 67063,31   | -10327288,8 | 3-17 | 200 |
| 3 | 3400 | COMB1 | Combination | 803,95  | 26832,58 | -153,93 | 4106718,46 | 65310,21   | -11082447   | 3-18 | 0   |
| 3 | 3600 | COMB1 | Combination | 803,95  | 29550,99 | -153,93 | 4106718,46 | 96095,78   | -16720804,3 | 3-18 | 200 |
| 3 | 3600 | COMB1 | Combination | 1170,41 | 28492,8  | 321,81  | 4518518,15 | 97604,54   | -17532713,4 | 3-19 | 0   |
| 3 | 3800 | COMB1 | Combination | 1170,41 | 31211,2  | 321,81  | 4518518,15 | 33241,94   | -23503113,1 | 3-19 | 200 |
| 3 | 3800 | COMB1 | Combination | 1463,6  | 26693,92 | 2078,97 | 5604060,63 | 28680,93   | -24334129,2 | 3-20 | 0   |
| 3 | 4000 | COMB1 | Combination | 1463,6  | 29412,33 | 2078,97 | 5604060,63 | -387112,34 | -29944754,5 | 3-20 | 200 |

|   |      |       |             |         |           |          |             |            |             |      |     |
|---|------|-------|-------------|---------|-----------|----------|-------------|------------|-------------|------|-----|
| 4 | 0    | COMB1 | Combination | 1463,6  | -29412,33 | -2078,97 | -5604060,63 | -387112,34 | -29944754,5 | 4-1  | 0   |
| 4 | 200  | COMB1 | Combination | 1463,6  | -26693,92 | -2078,97 | -5604060,63 | 28680,93   | -24334129,2 | 4-1  | 200 |
| 4 | 200  | COMB1 | Combination | 1170,41 | -31211,2  | -321,81  | -4518518,15 | 33241,94   | -23503113,1 | 4-2  | 0   |
| 4 | 400  | COMB1 | Combination | 1170,41 | -28492,8  | -321,81  | -4518518,15 | 97604,54   | -17532713,4 | 4-2  | 200 |
| 4 | 400  | COMB1 | Combination | 803,95  | -29550,99 | 153,93   | -4106718,46 | 96095,78   | -16720804,3 | 4-3  | 0   |
| 4 | 600  | COMB1 | Combination | 803,95  | -26832,58 | 153,93   | -4106718,46 | 65310,21   | -11082447   | 4-3  | 200 |
| 4 | 600  | COMB1 | Combination | 450,53  | -27087,22 | 199,32   | -3810196,83 | 67063,31   | -10327288,8 | 4-4  | 0   |
| 4 | 800  | COMB1 | Combination | 450,53  | -24368,82 | 199,32   | -3810196,83 | 27199,81   | -5181684,56 | 4-4  | 200 |
| 4 | 800  | COMB1 | Combination | 157,34  | -24227,23 | 144,41   | -3516096,53 | 32060,05   | -4500939,76 | 4-5  | 0   |
| 4 | 1000 | COMB1 | Combination | 157,34  | -21508,83 | 144,41   | -3516096,53 | 3177,65    | 72665,68    | 4-5  | 200 |
| 4 | 1000 | COMB1 | Combination | -59,39  | -21129,56 | 87,81    | -3180843,15 | 8839,56    | 669930,7    | 4-6  | 0   |
| 4 | 1200 | COMB1 | Combination | -59,39  | -18411,16 | 87,81    | -3180843,15 | -8721,85   | 4624002,81  | 4-6  | 200 |
| 4 | 1200 | COMB1 | Combination | -205,6  | -17888,4  | 48,24    | -2792283,31 | -3734,5    | 5132460,15  | 4-7  | 0   |
| 4 | 1400 | COMB1 | Combination | -205,6  | -15170    | 48,24    | -2792283,31 | -13382,27  | 8438300,37  | 4-7  | 200 |
| 4 | 1400 | COMB1 | Combination | -297,43 | -14564,27 | 23,99    | -2348371,38 | -9770,34   | 8854793,43  | 4-8  | 0   |
| 4 | 1600 | COMB1 | Combination | -297,43 | -11845,86 | 23,99    | -2348371,38 | -14567,75  | 11495806,51 | 4-8  | 200 |
| 4 | 1600 | COMB1 | Combination | -351,95 | -11195,07 | 9,67     | -1854251,75 | -12519,59  | 11818550,37 | 4-9  | 0   |
| 4 | 1800 | COMB1 | Combination | -351,95 | -8476,67  | 9,67     | -1854251,75 | -14454,47  | 13785724,61 | 4-9  | 200 |
| 4 | 1800 | COMB1 | Combination | -381,74 | -7805,56  | 0,53     | -1318881,2  | -13995,89  | 14013805,49 | 4-10 | 0   |
| 4 | 2000 | COMB1 | Combination | -381,74 | -5087,16  | 0,53     | -1318881,2  | -14101,98  | 15303077,31 | 4-10 | 200 |
| 4 | 2000 | COMB1 | Combination | -392,85 | -4413,24  | -7,24    | -753303,74  | -15247,15  | 15436171,04 | 4-11 | 0   |
| 4 | 2200 | COMB1 | Combination | -392,85 | -1694,83  | -7,24    | -753303,74  | -13799,07  | 16046978,36 | 4-11 | 200 |
| 4 | 2200 | COMB1 | Combination | -383,98 | -1032,71  | -17,21   | -169307,61  | -16643,29  | 16085209,4  | 4-12 | 0   |
| 4 | 2400 | COMB1 | Combination | -383,98 | 1685,69   | -17,21   | -169307,61  | -13202,2   | 16019911,57 | 4-12 | 200 |
| 4 | 2400 | COMB1 | Combination | -345,8  | 2320,62   | -33,8    | 421655,47   | -17928,39  | 15963823,2  | 4-13 | 0   |
| 4 | 2600 | COMB1 | Combination | -345,8  | 5039,03   | -33,8    | 421655,47   | -11168,15  | 15227857,87 | 4-13 | 200 |

|   |      |       |             |           |            |         |            |             |             |      |      |
|---|------|-------|-------------|-----------|------------|---------|------------|-------------|-------------|------|------|
| 4 | 2600 | COMB1 | Combination | -260,52   | 5626,66    | -63,38  | 1009684,92 | -17974,96   | 15078487,68 | 4-14 | 0    |
| 4 | 2800 | COMB1 | Combination | -260,52   | 8345,07    | -63,38  | 1009684,92 | -5299,91    | 13681314,41 | 4-14 | 200  |
| 4 | 2800 | COMB1 | Combination | -102,53   | 8855,82    | -114,38 | 1587825,06 | -14234,48   | 13440388,53 | 4-15 | 0    |
| 4 | 3000 | COMB1 | Combination | -102,53   | 11574,22   | -114,38 | 1587825,06 | 8642,27     | 11397384,68 | 4-15 | 200  |
| 4 | 3000 | COMB1 | Combination | 157,06    | 11963,05   | -193,81 | 2154919,81 | -1924,67    | 11067667,9  | 4-16 | 0    |
| 4 | 3200 | COMB1 | Combination | 157,06    | 14681,45   | -193,81 | 2154919,81 | 36836,8     | 8403217,62  | 4-16 | 200  |
| 4 | 3200 | COMB1 | Combination | 540,86    | 14884,59   | -290,04 | 2717520,39 | 26115,47    | 7989009,87  | 4-17 | 0    |
| 4 | 3400 | COMB1 | Combination | 540,86    | 17603      | -290,04 | 2717520,39 | 84123,75    | 4740251,06  | 4-17 | 200  |
| 4 | 3400 | COMB1 | Combination | 1049,59   | 17528,06   | -307,75 | 3312450,13 | 75975,05    | 4248201,58  | 4-18 | 0    |
| 4 | 3600 | COMB1 | Combination | 1049,59   | 20246,47   | -307,75 | 3312450,13 | 137524,2    | 470748,68   | 4-18 | 200  |
| 4 | 3600 | COMB1 | Combination | 1645,36   | 19653,65   | 110,16  | 4045996,27 | 133383,25   | -87084,87   | 4-19 | 0    |
| 4 | 3800 | COMB1 | Combination | 1645,36   | 22372,05   | 110,16  | 4045996,27 | 111350,46   | -4289654,72 | 4-19 | 200  |
| 4 | 3800 | COMB1 | Combination | 2221,77   | 19356,54   | 1980,5  | 5478315,92 | 102822,11   | -4888248,22 | 4-20 | 0    |
| 4 | 4000 | COMB1 | Combination | 2221,77   | 22074,94   | 1980,5  | 5478315,92 | -293277,85  | -9031395,8  | 4-20 | 200  |
| 6 | 0    | COMB1 | Combination | -41189,98 | 56159,24   | 4178,44 | -12688,45  | 11152979,17 | 165104240,1 | 6-1  | 0    |
| 6 | 1800 | COMB1 | Combination | -33776,16 | 56159,24   | 4178,44 | -12688,45  | 3631784,49  | 64017606,69 | 6-1  | 1800 |
| 6 | 3600 | COMB1 | Combination | -26362,33 | 56159,24   | 4178,44 | -12688,45  | -3889410,19 | -37069027   | 6-1  | 3600 |
| 7 | 0    | COMB1 | Combination | -         | 62749,53   | 3685,51 | 61684,76   | 4367770,8   | 63622117,21 | 7-1  | 0    |
| 7 | 1800 | COMB1 | Combination | 269759,33 | 62749,53   | 3685,51 | 61684,76   | -2266152,32 | -49327037   | 7-1  | 1800 |
| 7 | 3600 | COMB1 | Combination | -262345,5 | 62749,53   | 3685,51 | 61684,76   | -8900075,45 | -162276191  | 7-1  | 3600 |
| 9 | 0    | COMB1 | Combination | -6431,53  | -184054,46 | -143,32 | 7651333,65 | -100857,86  | -272052799  | 9-1  | 0    |
| 9 | 225  | COMB1 | Combination | -6431,53  | -177342,3  | -143,32 | 7651333,65 | -68611,69   | -231395663  | 9-1  | 225  |
| 9 | 225  | COMB1 | Combination | -6096,46  | -176928,73 | -92,83  | 6906461,11 | -73221,25   | -230346271  | 9-2  | 0    |
| 9 | 450  | COMB1 | Combination | -6096,46  | -170216,56 | -92,83  | 6906461,11 | -52335,1    | -191292426  | 9-2  | 225  |
| 9 | 450  | COMB1 | Combination | -5785,02  | -168796,26 | -76,64  | 6136959,63 | -56539,77   | -190302932  | 9-3  | 0    |

|   |      |       |             |          |            |        |             |           |             |      |     |
|---|------|-------|-------------|----------|------------|--------|-------------|-----------|-------------|------|-----|
| 9 | 675  | COMB1 | Combination | -5785,02 | -162084,1  | -76,64 | 6136959,63  | -39295,02 | -153078891  | 9-3  | 225 |
| 9 | 675  | COMB1 | Combination | -5504,54 | -160463,58 | -62,15 | 5318480,58  | -43079,99 | -152137112  | 9-4  | 0   |
| 9 | 900  | COMB1 | Combination | -5504,54 | -153751,42 | -62,15 | 5318480,58  | -29096,07 | -116787924  | 9-4  | 225 |
| 9 | 900  | COMB1 | Combination | -5251,71 | -152071,21 | -49,5  | 4483560,45  | -32555,21 | -115894798  | 9-5  | 0   |
| 9 | 1125 | COMB1 | Combination | -5251,71 | -145359,05 | -49,5  | 4483560,45  | -21418,45 | -82433893   | 9-5  | 225 |
| 9 | 1125 | COMB1 | Combination | -5023,98 | -143633,25 | -39,1  | 3647197,24  | -24558,81 | -81589934   | 9-6  | 0   |
| 9 | 1350 | COMB1 | Combination | -5023,98 | -136921,09 | -39,1  | 3647197,24  | -15760,9  | -50027571   | 9-6  | 225 |
| 9 | 1350 | COMB1 | Combination | -4818,64 | -135171,65 | -31,02 | 2823137,18  | -18618,97 | -49232972   | 9-7  | 0   |
| 9 | 1575 | COMB1 | Combination | -4818,64 | -128459,49 | -31,02 | 2823137,18  | -11638,48 | -19574468,3 | 9-7  | 225 |
| 9 | 1575 | COMB1 | Combination | -4633,43 | -126704,02 | -24,93 | 2023411,24  | -14232,23 | -18829313,1 | 9-8  | 0   |
| 9 | 1800 | COMB1 | Combination | -4633,43 | -119991,85 | -24,93 | 2023411,24  | -8621,87  | 8923972,17  | 9-8  | 225 |
| 9 | 1800 | COMB1 | Combination | -4466,22 | -118245,58 | -20,4  | 1258929,25  | -10976,53 | 9619693,67  | 9-9  | 0   |
| 9 | 2025 | COMB1 | Combination | -4466,22 | -111533,42 | -20,4  | 1258929,25  | -6386,76  | 35469831,02 | 9-9  | 225 |
| 9 | 2025 | COMB1 | Combination | -4315,14 | -109810,08 | -17,02 | 539745,06   | -8521,71  | 36116213,41 | 9-10 | 0   |
| 9 | 2250 | COMB1 | Combination | -4315,14 | -103097,92 | -17,02 | 539745,06   | -4691,99  | 60068364,19 | 9-10 | 225 |
| 9 | 2250 | COMB1 | Combination | -4178,53 | -101411,18 | -14,5  | -124506,46  | -6628,33  | 60665581,08 | 9-11 | 0   |
| 9 | 2475 | COMB1 | Combination | -4178,53 | -94699,02  | -14,5  | -124506,46  | -3365,23  | 82727978,8  | 9-11 | 225 |
| 9 | 2475 | COMB1 | Combination | -4054,92 | -93063,91  | -12,64 | -724197,75  | -5120,37  | 83276286,55 | 9-12 | 0   |
| 9 | 2700 | COMB1 | Combination | -4054,92 | -86351,74  | -12,64 | -724197,75  | -2276,53  | 103460547,3 | 9-12 | 225 |
| 9 | 2700 | COMB1 | Combination | -3943    | -84786,25  | -11,29 | -1249360,72 | -3867,35  | 103960297,5 | 9-13 | 0   |
| 9 | 2925 | COMB1 | Combination | -3943    | -78074,09  | -11,29 | -1249360,72 | -1326,25  | 122282085,8 | 9-13 | 225 |
| 9 | 2925 | COMB1 | Combination | -3841,7  | -76600,82  | -10,35 | -1689509,39 | -2766,29  | 122733747   | 9-14 | 0   |
| 9 | 3150 | COMB1 | Combination | -3841,7  | -69888,66  | -10,35 | -1689509,39 | -438,26   | 139213813,9 | 9-14 | 225 |
| 9 | 3150 | COMB1 | Combination | -3750,08 | -68536,6   | -9,62  | -2033755,98 | -1739,72  | 139618002,5 | 9-15 | 0   |
| 9 | 3375 | COMB1 | Combination | -3750,08 | -61824,44  | -9,62  | -2033755,98 | 423,77    | 154283620   | 9-15 | 225 |
| 9 | 3375 | COMB1 | Combination | -3667,46 | -60630,51  | -8,71  | -2271514,63 | -748,31   | 154641139,7 | 9-16 | 0   |

|    |      |       |             |          |           |          |             |           |             |      |     |
|----|------|-------|-------------|----------|-----------|----------|-------------|-----------|-------------|------|-----|
| 9  | 3600 | COMB1 | Combination | -3667,46 | -53918,35 | -8,71    | -2271514,63 | 1212,31   | 167527887,2 | 9-16 | 225 |
| 9  | 3600 | COMB1 | Combination | -3593,36 | -52928,66 | -6,82    | -2394071,69 | 160,99    | 167839777,9 | 9-17 | 0   |
| 9  | 3825 | COMB1 | Combination | -3593,36 | -46216,5  | -6,82    | -2394071,69 | 1694,84   | 178993607,8 | 9-17 | 225 |
| 9  | 3825 | COMB1 | Combination | -3527,57 | -45485,38 | -2,3     | -2398997,41 | 754,05    | 179261123,6 | 9-18 | 0   |
| 9  | 4050 | COMB1 | Combination | -3527,57 | -38773,22 | -2,3     | -2398997,41 | 1271,83   | 188740216,6 | 9-18 | 225 |
| 9  | 4050 | COMB1 | Combination | -3470,26 | -38332,93 | 7,75     | -2301413,34 | 433,2     | 188964364,2 | 9-19 | 0   |
| 9  | 4275 | COMB1 | Combination | -3470,26 | -31620,77 | 7,75     | -2301413,34 | -1311,57  | 196834156,1 | 9-19 | 225 |
| 9  | 4275 | COMB1 | Combination | -3422,73 | -30943,9  | 27,44    | -2162944,65 | -2125     | 197019992,7 | 9-20 | 0   |
| 9  | 4500 | COMB1 | Combination | -3422,73 | -24231,74 | 27,44    | -2162944,65 | -8299,84  | 203227251,7 | 9-20 | 225 |
| 10 | 0    | COMB1 | Combination | -3343    | -15289,02 | -51,26   | 1361657,01  | -17191,14 | 203482092,8 | 10-1 | 0   |
| 10 | 225  | COMB1 | Combination | -3343    | -8576,86  | -51,26   | 1361657,01  | -5656,85  | 206167005   | 10-1 | 225 |
| 10 | 225  | COMB1 | Combination | -3292,82 | -8440,91  | -24,85   | 1546505,55  | -6321,91  | 206218122,8 | 10-2 | 0   |
| 10 | 450  | COMB1 | Combination | -3292,82 | -1728,75  | -24,85   | 1546505,55  | -730,79   | 207362209,4 | 10-2 | 225 |
| 10 | 450  | COMB1 | Combination | -3241,96 | -1361,18  | -10,84   | 1683144,09  | -1416,53  | 207371910,1 | 10-3 | 0   |
| 10 | 675  | COMB1 | Combination | -3241,96 | 5350,98   | -10,84   | 1683144,09  | 1022,92   | 206923057,6 | 10-3 | 225 |
| 10 | 675  | COMB1 | Combination | -3192,94 | 6064,77   | -4,04    | 1715284,63  | 323,01    | 206889934,3 | 10-4 | 0   |
| 10 | 900  | COMB1 | Combination | -3192,94 | 12776,94  | -4,04    | 1715284,63  | 1232,66   | 204770241,8 | 10-4 | 225 |
| 10 | 900  | COMB1 | Combination | -3145,66 | 13756,75  | -1,25    | 1636432,96  | 545,07    | 204692888   | 10-5 | 0   |
| 10 | 1125 | COMB1 | Combination | -3145,66 | 20468,92  | -1,25    | 1636432,96  | 825,58    | 200842500,2 | 10-5 | 225 |
| 10 | 1125 | COMB1 | Combination | -3099,2  | 21655,06  | -0,36    | 1451764,44  | 145,37    | 200719570,7 | 10-6 | 0   |
| 10 | 1350 | COMB1 | Combination | -3099,2  | 28367,22  | -0,36    | 1451764,44  | 225,76    | 195092064,1 | 10-6 | 225 |
| 10 | 1350 | COMB1 | Combination | -3052,29 | 29710,05  | -0,2     | 1171800,51  | -460,99   | 194922517,4 | 10-7 | 0   |
| 10 | 1575 | COMB1 | Combination | -3052,29 | 36422,21  | -0,2     | 1171800,51  | -415,4    | 187482637,8 | 10-7 | 225 |
| 10 | 1575 | COMB1 | Combination | -3003,5  | 37882,46  | -0,18    | 808728,17   | -1128,6   | 187265683,8 | 10-8 | 0   |
| 10 | 1800 | COMB1 | Combination | -3003,5  | 44594,62  | -0,18    | 808728,17   | -1087,31  | 177987011,8 | 10-8 | 225 |
| 10 | 1800 | COMB1 | Combination | -2951,12 | 46141,04  | -0,04516 | 375080,4    | -1852,43  | 177722062   | 10-9 | 0   |

|    |      |       |             |           |           |          |             |            |             |       |     |
|----|------|-------|-------------|-----------|-----------|----------|-------------|------------|-------------|-------|-----|
| 10 | 2025 | COMB1 | Combination | -2951,12  | 52853,2   | -0,04516 | 375080,4    | -1842,27   | 166585210,6 | 10-9  | 225 |
| 10 | 2025 | COMB1 | Combination | -2893,09  | 54460,5   | 0,21     | -116850,6   | -2689,67   | 166271839,2 | 10-10 | 0   |
| 10 | 2250 | COMB1 | Combination | -2893,09  | 61172,67  | 0,21     | -116850,6   | -2737,78   | 153263107,6 | 10-10 | 225 |
| 10 | 2250 | COMB1 | Combination | -2826,68  | 62819,53  | 0,29     | -655079,03  | -3708      | 152901023,3 | 10-11 | 0   |
| 10 | 2475 | COMB1 | Combination | -2826,68  | 69531,7   | 0,29     | -655079,03  | -3772,99   | 138011510   | 10-11 | 225 |
| 10 | 2475 | COMB1 | Combination | -2748,28  | 71198,83  | -0,66    | -1227740,44 | -4915,4    | 137600538,7 | 10-12 | 0   |
| 10 | 2700 | COMB1 | Combination | -2748,28  | 77910,99  | -0,66    | -1227740,44 | -4766,16   | 120825683,4 | 10-12 | 225 |
| 10 | 2700 | COMB1 | Combination | -2652,79  | 79579,28  | -4,46    | -1822778,51 | -6149,76   | 120365761,9 | 10-13 | 0   |
| 10 | 2925 | COMB1 | Combination | -2652,79  | 86291,45  | -4,46    | -1822778,51 | -5145,66   | 101705304,8 | 10-13 | 225 |
| 10 | 2925 | COMB1 | Combination | -2533,21  | 87940,13  | -14,6    | -2427620,05 | -6849,69   | 101196485,3 | 10-14 | 0   |
| 10 | 3150 | COMB1 | Combination | -2533,21  | 94652,29  | -14,6    | -2427620,05 | -3564,15   | 80654837,76 | 10-14 | 225 |
| 10 | 3150 | COMB1 | Combination | -2379,6   | 96257,07  | -37,09   | -3028915,18 | -5701,29   | 80097302,6  | 10-15 | 0   |
| 10 | 3375 | COMB1 | Combination | -2379,6   | 102969,23 | -37,09   | -3028915,18 | 2643,03    | 57684344,39 | 10-15 | 225 |
| 10 | 3375 | COMB1 | Combination | -2178,42  | 104500,56 | -81,05   | -3612564,7  | -32,24     | 57078431,52 | 10-16 | 0   |
| 10 | 3600 | COMB1 | Combination | -2178,42  | 111212,72 | -81,05   | -3612564,7  | 18204,22   | 32810687,82 | 10-16 | 225 |
| 10 | 3600 | COMB1 | Combination | -1909,92  | 112633,04 | -157,78  | -4163812,52 | 14804,62   | 32156920,03 | 10-17 | 0   |
| 10 | 3825 | COMB1 | Combination | -1909,92  | 119345,2  | -157,78  | -4163812,52 | 50305,71   | 6059367,47  | 10-17 | 225 |
| 10 | 3825 | COMB1 | Combination | -1546,69  | 120616,86 | -276,16  | -4668731,14 | 46078,74   | 5358647,89  | 10-18 | 0   |
| 10 | 4050 | COMB1 | Combination | -1546,69  | 127329,02 | -276,16  | -4668731,14 | 108214,2   | -22535262,8 | 10-18 | 225 |
| 10 | 4050 | COMB1 | Combination | -1036,97  | 128312,73 | -421,7   | -5103835,73 | 102541,15  | -23281433,6 | 10-19 | 0   |
| 10 | 4275 | COMB1 | Combination | -1036,97  | 135024,89 | -421,7   | -5103835,73 | 197423,89  | -52906915   | 10-19 | 225 |
| 10 | 4275 | COMB1 | Combination | -303,38   | 134987,56 | -577,97  | -5495986,64 | 189779,46  | -53707599   | 10-20 | 0   |
| 10 | 4500 | COMB1 | Combination | -303,38   | 141699,72 | -577,97  | -5495986,64 | 319822,16  | -84834919   | 10-20 | 225 |
| 11 | 0    | COMB1 | Combination | -51783,8  | 204946,32 | 1030,87  | -3900712,72 | 412,51     | 73221780,83 | 11-1  | 0   |
| 11 | 200  | COMB1 | Combination | -51783,8  | 210912,69 | 1030,87  | -3900712,72 | -205762,21 | 31635880,11 | 11-1  | 200 |
| 11 | 200  | COMB1 | Combination | -51894,66 | 214731,92 | 809,16   | -4326522,79 | -206125,54 | 30215885,92 | 11-2  | 0   |



|    |      |       |             |           |           |        |             |            |             |      |      |
|----|------|-------|-------------|-----------|-----------|--------|-------------|------------|-------------|------|------|
| 11 | 400  | COMB1 | Combination | -51894,66 | 220698,28 | 809,16 | -4326522,79 | -367957,14 | -13327133,8 | 11-2 | 200  |
| 11 | 400  | COMB1 | Combination | -52536,43 | 221527,13 | 663,24 | -4604622,37 | -360980,25 | -14777591,5 | 11-3 | 0    |
| 11 | 600  | COMB1 | Combination | -52536,43 | 227493,5  | 663,24 | -4604622,37 | -493628,56 | -59679655   | 11-3 | 200  |
| 11 | 600  | COMB1 | Combination | -53650,84 | 227550,67 | 660,5  | -4759226,52 | -478859,71 | -61173392   | 11-4 | 0    |
| 11 | 800  | COMB1 | Combination | -53650,84 | 233517,04 | 660,5  | -4759226,52 | -610960,07 | -107280163  | 11-4 | 200  |
| 11 | 800  | COMB1 | Combination | -55171,11 | 230887,91 | 939,02 | -4852225,01 | -590563,72 | -108829181  | 11-5 | 0    |
| 11 | 1000 | COMB1 | Combination | -55171,11 | 236854,28 | 939,02 | -4852225,01 | -778368,09 | -155603400  | 11-5 | 200  |
| 12 | 0    | COMB1 | Combination | -56194,47 | -29464,89 | -44,67 | 1205514,26  | -87102,42  | -67046466   | 12-1 | 0    |
| 12 | 500  | COMB1 | Combination | -56194,47 | -26787,67 | -44,67 | 1205514,26  | -64768,12  | -52983327   | 12-1 | 500  |
| 12 | 1000 | COMB1 | Combination | -56194,47 | -24110,45 | -44,67 | 1205514,26  | -42433,82  | -40258796   | 12-1 | 1000 |
| 12 | 1500 | COMB1 | Combination | -56194,47 | -21433,24 | -44,67 | 1205514,26  | -20099,52  | -28872872,9 | 12-1 | 1500 |
| 12 | 2000 | COMB1 | Combination | -56194,47 | -18756,02 | -44,67 | 1205514,26  | 2234,79    | -18825557,5 | 12-1 | 2000 |
| 12 | 2500 | COMB1 | Combination | -56194,47 | -16078,81 | -44,67 | 1205514,26  | 24569,09   | -10116849,8 | 12-1 | 2500 |
| 12 | 3000 | COMB1 | Combination | -56194,47 | -13401,59 | -44,67 | 1205514,26  | 46903,39   | -2746749,88 | 12-1 | 3000 |
| 12 | 3500 | COMB1 | Combination | -56194,47 | -10724,38 | -44,67 | 1205514,26  | 69237,69   | 3284742,28  | 12-1 | 3500 |
| 12 | 4000 | COMB1 | Combination | -56194,47 | -8047,16  | -44,67 | 1205514,26  | 91571,99   | 7977626,69  | 12-1 | 4000 |
| 12 | 4500 | COMB1 | Combination | -56194,47 | -5369,95  | -44,67 | 1205514,26  | 113906,29  | 11331903,35 | 12-1 | 4500 |
| 13 | 0    | COMB1 | Combination | -56171,48 | -1334,5   | 13,53  | -1439111,78 | 67881,13   | 11302974,59 | 13-1 | 0    |
| 13 | 500  | COMB1 | Combination | -56171,48 | 1342,72   | 13,53  | -1439111,78 | 61116,45   | 11300919,85 | 13-1 | 500  |
| 13 | 1000 | COMB1 | Combination | -56171,48 | 4019,93   | 13,53  | -1439111,78 | 54351,77   | 9960257,35  | 13-1 | 1000 |
| 13 | 1500 | COMB1 | Combination | -56171,48 | 6697,15   | 13,53  | -1439111,78 | 47587,09   | 7280987,1   | 13-1 | 1500 |
| 13 | 2000 | COMB1 | Combination | -56171,48 | 9374,36   | 13,53  | -1439111,78 | 40822,41   | 3263109,1   | 13-1 | 2000 |
| 13 | 2500 | COMB1 | Combination | -56171,48 | 12051,58  | 13,53  | -1439111,78 | 34057,74   | -2093376,65 | 13-1 | 2500 |
| 13 | 3000 | COMB1 | Combination | -56171,48 | 14728,79  | 13,53  | -1439111,78 | 27293,06   | -8788470,16 | 13-1 | 3000 |
| 13 | 3500 | COMB1 | Combination | -56171,48 | 17406,01  | 13,53  | -1439111,78 | 20528,38   | -16822171,4 | 13-1 | 3500 |
| 13 | 4000 | COMB1 | Combination | -56171,48 | 20083,23  | 13,53  | -1439111,78 | 13763,7    | -26194480,4 | 13-1 | 4000 |

|    |      |       |             |           |            |           |              |              |             |      |      |
|----|------|-------|-------------|-----------|------------|-----------|--------------|--------------|-------------|------|------|
| 13 | 4500 | COMB1 | Combination | -56171,48 | 22760,44   | 13,53     | -1439111,78  | 6999,02      | -36905397   | 13-1 | 4500 |
| 14 | 0    | COMB1 | Combination | 294351,04 | -57030,5   | 1,855E-09 | -2,586E-07   | 0,000003265  | -75942300   | 14-1 | 0    |
| 14 | 1800 | COMB1 | Combination | 286937,21 | -57030,5   | 1,855E-09 | -2,586E-07   | -7,323E-08   | 26712608,08 | 14-1 | 1800 |
| 14 | 3600 | COMB1 | Combination | 279523,38 | -57030,5   | 1,855E-09 | -2,586E-07   | -0,000003411 | 129367516   | 14-1 | 3600 |
| 15 | 0    | COMB1 | Combination | -52626,86 | -52453,96  | 5,588E-10 | -0,000000148 | 0,000001247  | -122514081  | 15-1 | 0    |
| 15 | 1800 | COMB1 | Combination | -45213,04 | -52453,96  | 5,588E-10 | -0,000000148 | 2,411E-07    | -28096946,4 | 15-1 | 1800 |
| 15 | 3600 | COMB1 | Combination | -37799,21 | -52453,96  | 5,588E-10 | -0,000000148 | -7,647E-07   | 66320187,89 | 15-1 | 3600 |
| 16 | 0    | COMB1 | Combination | -47036,74 | 52582,8    | 2,766E-09 | -1,273E-07   | 0,000006627  | 152286428,6 | 16-1 | 0    |
| 16 | 1800 | COMB1 | Combination | -39622,91 | 52582,8    | 2,766E-09 | -1,273E-07   | 0,000001648  | 57637394,77 | 16-1 | 1800 |
| 16 | 3600 | COMB1 | Combination | -32209,09 | 52582,8    | 2,766E-09 | -1,273E-07   | -0,00000333  | -37011639   | 16-1 | 3600 |
| 17 | 0    | COMB1 | Combination | 293010,19 | 59064,08   | 6,038E-10 | -2,845E-07   | 2,013E-07    | 59358273,31 | 17-1 | 0    |
| 17 | 1800 | COMB1 | Combination | 285596,36 | 59064,08   | 6,038E-10 | -2,845E-07   | -8,856E-07   | -46957069   | 17-1 | 1800 |
| 17 | 3600 | COMB1 | Combination | 278182,54 | 59064,08   | 6,038E-10 | -2,845E-07   | -0,000001973 | -153272411  | 17-1 | 3600 |
| 18 | 0    | COMB1 | Combination | -3367,67  | -144083,31 | 6,816E-11 | 0,000005433  | 7,303E-08    | -233782091  | 18-1 | 0    |
| 18 | 225  | COMB1 | Combination | -3367,67  | -142878,56 | 6,816E-11 | 0,000005433  | 5,77E-08     | -201498881  | 18-1 | 225  |
| 18 | 225  | COMB1 | Combination | -3061,2   | -138217,14 | 8,1E-11   | 0,000005559  | 6,586E-08    | -199848440  | 18-2 | 0    |
| 18 | 450  | COMB1 | Combination | -3061,2   | -137012,39 | 8,1E-11   | 0,000005559  | 4,764E-08    | -168885118  | 18-2 | 225  |
| 18 | 450  | COMB1 | Combination | -2801,73  | -132600,61 | 7,118E-11 | 0,000005677  | 3,705E-08    | -167312750  | 18-3 | 0    |
| 18 | 675  | COMB1 | Combination | -2801,73  | -131395,86 | 7,118E-11 | 0,000005677  | 2,104E-08    | -137613147  | 18-3 | 225  |
| 18 | 675  | COMB1 | Combination | -2591,15  | -127052    | 1,59E-10  | 0,00000555   | 2,42E-08     | -136105360  | 18-4 | 0    |
| 18 | 900  | COMB1 | Combination | -2591,15  | -125847,26 | 1,59E-10  | 0,00000555   | -1,158E-08   | -107654193  | 18-4 | 225  |
| 18 | 900  | COMB1 | Combination | -2420,56  | -121474,98 | 1,855E-10 | 0,000005164  | -2,083E-08   | -106211117  | 18-5 | 0    |
| 18 | 1125 | COMB1 | Combination | -2420,56  | -120270,23 | 1,855E-10 | 0,000005164  | -6,256E-08   | -79014780   | 18-5 | 225  |

|    |      |       |             |          |            |            |             |             |             |       |     |
|----|------|-------|-------------|----------|------------|------------|-------------|-------------|-------------|-------|-----|
| 18 | 1125 | COMB1 | Combination | -2283,47 | -115803,98 | -1,22E-10  | 0,000004597 | -5,934E-08  | -77637359   | 18-6  | 0   |
| 18 | 1350 | COMB1 | Combination | -2283,47 | -114599,23 | -1,22E-10  | 0,000004597 | -3,189E-08  | -51716997   | 18-6  | 225 |
| 18 | 1350 | COMB1 | Combination | -2174,33 | -110041,52 | -1,616E-11 | 0,000003785 | -3,381E-08  | -50406300   | 18-7  | 0   |
| 18 | 1575 | COMB1 | Combination | -2174,33 | -108836,77 | -1,616E-11 | 0,000003785 | -3,018E-08  | -25782492,6 | 18-7  | 225 |
| 18 | 1575 | COMB1 | Combination | -2088,84 | -104206,41 | -4,73E-11  | 0,000003009 | -4,042E-08  | -24539473   | 18-8  | 0   |
| 18 | 1800 | COMB1 | Combination | -2088,84 | -103001,66 | -4,73E-11  | 0,000003009 | -2,977E-08  | -1228564,84 | 18-8  | 225 |
| 18 | 1800 | COMB1 | Combination | -2023,39 | -98324,82  | -1,131E-10 | 0,000002314 | -2,907E-08  | -53913,98   | 18-9  | 0   |
| 18 | 2025 | COMB1 | Combination | -2023,39 | -97120,08  | -1,131E-10 | 0,000002314 | -3,63E-09   | 21933637,02 | 18-9  | 225 |
| 18 | 2025 | COMB1 | Combination | -1974,92 | -92426,25  | 7,171E-11  | 0,000001889 | -5,797E-09  | 23039550,7  | 18-10 | 0   |
| 18 | 2250 | COMB1 | Combination | -1974,92 | -91221,5   | 7,171E-11  | 0,000001889 | -2,193E-08  | 43699922,7  | 18-10 | 225 |
| 18 | 2250 | COMB1 | Combination | -1940,76 | -86543,48  | -1,775E-10 | 0,000001836 | -2,849E-08  | 44737091,86 | 18-11 | 0   |
| 18 | 2475 | COMB1 | Combination | -1940,76 | -85338,74  | -1,775E-10 | 0,000001836 | 1,145E-08   | 64073841,86 | 18-11 | 225 |
| 18 | 2475 | COMB1 | Combination | -1918,58 | -80713,94  | -2,08E-11  | 0,000002357 | 1,783E-08   | 65042666,4  | 18-12 | 0   |
| 18 | 2700 | COMB1 | Combination | -1918,58 | -79509,19  | -2,08E-11  | 0,000002357 | 2,251E-08   | 83067768,04 | 18-12 | 225 |
| 18 | 2700 | COMB1 | Combination | -1906,27 | -74981,76  | -6,801E-11 | 0,00000288  | 1,944E-08   | 83969120,74 | 18-13 | 0   |
| 18 | 2925 | COMB1 | Combination | -1906,27 | -73777,01  | -6,801E-11 | 0,00000288  | 3,474E-08   | 100704482,3 | 18-13 | 225 |
| 18 | 2925 | COMB1 | Combination | -1901,95 | -69400,35  | -8,166E-11 | 0,000002897 | 3,572E-08   | 101539800,8 | 18-14 | 0   |
| 18 | 3150 | COMB1 | Combination | -1901,95 | -68195,6   | -8,166E-11 | 0,000002897 | 5,409E-08   | 117019345,8 | 18-14 | 225 |
| 18 | 3150 | COMB1 | Combination | -1903,92 | -64035,06  | -4,623E-11 | 0,00000263  | 3,76E-08    | 117790753,1 | 18-15 | 0   |
| 18 | 3375 | COMB1 | Combination | -1903,92 | -62830,31  | -4,623E-11 | 0,00000263  | 0,000000048 | 132063106,6 | 18-15 | 225 |
| 18 | 3375 | COMB1 | Combination | -1910,67 | -58964,48  | -4,09E-11  | 0,000002279 | 0,000000035 | 132773549,1 | 18-16 | 0   |
| 18 | 3600 | COMB1 | Combination | -1910,67 | -57759,74  | -4,09E-11  | 0,000002279 | 4,42E-08    | 145905023,6 | 18-16 | 225 |
| 18 | 3600 | COMB1 | Combination | -1920,77 | -54279,73  | 8,619E-12  | 0,000002505 | 2,489E-08   | 146558421,5 | 18-17 | 0   |
| 18 | 3825 | COMB1 | Combination | -1920,77 | -53074,98  | 8,619E-12  | 0,000002505 | 2,295E-08   | 158635825,7 | 18-17 | 225 |
| 18 | 3825 | COMB1 | Combination | -1932,89 | -50070,1   | 1,8E-11    | 0,000003117 | 2,457E-08   | 159236875   | 18-18 | 0   |
| 18 | 4050 | COMB1 | Combination | -1932,89 | -48865,35  | 1,8E-11    | 0,000003117 | 2,052E-08   | 170367112,9 | 18-18 | 225 |

|    |      |       |             |          |           |            |              |            |             |       |     |
|----|------|-------|-------------|----------|-----------|------------|--------------|------------|-------------|-------|-----|
| 18 | 4050 | COMB1 | Combination | -1945,66 | -46290,61 | 6,138E-11  | 0,000003518  | 1,526E-08  | 170919157,9 | 18-19 | 0   |
| 18 | 4275 | COMB1 | Combination | -1945,66 | -45085,86 | 6,138E-11  | 0,000003518  | 1,448E-09  | 181199010,6 | 18-19 | 225 |
| 18 | 4275 | COMB1 | Combination | -1957,33 | -40780,8  | -1,199E-10 | 0,000003516  | -4,327E-09 | 181714594,7 | 18-20 | 0   |
| 18 | 4500 | COMB1 | Combination | -1957,33 | -39576,06 | -1,199E-10 | 0,000003516  | 2,265E-08  | 190754741,5 | 18-20 | 225 |
| 19 | 0    | COMB1 | Combination | -1971,76 | 2241,11   | 1,16E-10   | 0,000001788  | 1,42E-09   | 191350493,8 | 19-1  | 0   |
| 19 | 225  | COMB1 | Combination | -1971,76 | 3445,86   | 1,16E-10   | 0,000001788  | -2,469E-08 | 190710710,2 | 19-1  | 225 |
| 19 | 225  | COMB1 | Combination | -1976,65 | 6813,68   | 2,899E-11  | 0,000001572  | -2,358E-08 | 190644661,9 | 19-2  | 0   |
| 19 | 450  | COMB1 | Combination | -1976,65 | 8018,43   | 2,899E-11  | 0,000001572  | -3,01E-08  | 188976049,2 | 19-2  | 225 |
| 19 | 450  | COMB1 | Combination | -1978,97 | 10478,83  | -5,788E-12 | 0,000001288  | -1,629E-08 | 188870645,5 | 19-3  | 0   |
| 19 | 675  | COMB1 | Combination | -1978,97 | 11683,57  | -5,788E-12 | 0,000001288  | -1,499E-08 | 186377375,6 | 19-3  | 225 |
| 19 | 675  | COMB1 | Combination | -1977,43 | 14672,39  | 2,455E-11  | 0,000002119  | -4,142E-08 | 186224222   | 19-4  | 0   |
| 19 | 900  | COMB1 | Combination | -1977,43 | 15877,14  | 2,455E-11  | 0,000002119  | -4,694E-08 | 182787399,6 | 19-4  | 225 |
| 19 | 900  | COMB1 | Combination | -1970,9  | 19355,32  | -1,717E-10 | 9,021E-07    | -4,668E-08 | 182582120,8 | 19-5  | 0   |
| 19 | 1125 | COMB1 | Combination | -1970,9  | 20560,07  | -1,717E-10 | 9,021E-07    | -8,044E-09 | 178091639,1 | 19-5  | 225 |
| 19 | 1125 | COMB1 | Combination | -1958,21 | 24429,43  | -1,58E-10  | -5,191E-07   | 1,402E-09  | 177829310,7 | 19-6  | 0   |
| 19 | 1350 | COMB1 | Combination | -1958,21 | 25634,18  | -1,58E-10  | -5,191E-07   | 3,694E-08  | 172197154,5 | 19-6  | 225 |
| 19 | 1350 | COMB1 | Combination | -1938    | 29797,89  | -1,235E-10 | -0,000001451 | 3,878E-08  | 171873826,8 | 19-7  | 0   |
| 19 | 1575 | COMB1 | Combination | -1938    | 31002,63  | -1,235E-10 | -0,000001451 | 6,657E-08  | 165033768,1 | 19-7  | 225 |
| 19 | 1575 | COMB1 | Combination | -1908,74 | 35378,13  | 9,142E-11  | -0,000002368 | 6,073E-08  | 164646519   | 19-8  | 0   |
| 19 | 1800 | COMB1 | Combination | -1908,74 | 36582,88  | 9,142E-11  | -0,000002368 | 4,016E-08  | 156550905,2 | 19-8  | 225 |
| 19 | 1800 | COMB1 | Combination | -1868,52 | 41100,72  | 3,524E-11  | -0,000002863 | 3,579E-08  | 156097684,6 | 19-9  | 0   |
| 19 | 2025 | COMB1 | Combination | -1868,52 | 42305,47  | 3,524E-11  | -0,000002863 | 2,786E-08  | 146714487,7 | 19-9  | 225 |
| 19 | 2025 | COMB1 | Combination | -1815,01 | 46907,18  | -4,439E-11 | -0,000003502 | 9,242E-09  | 146193984,9 | 19-10 | 0   |
| 19 | 2250 | COMB1 | Combination | -1815,01 | 48111,93  | -4,439E-11 | -0,000003502 | 1,923E-08  | 135504334,9 | 19-10 | 225 |
| 19 | 2250 | COMB1 | Combination | -1745,07 | 52746,75  | -2,301E-10 | -0,000004275 | 1,065E-08  | 134915872,1 | 19-11 | 0   |
| 19 | 2475 | COMB1 | Combination | -1745,07 | 53951,5   | -2,301E-10 | -0,000004275 | 6,241E-08  | 122912319,5 | 19-11 | 225 |

|    |      |       |             |           |           |            |              |            |             |       |     |
|----|------|-------|-------------|-----------|-----------|------------|--------------|------------|-------------|-------|-----|
| 19 | 2475 | COMB1 | Combination | -1654,49  | 58573,33  | 4,237E-12  | -0,000004167 | 5,907E-08  | 122255780,7 | 19-12 | 0   |
| 19 | 2700 | COMB1 | Combination | -1654,49  | 59778,08  | 4,237E-12  | -0,000004167 | 5,812E-08  | 108941246,7 | 19-12 | 225 |
| 19 | 2700 | COMB1 | Combination | -1537,13  | 64342,69  | 2,49E-11   | -0,000003833 | 5,303E-08  | 108217039,9 | 19-13 | 0   |
| 19 | 2925 | COMB1 | Combination | -1537,13  | 65547,44  | 2,49E-11   | -0,000003833 | 4,743E-08  | 93604400,28 | 19-13 | 225 |
| 19 | 2925 | COMB1 | Combination | -1384,1   | 70010,16  | 7,643E-11  | -0,000003317 | 3,574E-08  | 92813449    | 19-14 | 0   |
| 19 | 3150 | COMB1 | Combination | -1384,1   | 71214,91  | 7,643E-11  | -0,000003317 | 1,854E-08  | 76925628,11 | 19-14 | 225 |
| 19 | 3150 | COMB1 | Combination | -1181,31  | 75529,29  | -9,344E-11 | -0,000003047 | 2,227E-10  | 76069383,4  | 19-15 | 0   |
| 19 | 3375 | COMB1 | Combination | -1181,31  | 76734,03  | -9,344E-11 | -0,000003047 | 2,125E-08  | 58939759,89 | 19-15 | 225 |
| 19 | 3375 | COMB1 | Combination | -907,11   | 80853,45  | -1,575E-10 | -0,000002782 | -4,401E-09 | 58020209,14 | 19-16 | 0   |
| 19 | 3600 | COMB1 | Combination | -907,11   | 82058,19  | -1,575E-10 | -0,000002782 | 3,104E-08  | 39692649,7  | 19-16 | 225 |
| 19 | 3600 | COMB1 | Combination | -524,37   | 85941,37  | -6,722E-11 | -0,000002562 | 2,692E-08  | 38712277,92 | 19-17 | 0   |
| 19 | 3825 | COMB1 | Combination | -524,37   | 87146,11  | -6,722E-11 | -0,000002562 | 4,204E-08  | 19239936,49 | 19-17 | 225 |
| 19 | 3825 | COMB1 | Combination | 26,72     | 90797,27  | -8,72E-11  | -0,000002657 | 4,412E-08  | 18201561,31 | 19-18 | 0   |
| 19 | 4050 | COMB1 | Combination | 26,72     | 92002,02  | -8,72E-11  | -0,000002657 | 6,374E-08  | -2363359,11 | 19-18 | 225 |
| 19 | 4050 | COMB1 | Combination | 866,15    | 95471,21  | -4,784E-10 | -0,000002988 | 3,714E-08  | -3457284,07 | 19-19 | 0   |
| 19 | 4275 | COMB1 | Combination | 866,15    | 96675,96  | -4,784E-10 | -0,000002988 | 1,448E-07  | -25073840,4 | 19-19 | 225 |
| 19 | 4275 | COMB1 | Combination | 2171,33   | 100362,16 | -6,879E-10 | -0,000003261 | 1,408E-07  | -26229801,9 | 19-20 | 0   |
| 19 | 4500 | COMB1 | Combination | 2171,33   | 101566,9  | -6,879E-10 | -0,000003261 | 2,956E-07  | -48946821   | 19-20 | 225 |
| 20 | 0    | COMB1 | Combination | -41206,81 | 207609,4  | 2,215E-10  | -0,000003472 | 4,105E-09  | 89383834,86 | 20-1  | 0   |
| 20 | 200  | COMB1 | Combination | -41206,81 | 208680,29 | 2,215E-10  | -0,000003472 | -4,02E-08  | 47754866,21 | 20-1  | 200 |
| 20 | 200  | COMB1 | Combination | -40799,1  | 216352,15 | -1,186E-10 | -0,000003543 | -4,422E-08 | 44922694,78 | 20-2  | 0   |
| 20 | 400  | COMB1 | Combination | -40799,1  | 217423,03 | -1,186E-10 | -0,000003543 | -2,051E-08 | 1545176,57  | 20-2  | 200 |
| 20 | 400  | COMB1 | Combination | -41350,17 | 219546,38 | 1,508E-10  | -0,000003615 | -2,652E-08 | -1317646,73 | 20-3  | 0   |
| 20 | 600  | COMB1 | Combination | -41350,17 | 220617,26 | 1,508E-10  | -0,000003615 | -5,668E-08 | -45334010   | 20-3  | 200 |
| 20 | 600  | COMB1 | Combination | -42843,69 | 221765,42 | 1,605E-10  | -0,000003646 | -6,061E-08 | -48235078   | 20-4  | 0   |
| 20 | 800  | COMB1 | Combination | -42843,69 | 222836,3  | 1,605E-10  | -0,000003646 | -9,271E-08 | -92695250   | 20-4  | 200 |

|    |      |       |             |           |           |            |              |             |             |      |      |
|----|------|-------|-------------|-----------|-----------|------------|--------------|-------------|-------------|------|------|
| 20 | 800  | COMB1 | Combination | -45212,36 | 220146,29 | 4,27E-10   | -0,000003624 | -9,37E-08   | -95641260   | 20-5 | 0    |
| 20 | 1000 | COMB1 | Combination | -45212,36 | 221217,18 | 4,27E-10   | -0,000003624 | -1,791E-07  | -139777606  | 20-5 | 200  |
| 21 | 0    | COMB1 | Combination | -52512,33 | -30832,15 | -2,015E-10 | 2,532E-07    | -5,174E-07  | -66567138   | 21-1 | 0    |
| 21 | 500  | COMB1 | Combination | -52512,33 | -28154,94 | -2,015E-10 | 2,532E-07    | -4,167E-07  | -51820365   | 21-1 | 500  |
| 21 | 1000 | COMB1 | Combination | -52512,33 | -25477,72 | -2,015E-10 | 2,532E-07    | -3,159E-07  | -38412200   | 21-1 | 1000 |
| 21 | 1500 | COMB1 | Combination | -52512,33 | -22800,51 | -2,015E-10 | 2,532E-07    | -2,152E-07  | -26342642,9 | 21-1 | 1500 |
| 21 | 2000 | COMB1 | Combination | -52512,33 | -20123,29 | -2,015E-10 | 2,532E-07    | -1,144E-07  | -15611693,4 | 21-1 | 2000 |
| 21 | 2500 | COMB1 | Combination | -52512,33 | -17446,08 | -2,015E-10 | 2,532E-07    | -1,366E-08  | -6219351,72 | 21-1 | 2500 |
| 21 | 3000 | COMB1 | Combination | -52512,33 | -14768,86 | -2,015E-10 | 2,532E-07    | 8,709E-08   | 1834382,22  | 21-1 | 3000 |
| 21 | 3500 | COMB1 | Combination | -52512,33 | -12091,64 | -2,015E-10 | 2,532E-07    | 1,878E-07   | 8549508,4   | 21-1 | 3500 |
| 21 | 4000 | COMB1 | Combination | -52512,33 | -9414,43  | -2,015E-10 | 2,532E-07    | 2,886E-07   | 13926026,84 | 21-1 | 4000 |
| 21 | 4500 | COMB1 | Combination | -52512,33 | -6737,21  | -2,015E-10 | 2,532E-07    | 3,894E-07   | 17963937,52 | 21-1 | 4500 |
| 22 | 0    | COMB1 | Combination | -52558,32 | 254,91    | -1,972E-10 | -1,416E-07   | -3,604E-07  | 18021795,05 | 22-1 | 0    |
| 22 | 500  | COMB1 | Combination | -52558,32 | 2932,12   | -1,972E-10 | -1,416E-07   | -2,618E-07  | 17225037,93 | 22-1 | 500  |
| 22 | 1000 | COMB1 | Combination | -52558,32 | 5609,34   | -1,972E-10 | -1,416E-07   | -1,632E-07  | 15089673,06 | 22-1 | 1000 |
| 22 | 1500 | COMB1 | Combination | -52558,32 | 8286,55   | -1,972E-10 | -1,416E-07   | -6,46E-08   | 11615700,44 | 22-1 | 1500 |
| 22 | 2000 | COMB1 | Combination | -52558,32 | 10963,77  | -1,972E-10 | -1,416E-07   | 3,401E-08   | 6803120,06  | 22-1 | 2000 |
| 22 | 2500 | COMB1 | Combination | -52558,32 | 13640,98  | -1,972E-10 | -1,416E-07   | 1,326E-07   | 651931,93   | 22-1 | 2500 |
| 22 | 3000 | COMB1 | Combination | -52558,32 | 16318,2   | -1,972E-10 | -1,416E-07   | 2,312E-07   | -6837863,95 | 22-1 | 3000 |
| 22 | 3500 | COMB1 | Combination | -52558,32 | 18995,42  | -1,972E-10 | -1,416E-07   | 3,298E-07   | -15666267,6 | 22-1 | 3500 |
| 22 | 4000 | COMB1 | Combination | -52558,32 | 21672,63  | -1,972E-10 | -1,416E-07   | 4,285E-07   | -25833279   | 22-1 | 4000 |
| 22 | 4500 | COMB1 | Combination | -52558,32 | 24349,85  | -1,972E-10 | -1,416E-07   | 5,271E-07   | -37338898   | 22-1 | 4500 |
| 23 | 0    | COMB1 | Combination | 285786,55 | -63766,32 | -4890,43   | 14459,99     | -5793477,82 | -83770094   | 23-1 | 0    |
| 23 | 1800 | COMB1 | Combination | 278372,72 | -63766,32 | -4890,43   | 14459,99     | 3009296,6   | 31009277,45 | 23-1 | 1800 |
| 23 | 3600 | COMB1 | Combination | 270958,89 | -63766,32 | -4890,43   | 14459,99     | 11812071,02 | 145788649   | 23-1 | 3600 |

|    |      |       |             |           |            |          |             |             |             |      |      |
|----|------|-------|-------------|-----------|------------|----------|-------------|-------------|-------------|------|------|
| 24 | 0    | COMB1 | Combination | -48340,52 | -56223,66  | -4301,5  | -26958,21   | -11046623,7 | -135235226  | 24-1 | 0    |
| 24 | 1800 | COMB1 | Combination | -40926,69 | -56223,66  | -4301,5  | -26958,21   | -3303916,37 | -34032643   | 24-1 | 1800 |
| 24 | 3600 | COMB1 | Combination | -33512,87 | -56223,66  | -4301,5  | -26958,21   | 4438790,97  | 67169940,58 | 24-1 | 3600 |
| 25 | 0    | COMB1 | Combination | -41189,98 | 56159,24   | -4178,44 | 12688,45    | -11152979,2 | 165104240,1 | 25-1 | 0    |
| 25 | 1800 | COMB1 | Combination | -33776,16 | 56159,24   | -4178,44 | 12688,45    | -3631784,49 | 64017606,69 | 25-1 | 1800 |
| 25 | 3600 | COMB1 | Combination | -26362,33 | 56159,24   | -4178,44 | 12688,45    | 3889410,19  | -37069027   | 25-1 | 3600 |
| 26 | 0    | COMB1 | Combination | 277173,15 | 62749,53   | -3685,51 | -61684,76   | -4367770,8  | 63622117,21 | 26-1 | 0    |
| 26 | 1800 | COMB1 | Combination | 269759,33 | 62749,53   | -3685,51 | -61684,76   | 2266152,32  | -49327037   | 26-1 | 1800 |
| 26 | 3600 | COMB1 | Combination | -262345,5 | 62749,53   | -3685,51 | -61684,76   | 8900075,45  | -162276191  | 26-1 | 3600 |
| 27 | 0    | COMB1 | Combination | -6431,53  | -184054,46 | 143,32   | -7651333,65 | 100857,86   | -272052799  | 27-1 | 0    |
| 27 | 225  | COMB1 | Combination | -6431,53  | -177342,3  | 143,32   | -7651333,65 | 68611,69    | -231395663  | 27-1 | 225  |
| 27 | 225  | COMB1 | Combination | -6096,46  | -176928,73 | 92,83    | -6906461,11 | 73221,25    | -230346271  | 27-2 | 0    |
| 27 | 450  | COMB1 | Combination | -6096,46  | -170216,56 | 92,83    | -6906461,11 | 52335,1     | -191292426  | 27-2 | 225  |
| 27 | 450  | COMB1 | Combination | -5785,02  | -168796,26 | 76,64    | -6136959,63 | 56539,77    | -190302932  | 27-3 | 0    |
| 27 | 675  | COMB1 | Combination | -5785,02  | -162084,1  | 76,64    | -6136959,63 | 39295,02    | -153078891  | 27-3 | 225  |
| 27 | 675  | COMB1 | Combination | -5504,54  | -160463,58 | 62,15    | -5318480,58 | 43079,99    | -152137112  | 27-4 | 0    |
| 27 | 900  | COMB1 | Combination | -5504,54  | -153751,42 | 62,15    | -5318480,58 | 29096,07    | -116787924  | 27-4 | 225  |
| 27 | 900  | COMB1 | Combination | -5251,71  | -152071,21 | 49,5     | -4483560,45 | 32555,21    | -115894798  | 27-5 | 0    |
| 27 | 1125 | COMB1 | Combination | -5251,71  | -145359,05 | 49,5     | -4483560,45 | 21418,45    | -82433893   | 27-5 | 225  |
| 27 | 1125 | COMB1 | Combination | -5023,98  | -143633,25 | 39,1     | -3647197,24 | 24558,81    | -81589934   | 27-6 | 0    |
| 27 | 1350 | COMB1 | Combination | -5023,98  | -136921,09 | 39,1     | -3647197,24 | 15760,9     | -50027571   | 27-6 | 225  |
| 27 | 1350 | COMB1 | Combination | -4818,64  | -135171,65 | 31,02    | -2823137,18 | 18618,97    | -49232972   | 27-7 | 0    |
| 27 | 1575 | COMB1 | Combination | -4818,64  | -128459,49 | 31,02    | -2823137,18 | 11638,48    | -19574468,3 | 27-7 | 225  |
| 27 | 1575 | COMB1 | Combination | -4633,43  | -126704,02 | 24,93    | -2023411,24 | 14232,23    | -18829313,1 | 27-8 | 0    |
| 27 | 1800 | COMB1 | Combination | -4633,43  | -119991,85 | 24,93    | -2023411,24 | 8621,87     | 8923972,17  | 27-8 | 225  |

|    |      |       |             |          |            |        |             |          |             |       |     |
|----|------|-------|-------------|----------|------------|--------|-------------|----------|-------------|-------|-----|
| 27 | 1800 | COMB1 | Combination | -4466,22 | -118245,58 | 20,4   | -1258929,25 | 10976,53 | 9619693,67  | 27-9  | 0   |
| 27 | 2025 | COMB1 | Combination | -4466,22 | -111533,42 | 20,4   | -1258929,25 | 6386,76  | 35469831,02 | 27-9  | 225 |
| 27 | 2025 | COMB1 | Combination | -4315,14 | -109810,08 | 17,02  | -539745,06  | 8521,71  | 36116213,41 | 27-10 | 0   |
| 27 | 2250 | COMB1 | Combination | -4315,14 | -103097,92 | 17,02  | -539745,06  | 4691,99  | 60068364,19 | 27-10 | 225 |
| 27 | 2250 | COMB1 | Combination | -4178,53 | -101411,18 | 14,5   | 124506,46   | 6628,33  | 60665581,08 | 27-11 | 0   |
| 27 | 2475 | COMB1 | Combination | -4178,53 | -94699,02  | 14,5   | 124506,46   | 3365,23  | 82727978,8  | 27-11 | 225 |
| 27 | 2475 | COMB1 | Combination | -4054,92 | -93063,91  | 12,64  | 724197,75   | 5120,37  | 83276286,55 | 27-12 | 0   |
| 27 | 2700 | COMB1 | Combination | -4054,92 | -86351,74  | 12,64  | 724197,75   | 2276,53  | 103460547,3 | 27-12 | 225 |
| 27 | 2700 | COMB1 | Combination | -3943    | -84786,25  | 11,29  | 1249360,72  | 3867,35  | 103960297,5 | 27-13 | 0   |
| 27 | 2925 | COMB1 | Combination | -3943    | -78074,09  | 11,29  | 1249360,72  | 1326,25  | 122282085,8 | 27-13 | 225 |
| 27 | 2925 | COMB1 | Combination | -3841,7  | -76600,82  | 10,35  | 1689509,39  | 2766,29  | 122733747   | 27-14 | 0   |
| 27 | 3150 | COMB1 | Combination | -3841,7  | -69888,66  | 10,35  | 1689509,39  | 438,26   | 139213813,9 | 27-14 | 225 |
| 27 | 3150 | COMB1 | Combination | -3750,08 | -68536,6   | 9,62   | 2033755,98  | 1739,72  | 139618002,5 | 27-15 | 0   |
| 27 | 3375 | COMB1 | Combination | -3750,08 | -61824,44  | 9,62   | 2033755,98  | -423,77  | 154283620   | 27-15 | 225 |
| 27 | 3375 | COMB1 | Combination | -3667,46 | -60630,51  | 8,71   | 2271514,63  | 748,31   | 154641139,7 | 27-16 | 0   |
| 27 | 3600 | COMB1 | Combination | -3667,46 | -53918,35  | 8,71   | 2271514,63  | -1212,31 | 167527887,2 | 27-16 | 225 |
| 27 | 3600 | COMB1 | Combination | -3593,36 | -52928,66  | 6,82   | 2394071,69  | -160,99  | 167839777,9 | 27-17 | 0   |
| 27 | 3825 | COMB1 | Combination | -3593,36 | -46216,5   | 6,82   | 2394071,69  | -1694,84 | 178993607,8 | 27-17 | 225 |
| 27 | 3825 | COMB1 | Combination | -3527,57 | -45485,38  | 2,3    | 2398997,41  | -754,05  | 179261123,6 | 27-18 | 0   |
| 27 | 4050 | COMB1 | Combination | -3527,57 | -38773,22  | 2,3    | 2398997,41  | -1271,83 | 188740216,6 | 27-18 | 225 |
| 27 | 4050 | COMB1 | Combination | -3470,26 | -38332,93  | -7,75  | 2301413,34  | -433,2   | 188964364,2 | 27-19 | 0   |
| 27 | 4275 | COMB1 | Combination | -3470,26 | -31620,77  | -7,75  | 2301413,34  | 1311,57  | 196834156,1 | 27-19 | 225 |
| 27 | 4275 | COMB1 | Combination | -3422,73 | -30943,9   | -27,44 | 2162944,65  | 2125     | 197019992,7 | 27-20 | 0   |
| 27 | 4500 | COMB1 | Combination | -3422,73 | -24231,74  | -27,44 | 2162944,65  | 8299,84  | 203227251,7 | 27-20 | 225 |
| 28 | 0    | COMB1 | Combination | -3343    | -15289,02  | 51,26  | -1361657,01 | 17191,14 | 203482092,8 | 28-1  | 0   |
| 28 | 225  | COMB1 | Combination | -3343    | -8576,86   | 51,26  | -1361657,01 | 5656,85  | 206167005   | 28-1  | 225 |



|    |      |       |             |          |          |         |             |          |             |       |     |
|----|------|-------|-------------|----------|----------|---------|-------------|----------|-------------|-------|-----|
| 28 | 225  | COMB1 | Combination | -3292,82 | -8440,91 | 24,85   | -1546505,55 | 6321,91  | 206218122,8 | 28-2  | 0   |
| 28 | 450  | COMB1 | Combination | -3292,82 | -1728,75 | 24,85   | -1546505,55 | 730,79   | 207362209,4 | 28-2  | 225 |
| 28 | 450  | COMB1 | Combination | -3241,96 | -1361,18 | 10,84   | -1683144,09 | 1416,53  | 207371910,1 | 28-3  | 0   |
| 28 | 675  | COMB1 | Combination | -3241,96 | 5350,98  | 10,84   | -1683144,09 | -1022,92 | 206923057,6 | 28-3  | 225 |
| 28 | 675  | COMB1 | Combination | -3192,94 | 6064,77  | 4,04    | -1715284,63 | -323,01  | 206889934,3 | 28-4  | 0   |
| 28 | 900  | COMB1 | Combination | -3192,94 | 12776,94 | 4,04    | -1715284,63 | -1232,66 | 204770241,8 | 28-4  | 225 |
| 28 | 900  | COMB1 | Combination | -3145,66 | 13756,75 | 1,25    | -1636432,96 | -545,07  | 204692888   | 28-5  | 0   |
| 28 | 1125 | COMB1 | Combination | -3145,66 | 20468,92 | 1,25    | -1636432,96 | -825,58  | 200842500,2 | 28-5  | 225 |
| 28 | 1125 | COMB1 | Combination | -3099,2  | 21655,06 | 0,36    | -1451764,44 | -145,37  | 200719570,7 | 28-6  | 0   |
| 28 | 1350 | COMB1 | Combination | -3099,2  | 28367,22 | 0,36    | -1451764,44 | -225,76  | 195092064,1 | 28-6  | 225 |
| 28 | 1350 | COMB1 | Combination | -3052,29 | 29710,05 | 0,2     | -1171800,51 | 460,99   | 194922517,4 | 28-7  | 0   |
| 28 | 1575 | COMB1 | Combination | -3052,29 | 36422,21 | 0,2     | -1171800,51 | 415,4    | 187482637,8 | 28-7  | 225 |
| 28 | 1575 | COMB1 | Combination | -3003,5  | 37882,46 | 0,18    | -808728,17  | 1128,6   | 187265683,8 | 28-8  | 0   |
| 28 | 1800 | COMB1 | Combination | -3003,5  | 44594,62 | 0,18    | -808728,17  | 1087,31  | 177987011,8 | 28-8  | 225 |
| 28 | 1800 | COMB1 | Combination | -2951,12 | 46141,04 | 0,04516 | -375080,4   | 1852,43  | 177722062   | 28-9  | 0   |
| 28 | 2025 | COMB1 | Combination | -2951,12 | 52853,2  | 0,04516 | -375080,4   | 1842,27  | 166585210,6 | 28-9  | 225 |
| 28 | 2025 | COMB1 | Combination | -2893,09 | 54460,5  | -0,21   | 116850,6    | 2689,67  | 166271839,2 | 28-10 | 0   |
| 28 | 2250 | COMB1 | Combination | -2893,09 | 61172,67 | -0,21   | 116850,6    | 2737,78  | 153263107,6 | 28-10 | 225 |
| 28 | 2250 | COMB1 | Combination | -2826,68 | 62819,53 | -0,29   | 655079,03   | 3708     | 152901023,3 | 28-11 | 0   |
| 28 | 2475 | COMB1 | Combination | -2826,68 | 69531,7  | -0,29   | 655079,03   | 3772,99  | 138011510   | 28-11 | 225 |
| 28 | 2475 | COMB1 | Combination | -2748,28 | 71198,83 | 0,66    | 1227740,44  | 4915,4   | 137600538,7 | 28-12 | 0   |
| 28 | 2700 | COMB1 | Combination | -2748,28 | 77910,99 | 0,66    | 1227740,44  | 4766,16  | 120825683,4 | 28-12 | 225 |
| 28 | 2700 | COMB1 | Combination | -2652,79 | 79579,28 | 4,46    | 1822778,51  | 6149,76  | 120365761,9 | 28-13 | 0   |
| 28 | 2925 | COMB1 | Combination | -2652,79 | 86291,45 | 4,46    | 1822778,51  | 5145,66  | 101705304,8 | 28-13 | 225 |
| 28 | 2925 | COMB1 | Combination | -2533,21 | 87940,13 | 14,6    | 2427620,05  | 6849,69  | 101196485,3 | 28-14 | 0   |
| 28 | 3150 | COMB1 | Combination | -2533,21 | 94652,29 | 14,6    | 2427620,05  | 3564,15  | 80654837,76 | 28-14 | 225 |

|    |      |       |             |           |           |          |             |            |             |       |      |
|----|------|-------|-------------|-----------|-----------|----------|-------------|------------|-------------|-------|------|
| 28 | 3150 | COMB1 | Combination | -2379,6   | 96257,07  | 37,09    | 3028915,18  | 5701,29    | 80097302,6  | 28-15 | 0    |
| 28 | 3375 | COMB1 | Combination | -2379,6   | 102969,23 | 37,09    | 3028915,18  | -2643,03   | 57684344,39 | 28-15 | 225  |
| 28 | 3375 | COMB1 | Combination | -2178,42  | 104500,56 | 81,05    | 3612564,7   | 32,24      | 57078431,52 | 28-16 | 0    |
| 28 | 3600 | COMB1 | Combination | -2178,42  | 111212,72 | 81,05    | 3612564,7   | -18204,22  | 32810687,82 | 28-16 | 225  |
| 28 | 3600 | COMB1 | Combination | -1909,92  | 112633,04 | 157,78   | 4163812,52  | -14804,62  | 32156920,03 | 28-17 | 0    |
| 28 | 3825 | COMB1 | Combination | -1909,92  | 119345,2  | 157,78   | 4163812,52  | -50305,71  | 6059367,47  | 28-17 | 225  |
| 28 | 3825 | COMB1 | Combination | -1546,69  | 120616,86 | 276,16   | 4668731,14  | -46078,74  | 5358647,89  | 28-18 | 0    |
| 28 | 4050 | COMB1 | Combination | -1546,69  | 127329,02 | 276,16   | 4668731,14  | -108214,2  | -22535262,8 | 28-18 | 225  |
| 28 | 4050 | COMB1 | Combination | -1036,97  | 128312,73 | 421,7    | 5103835,73  | -102541,15 | -23281433,6 | 28-19 | 0    |
| 28 | 4275 | COMB1 | Combination | -1036,97  | 135024,89 | 421,7    | 5103835,73  | -197423,89 | -52906915   | 28-19 | 225  |
| 28 | 4275 | COMB1 | Combination | -303,38   | 134987,56 | 577,97   | 5495986,64  | -189779,46 | -53707599   | 28-20 | 0    |
| 28 | 4500 | COMB1 | Combination | -303,38   | 141699,72 | 577,97   | 5495986,64  | -319822,16 | -84834919   | 28-20 | 225  |
| 29 | 0    | COMB1 | Combination | -51783,8  | 204946,32 | -1030,87 | 3900712,72  | -412,51    | 73221780,83 | 29-1  | 0    |
| 29 | 200  | COMB1 | Combination | -51783,8  | 210912,69 | -1030,87 | 3900712,72  | 205762,21  | 31635880,11 | 29-1  | 200  |
| 29 | 200  | COMB1 | Combination | -51894,66 | 214731,92 | -809,16  | 4326522,79  | 206125,54  | 30215885,92 | 29-2  | 0    |
| 29 | 400  | COMB1 | Combination | -51894,66 | 220698,28 | -809,16  | 4326522,79  | 367957,14  | -13327133,8 | 29-2  | 200  |
| 29 | 400  | COMB1 | Combination | -52536,43 | 221527,13 | -663,24  | 4604622,37  | 360980,25  | -14777591,5 | 29-3  | 0    |
| 29 | 600  | COMB1 | Combination | -52536,43 | 227493,5  | -663,24  | 4604622,37  | 493628,56  | -59679655   | 29-3  | 200  |
| 29 | 600  | COMB1 | Combination | -53650,84 | 227550,67 | -660,5   | 4759226,52  | 478859,71  | -61173392   | 29-4  | 0    |
| 29 | 800  | COMB1 | Combination | -53650,84 | 233517,04 | -660,5   | 4759226,52  | 610960,07  | -107280163  | 29-4  | 200  |
| 29 | 800  | COMB1 | Combination | -55171,11 | 230887,91 | -939,02  | 4852225,01  | 590563,72  | -108829181  | 29-5  | 0    |
| 29 | 1000 | COMB1 | Combination | -55171,11 | 236854,28 | -939,02  | 4852225,01  | 778368,09  | -155603400  | 29-5  | 200  |
| 30 | 0    | COMB1 | Combination | -56194,47 | -29464,89 | 44,67    | -1205514,26 | 87102,42   | -67046466   | 30-1  | 0    |
| 30 | 500  | COMB1 | Combination | -56194,47 | -26787,67 | 44,67    | -1205514,26 | 64768,12   | -52983327   | 30-1  | 500  |
| 30 | 1000 | COMB1 | Combination | -56194,47 | -24110,45 | 44,67    | -1205514,26 | 42433,82   | -40258796   | 30-1  | 1000 |
| 30 | 1500 | COMB1 | Combination | -56194,47 | -21433,24 | 44,67    | -1205514,26 | 20099,52   | -28872872,9 | 30-1  | 1500 |

|    |      |       |             |           |           |         |             |            |             |      |      |
|----|------|-------|-------------|-----------|-----------|---------|-------------|------------|-------------|------|------|
| 30 | 2000 | COMB1 | Combination | -56194,47 | -18756,02 | 44,67   | -1205514,26 | -2234,79   | -18825557,5 | 30-1 | 2000 |
| 30 | 2500 | COMB1 | Combination | -56194,47 | -16078,81 | 44,67   | -1205514,26 | -24569,09  | -10116849,8 | 30-1 | 2500 |
| 30 | 3000 | COMB1 | Combination | -56194,47 | -13401,59 | 44,67   | -1205514,26 | -46903,39  | -2746749,88 | 30-1 | 3000 |
| 30 | 3500 | COMB1 | Combination | -56194,47 | -10724,38 | 44,67   | -1205514,26 | -69237,69  | 3284742,28  | 30-1 | 3500 |
| 30 | 4000 | COMB1 | Combination | -56194,47 | -8047,16  | 44,67   | -1205514,26 | -91571,99  | 7977626,69  | 30-1 | 4000 |
| 30 | 4500 | COMB1 | Combination | -56194,47 | -5369,95  | 44,67   | -1205514,26 | -113906,29 | 11331903,35 | 30-1 | 4500 |
| 31 | 0    | COMB1 | Combination | -56171,48 | -1334,5   | -13,53  | 1439111,78  | -67881,13  | 11302974,59 | 31-1 | 0    |
| 31 | 500  | COMB1 | Combination | -56171,48 | 1342,72   | -13,53  | 1439111,78  | -61116,45  | 11300919,85 | 31-1 | 500  |
| 31 | 1000 | COMB1 | Combination | -56171,48 | 4019,93   | -13,53  | 1439111,78  | -54351,77  | 9960257,35  | 31-1 | 1000 |
| 31 | 1500 | COMB1 | Combination | -56171,48 | 6697,15   | -13,53  | 1439111,78  | -47587,09  | 7280987,1   | 31-1 | 1500 |
| 31 | 2000 | COMB1 | Combination | -56171,48 | 9374,36   | -13,53  | 1439111,78  | -40822,41  | 3263109,1   | 31-1 | 2000 |
| 31 | 2500 | COMB1 | Combination | -56171,48 | 12051,58  | -13,53  | 1439111,78  | -34057,74  | -2093376,65 | 31-1 | 2500 |
| 31 | 3000 | COMB1 | Combination | -56171,48 | 14728,79  | -13,53  | 1439111,78  | -27293,06  | -8788470,16 | 31-1 | 3000 |
| 31 | 3500 | COMB1 | Combination | -56171,48 | 17406,01  | -13,53  | 1439111,78  | -20528,38  | -16822171,4 | 31-1 | 3500 |
| 31 | 4000 | COMB1 | Combination | -56171,48 | 20083,23  | -13,53  | 1439111,78  | -13763,7   | -26194480,4 | 31-1 | 4000 |
| 31 | 4500 | COMB1 | Combination | -56171,48 | 22760,44  | -13,53  | 1439111,78  | -6999,02   | -36905397   | 31-1 | 4500 |
| 32 | 0    | COMB1 | Combination | -237,72   | -30753,15 | -629,6  | 7829137,98  | -140265,63 | -14628797,4 | 32-1 | 0    |
| 32 | 200  | COMB1 | Combination | -237,72   | -28034,74 | -629,6  | 7829137,98  | -14345,27  | -8750008,57 | 32-1 | 200  |
| 32 | 200  | COMB1 | Combination | 26,38     | -27677,13 | -215,92 | 6524478,94  | -16153,04  | -8329222,74 | 32-2 | 0    |
| 32 | 400  | COMB1 | Combination | 26,38     | -24958,73 | -215,92 | 6524478,94  | 27031,85   | -3065636,24 | 32-2 | 200  |
| 32 | 400  | COMB1 | Combination | 244,41    | -25050,39 | -40,05  | 5587780,82  | 23892,34   | -2690024,07 | 32-3 | 0    |
| 32 | 600  | COMB1 | Combination | 244,41    | -22331,99 | -40,05  | 5587780,82  | 31902,98   | 2048214,31  | 32-3 | 200  |
| 32 | 600  | COMB1 | Combination | 399,95    | -21900,1  | 13,98   | 4711037,02  | 28931,67   | 2378168,19  | 32-4 | 0    |
| 32 | 800  | COMB1 | Combination | 399,95    | -19181,69 | 13,98   | 4711037,02  | 26135,22   | 6486346,94  | 32-4 | 200  |
| 32 | 800  | COMB1 | Combination | 505,61    | -18435,82 | 21,32   | 3845005,63  | 23931,6    | 6766608,71  | 32-5 | 0    |
| 32 | 1000 | COMB1 | Combination | 505,61    | -15717,42 | 21,32   | 3845005,63  | 19666,62   | 10181932,83 | 32-5 | 200  |

|    |      |       |             |        |           |          |             |          |             |       |     |
|----|------|-------|-------------|--------|-----------|----------|-------------|----------|-------------|-------|-----|
| 32 | 1000 | COMB1 | Combination | 577,44 | -14761,76 | 16,08    | 2972349,01  | 18119,8  | 10408942,8  | 32-6  | 0   |
| 32 | 1200 | COMB1 | Combination | 577,44 | -12043,36 | 16,08    | 2972349,01  | 14903,06 | 13089454,35 | 32-6  | 200 |
| 32 | 1200 | COMB1 | Combination | 627,06 | -10949,53 | 9,97     | 2092428,76  | 13843,96 | 13260680,75 | 32-7  | 0   |
| 32 | 1400 | COMB1 | Combination | 627,06 | -8231,13  | 9,97     | 2092428,76  | 11850,37 | 15178746,97 | 32-7  | 200 |
| 32 | 1400 | COMB1 | Combination | 661,69 | -7048,76  | 5,74     | 1208442,54  | 11123,34 | 15292523,53 | 32-8  | 0   |
| 32 | 1600 | COMB1 | Combination | 661,69 | -4330,36  | 5,74     | 1208442,54  | 9976,22  | 16430435,87 | 32-8  | 200 |
| 32 | 1600 | COMB1 | Combination | 685,39 | -3098,9   | 3,25     | 325898,23   | 9487,09  | 16485746,38 | 32-9  | 0   |
| 32 | 1800 | COMB1 | Combination | 685,39 | -380,5    | 3,25     | 325898,23   | 8836,73  | 16833686,48 | 32-9  | 200 |
| 32 | 1800 | COMB1 | Combination | 700,43 | 866,62    | 1,84     | -548840,48  | 8527,78  | 16830052,72 | 32-10 | 0   |
| 32 | 2000 | COMB1 | Combination | 700,43 | 3585,03   | 1,84     | -548840,48  | 8160,19  | 16384887,85 | 32-10 | 200 |
| 32 | 2000 | COMB1 | Combination | 707,93 | 4817,07   | 0,9      | -1408993,16 | 8003,51  | 16322306,8  | 32-11 | 0   |
| 32 | 2200 | COMB1 | Combination | 707,93 | 7535,47   | 0,9      | -1408993,16 | 7823,4   | 15087053,38 | 32-11 | 200 |
| 32 | 2200 | COMB1 | Combination | 708,31 | 8721,86   | -0,01151 | -2247642,02 | 7808,43  | 14965976,75 | 32-12 | 0   |
| 32 | 2400 | COMB1 | Combination | 708,31 | 11440,26  | -0,01151 | -2247642,02 | 7810,73  | 12949764,54 | 32-12 | 200 |
| 32 | 2400 | COMB1 | Combination | 701,36 | 12548,16  | -1,29    | -3057917,37 | 7942,92  | 12771114,44 | 32-13 | 0   |
| 32 | 2600 | COMB1 | Combination | 701,36 | 15266,56  | -1,29    | -3057917,37 | 8201,27  | 9989642,16  | 32-13 | 200 |
| 32 | 2600 | COMB1 | Combination | 686,12 | 16258,03  | -3,26    | -3833289,05 | 8504,71  | 9754865,19  | 32-14 | 0   |
| 32 | 2800 | COMB1 | Combination | 686,12 | 18976,44  | -3,26    | -3833289,05 | 9157,57  | 6231418,48  | 32-14 | 200 |
| 32 | 2800 | COMB1 | Combination | 660,5  | 19804,37  | -5,82    | -4568041,82 | 9677,27  | 5942590,02  | 32-15 | 0   |
| 32 | 3000 | COMB1 | Combination | 660,5  | 22522,77  | -5,82    | -4568041,82 | 10841,35 | 1709875,58  | 32-15 | 200 |
| 32 | 3000 | COMB1 | Combination | 620,74 | 23124,88  | -7,09    | -5258657,79 | 11653,16 | 1369873,81  | 32-16 | 0   |
| 32 | 3200 | COMB1 | Combination | 620,74 | 25843,28  | -7,09    | -5258657,79 | 13070,55 | -3526942,69 | 32-16 | 200 |
| 32 | 3200 | COMB1 | Combination | 560,8  | 26126,53  | -0,13    | -5905413,97 | 14249,39 | -3914115,12 | 32-17 | 0   |
| 32 | 3400 | COMB1 | Combination | 560,8  | 28844,94  | -0,13    | -5905413,97 | 14274,91 | -9411262,17 | 32-17 | 200 |
| 32 | 3400 | COMB1 | Combination | 472,8  | 28659,32  | 34,05    | -6523307,02 | 15847,76 | -9840029,92 | 32-18 | 0   |
| 32 | 3600 | COMB1 | Combination | 472,8  | 31377,72  | 34,05    | -6523307,02 | 9038,26  | -15843733,9 | 32-18 | 200 |

|    |      |       |             |        |           |         |             |           |             |       |     |
|----|------|-------|-------------|--------|-----------|---------|-------------|-----------|-------------|-------|-----|
| 32 | 3600 | COMB1 | Combination | 351,93 | 30377,38  | 135,21  | -7157503,32 | 10620,84  | -16306808,6 | 32-19 | 0   |
| 32 | 3800 | COMB1 | Combination | 351,93 | 33095,78  | 135,21  | -7157503,32 | -16420,76 | -22654124,6 | 32-19 | 200 |
| 32 | 3800 | COMB1 | Combination | 211,23 | 31561,23  | 358,97  | -8109965,68 | -15727,8  | -23146526   | 32-20 | 0   |
| 32 | 4000 | COMB1 | Combination | 211,23 | 34279,63  | 358,97  | -8109965,68 | -87521,82 | -29730611,4 | 32-20 | 200 |
| 33 | 0    | COMB1 | Combination | 211,23 | -34279,63 | -358,97 | 8109965,68  | -87521,82 | -29730611,4 | 33-1  | 0   |
| 33 | 200  | COMB1 | Combination | 211,23 | -31561,23 | -358,97 | 8109965,68  | -15727,8  | -23146526   | 33-1  | 200 |
| 33 | 200  | COMB1 | Combination | 351,93 | -33095,78 | -135,21 | 7157503,32  | -16420,76 | -22654124,6 | 33-2  | 0   |
| 33 | 400  | COMB1 | Combination | 351,93 | -30377,38 | -135,21 | 7157503,32  | 10620,84  | -16306808,6 | 33-2  | 200 |
| 33 | 400  | COMB1 | Combination | 472,8  | -31377,72 | -34,05  | 6523307,02  | 9038,26   | -15843733,9 | 33-3  | 0   |
| 33 | 600  | COMB1 | Combination | 472,8  | -28659,32 | -34,05  | 6523307,02  | 15847,76  | -9840029,92 | 33-3  | 200 |
| 33 | 600  | COMB1 | Combination | 560,8  | -28844,94 | 0,13    | 5905413,97  | 14274,91  | -9411262,17 | 33-4  | 0   |
| 33 | 800  | COMB1 | Combination | 560,8  | -26126,53 | 0,13    | 5905413,97  | 14249,39  | -3914115,12 | 33-4  | 200 |
| 33 | 800  | COMB1 | Combination | 620,74 | -25843,28 | 7,09    | 5258657,79  | 13070,55  | -3526942,69 | 33-5  | 0   |
| 33 | 1000 | COMB1 | Combination | 620,74 | -23124,88 | 7,09    | 5258657,79  | 11653,16  | 1369873,81  | 33-5  | 200 |
| 33 | 1000 | COMB1 | Combination | 660,5  | -22522,77 | 5,82    | 4568041,82  | 10841,35  | 1709875,58  | 33-6  | 0   |
| 33 | 1200 | COMB1 | Combination | 660,5  | -19804,37 | 5,82    | 4568041,82  | 9677,27   | 5942590,02  | 33-6  | 200 |
| 33 | 1200 | COMB1 | Combination | 686,12 | -18976,44 | 3,26    | 3833289,05  | 9157,57   | 6231418,48  | 33-7  | 0   |
| 33 | 1400 | COMB1 | Combination | 686,12 | -16258,03 | 3,26    | 3833289,05  | 8504,71   | 9754865,19  | 33-7  | 200 |
| 33 | 1400 | COMB1 | Combination | 701,36 | -15266,56 | 1,29    | 3057917,37  | 8201,27   | 9989642,16  | 33-8  | 0   |
| 33 | 1600 | COMB1 | Combination | 701,36 | -12548,16 | 1,29    | 3057917,37  | 7942,92   | 12771114,44 | 33-8  | 200 |
| 33 | 1600 | COMB1 | Combination | 708,31 | -11440,26 | 0,01151 | 2247642,02  | 7810,73   | 12949764,54 | 33-9  | 0   |
| 33 | 1800 | COMB1 | Combination | 708,31 | -8721,86  | 0,01151 | 2247642,02  | 7808,43   | 14965976,75 | 33-9  | 200 |
| 33 | 1800 | COMB1 | Combination | 707,93 | -7535,47  | -0,9    | 1408993,16  | 7823,4    | 15087053,38 | 33-10 | 0   |
| 33 | 2000 | COMB1 | Combination | 707,93 | -4817,07  | -0,9    | 1408993,16  | 8003,51   | 16322306,8  | 33-10 | 200 |
| 33 | 2000 | COMB1 | Combination | 700,43 | -3585,03  | -1,84   | 548840,48   | 8160,19   | 16384887,85 | 33-11 | 0   |
| 33 | 2200 | COMB1 | Combination | 700,43 | -866,62   | -1,84   | 548840,48   | 8527,78   | 16830052,72 | 33-11 | 200 |

|    |      |       |             |          |          |        |             |            |             |       |      |
|----|------|-------|-------------|----------|----------|--------|-------------|------------|-------------|-------|------|
| 33 | 2200 | COMB1 | Combination | 685,39   | 380,5    | -3,25  | -325898,23  | 8836,73    | 16833686,48 | 33-12 | 0    |
| 33 | 2400 | COMB1 | Combination | 685,39   | 3098,9   | -3,25  | -325898,23  | 9487,09    | 16485746,38 | 33-12 | 200  |
| 33 | 2400 | COMB1 | Combination | 661,69   | 4330,36  | -5,74  | -1208442,54 | 9976,22    | 16430435,87 | 33-13 | 0    |
| 33 | 2600 | COMB1 | Combination | 661,69   | 7048,76  | -5,74  | -1208442,54 | 11123,34   | 15292523,53 | 33-13 | 200  |
| 33 | 2600 | COMB1 | Combination | 627,06   | 8231,13  | -9,97  | -2092428,76 | 11850,37   | 15178746,97 | 33-14 | 0    |
| 33 | 2800 | COMB1 | Combination | 627,06   | 10949,53 | -9,97  | -2092428,76 | 13843,96   | 13260680,75 | 33-14 | 200  |
| 33 | 2800 | COMB1 | Combination | 577,44   | 12043,36 | -16,08 | -2972349,01 | 14903,06   | 13089454,35 | 33-15 | 0    |
| 33 | 3000 | COMB1 | Combination | 577,44   | 14761,76 | -16,08 | -2972349,01 | 18119,8    | 10408942,8  | 33-15 | 200  |
| 33 | 3000 | COMB1 | Combination | 505,61   | 15717,42 | -21,32 | -3845005,63 | 19666,62   | 10181932,83 | 33-16 | 0    |
| 33 | 3200 | COMB1 | Combination | 505,61   | 18435,82 | -21,32 | -3845005,63 | 23931,6    | 6766608,71  | 33-16 | 200  |
| 33 | 3200 | COMB1 | Combination | 399,95   | 19181,69 | -13,98 | -4711037,02 | 26135,22   | 6486346,94  | 33-17 | 0    |
| 33 | 3400 | COMB1 | Combination | 399,95   | 21900,1  | -13,98 | -4711037,02 | 28931,67   | 2378168,19  | 33-17 | 200  |
| 33 | 3400 | COMB1 | Combination | 244,41   | 22331,99 | 40,05  | -5587780,82 | 31902,98   | 2048214,31  | 33-18 | 0    |
| 33 | 3600 | COMB1 | Combination | 244,41   | 25050,39 | 40,05  | -5587780,82 | 23892,34   | -2690024,07 | 33-18 | 200  |
| 33 | 3600 | COMB1 | Combination | 26,38    | 24958,73 | 215,92 | -6524478,94 | 27031,85   | -3065636,24 | 33-19 | 0    |
| 33 | 3800 | COMB1 | Combination | 26,38    | 27677,13 | 215,92 | -6524478,94 | -16153,04  | -8329222,74 | 33-19 | 200  |
| 33 | 3800 | COMB1 | Combination | -237,72  | 28034,74 | 629,6  | -7829137,98 | -14345,27  | -8750008,57 | 33-20 | 0    |
| 33 | 4000 | COMB1 | Combination | -237,72  | 30753,15 | 629,6  | -7829137,98 | -140265,63 | -14628797,4 | 33-20 | 200  |
| 34 | 0    | COMB1 | Combination | -4256,84 | -4047,98 | -29,19 | 123474,91   | -60144,21  | -3233276,71 | 34-1  | 0    |
| 34 | 500  | COMB1 | Combination | -4256,84 | -3106,54 | -29,19 | 123474,91   | -45551,71  | -1444646,32 | 34-1  | 500  |
| 34 | 1000 | COMB1 | Combination | -4256,84 | -2165,1  | -29,19 | 123474,91   | -30959,21  | -126735,13  | 34-1  | 1000 |
| 34 | 1500 | COMB1 | Combination | -4256,84 | -1223,66 | -29,19 | 123474,91   | -16366,71  | 720456,84   | 34-1  | 1500 |
| 34 | 2000 | COMB1 | Combination | -4256,84 | -282,23  | -29,19 | 123474,91   | -1774,21   | 1096929,61  | 34-1  | 2000 |
| 34 | 2500 | COMB1 | Combination | -4256,84 | 659,21   | -29,19 | 123474,91   | 12818,29   | 1002683,16  | 34-1  | 2500 |
| 34 | 3000 | COMB1 | Combination | -4256,84 | 1600,65  | -29,19 | 123474,91   | 27410,79   | 437717,51   | 34-1  | 3000 |
| 34 | 3500 | COMB1 | Combination | -4256,84 | 2542,09  | -29,19 | 123474,91   | 42003,3    | -597967,36  | 34-1  | 3500 |

|    |      |       |             |          |          |        |            |           |             |      |      |
|----|------|-------|-------------|----------|----------|--------|------------|-----------|-------------|------|------|
| 34 | 4000 | COMB1 | Combination | -4256,84 | 3483,53  | -29,19 | 123474,91  | 56595,8   | -2104371,43 | 34-1 | 4000 |
| 35 | 0    | COMB1 | Combination | -4256,84 | -3483,53 | 29,19  | -123474,91 | 56595,8   | -2104371,43 | 35-1 | 0    |
| 35 | 500  | COMB1 | Combination | -4256,84 | -2542,09 | 29,19  | -123474,91 | 42003,3   | -597967,36  | 35-1 | 500  |
| 35 | 1000 | COMB1 | Combination | -4256,84 | -1600,65 | 29,19  | -123474,91 | 27410,79  | 437717,51   | 35-1 | 1000 |
| 35 | 1500 | COMB1 | Combination | -4256,84 | -659,21  | 29,19  | -123474,91 | 12818,29  | 1002683,16  | 35-1 | 1500 |
| 35 | 2000 | COMB1 | Combination | -4256,84 | 282,23   | 29,19  | -123474,91 | -1774,21  | 1096929,61  | 35-1 | 2000 |
| 35 | 2500 | COMB1 | Combination | -4256,84 | 1223,66  | 29,19  | -123474,91 | -16366,71 | 720456,84   | 35-1 | 2500 |
| 35 | 3000 | COMB1 | Combination | -4256,84 | 2165,1   | 29,19  | -123474,91 | -30959,21 | -126735,13  | 35-1 | 3000 |
| 35 | 3500 | COMB1 | Combination | -4256,84 | 3106,54  | 29,19  | -123474,91 | -45551,71 | -1444646,32 | 35-1 | 3500 |
| 35 | 4000 | COMB1 | Combination | -4256,84 | 4047,98  | 29,19  | -123474,91 | -60144,21 | -3233276,71 | 35-1 | 4000 |
| 36 | 0    | COMB1 | Combination | 117,43   | -7574,16 | -33,93 | 117931,2   | -8557,99  | 3437544,15  | 36-1 | 0    |
| 36 | 200  | COMB1 | Combination | 117,43   | -7197,59 | -33,93 | 117931,2   | -1771,29  | 4914719,17  | 36-1 | 200  |
| 36 | 200  | COMB1 | Combination | 119,95   | -7876,93 | -16,02 | 13990,3    | -2870,03  | 5230852,36  | 36-2 | 0    |
| 36 | 400  | COMB1 | Combination | 119,95   | -7500,35 | -16,02 | 13990,3    | 333,16    | 6768580,55  | 36-2 | 200  |
| 36 | 400  | COMB1 | Combination | 118,02   | -7329,64 | -9,7   | -18904,83  | -1206,14  | 7075657,12  | 36-3 | 0    |
| 36 | 600  | COMB1 | Combination | 118,02   | -6953,06 | -9,7   | -18904,83  | 734,37    | 8503927,05  | 36-3 | 200  |
| 36 | 600  | COMB1 | Combination | 112,82   | -6296,08 | -8,9   | -34738,92  | -986,14   | 8778090,9   | 36-4 | 0    |
| 36 | 800  | COMB1 | Combination | 112,82   | -5919,51 | -8,9   | -34738,92  | 794,39    | 9999650,26  | 36-4 | 200  |
| 36 | 800  | COMB1 | Combination | 105,44   | -4906,81 | -8,97  | -42937,31  | -933,99   | 10223653,71 | 36-5 | 0    |
| 36 | 1000 | COMB1 | Combination | 105,44   | -4530,23 | -8,97  | -42937,31  | 860,82    | 11167357,2  | 36-5 | 200  |
| 36 | 1000 | COMB1 | Combination | 96,57    | -3244,75 | -8,88  | -47388,21  | -850,27   | 11328222,91 | 36-6 | 0    |
| 36 | 1200 | COMB1 | Combination | 96,57    | -2868,17 | -8,88  | -47388,21  | 924,74    | 11939514,9  | 36-6 | 200  |
| 36 | 1200 | COMB1 | Combination | 86,75    | -1375,8  | -8,55  | -49198,19  | -734,9    | 12027351,82 | 36-7 | 0    |
| 36 | 1400 | COMB1 | Combination | 86,75    | -999,22  | -8,55  | -49198,19  | 974,66    | 12264854,08 | 36-7 | 200  |
| 36 | 1400 | COMB1 | Combination | 76,4     | 645,19   | -8,04  | -49107,83  | -608,55   | 12272258,95 | 36-8 | 0    |
| 36 | 1600 | COMB1 | Combination | 76,4     | 1021,77  | -8,04  | -49107,83  | 1000,2    | 12105562,59 | 36-8 | 200  |

|    |      |       |             |        |           |       |            |         |             |       |     |
|----|------|-------|-------------|--------|-----------|-------|------------|---------|-------------|-------|-----|
| 36 | 1600 | COMB1 | Combination | 65,87  | 2771      | -7,41 | -47597,38  | -480,9  | 12027235,92 | 36-9  | 0   |
| 36 | 1800 | COMB1 | Combination | 65,87  | 3147,58   | -7,41 | -47597,38  | 1001,38 | 11435377,39 | 36-9  | 200 |
| 36 | 1800 | COMB1 | Combination | 55,41  | 4959,13   | -6,69 | -45091,7   | -358,58 | 11267870,01 | 36-10 | 0   |
| 36 | 2000 | COMB1 | Combination | 55,41  | 5335,71   | -6,69 | -45091,7   | 978,62  | 10238385,66 | 36-10 | 200 |
| 36 | 2000 | COMB1 | Combination | 45,25  | 7169,3    | -5,9  | -41995,26  | -245,33 | 9979956,3   | 36-11 | 0   |
| 36 | 2200 | COMB1 | Combination | 45,25  | 7545,87   | -5,9  | -41995,26  | 934,63  | 8508439,71  | 36-11 | 200 |
| 36 | 2200 | COMB1 | Combination | 35,54  | 9361,03   | -5,08 | -38716,3   | -144,67 | 8159013,14  | 36-12 | 0   |
| 36 | 2400 | COMB1 | Combination | 35,54  | 9737,61   | -5,08 | -38716,3   | 872,05  | 6249148,84  | 36-12 | 200 |
| 36 | 2400 | COMB1 | Combination | 26,45  | 11491,27  | -4,27 | -35675,34  | -59,04  | 5810373,5   | 36-13 | 0   |
| 36 | 2600 | COMB1 | Combination | 26,45  | 11867,85  | -4,27 | -35675,34  | 794,29  | 3474461,03  | 36-13 | 200 |
| 36 | 2600 | COMB1 | Combination | 18,06  | 13511,53  | -3,48 | -33328,19  | 9,43    | 2949874,65  | 36-14 | 0   |
| 36 | 2800 | COMB1 | Combination | 18,06  | 13888,11  | -3,48 | -33328,19  | 704,63  | 209911,05   | 36-14 | 200 |
| 36 | 2800 | COMB1 | Combination | 10,47  | 15364,38  | -2,73 | -32199,32  | 59,35   | -394763,77  | 36-15 | 0   |
| 36 | 3000 | COMB1 | Combination | 10,47  | 15740,96  | -2,73 | -32199,32  | 606,24  | -3505297,88 | 36-15 | 200 |
| 36 | 3000 | COMB1 | Combination | 3,74   | 16978,23  | -2,06 | -33077,19  | 89,05   | -4181676,5  | 36-16 | 0   |
| 36 | 3200 | COMB1 | Combination | 3,74   | 17354,81  | -2,06 | -33077,19  | 501,36  | -7614980,54 | 36-16 | 200 |
| 36 | 3200 | COMB1 | Combination | -2,06  | 18258,69  | -1,49 | -37116,41  | 97,52   | -8351248,17 | 36-17 | 0   |
| 36 | 3400 | COMB1 | Combination | -2,06  | 18635,26  | -1,49 | -37116,41  | 394,54  | -12040643   | 36-17 | 200 |
| 36 | 3400 | COMB1 | Combination | -6,86  | 19063,43  | -1,13 | -48125,77  | 85,27   | -12820028,9 | 36-18 | 0   |
| 36 | 3600 | COMB1 | Combination | -6,86  | 19440     | -1,13 | -48125,77  | 312,1   | -16670372,2 | 36-18 | 200 |
| 36 | 3600 | COMB1 | Combination | -10,58 | 19076,63  | -1,51 | -75140,59  | 91,96   | -17467099,3 | 36-19 | 0   |
| 36 | 3800 | COMB1 | Combination | -10,58 | 19453,2   | -1,51 | -75140,59  | 393,15  | -21320082,5 | 36-19 | 200 |
| 36 | 3800 | COMB1 | Combination | -13,11 | 17088,26  | -3,17 | -169617,62 | 264,23  | -22088366   | 36-20 | 0   |
| 36 | 4000 | COMB1 | Combination | -13,11 | 17464,84  | -3,17 | -169617,62 | 898,54  | -25543675,6 | 36-20 | 200 |
| 37 | 0    | COMB1 | Combination | -13,11 | -17464,84 | 3,17  | 169617,62  | 898,54  | -25543675,6 | 37-1  | 0   |
| 37 | 200  | COMB1 | Combination | -13,11 | -17088,26 | 3,17  | 169617,62  | 264,23  | -22088366   | 37-1  | 200 |



|    |      |       |             |        |           |      |          |         |             |       |     |
|----|------|-------|-------------|--------|-----------|------|----------|---------|-------------|-------|-----|
| 37 | 200  | COMB1 | Combination | -10,58 | -19453,2  | 1,51 | 75140,59 | 393,15  | -21320082,5 | 37-2  | 0   |
| 37 | 400  | COMB1 | Combination | -10,58 | -19076,63 | 1,51 | 75140,59 | 91,96   | -17467099,3 | 37-2  | 200 |
| 37 | 400  | COMB1 | Combination | -6,86  | -19440    | 1,13 | 48125,77 | 312,1   | -16670372,2 | 37-3  | 0   |
| 37 | 600  | COMB1 | Combination | -6,86  | -19063,43 | 1,13 | 48125,77 | 85,27   | -12820028,9 | 37-3  | 200 |
| 37 | 600  | COMB1 | Combination | -2,06  | -18635,26 | 1,49 | 37116,41 | 394,54  | -12040643   | 37-4  | 0   |
| 37 | 800  | COMB1 | Combination | -2,06  | -18258,69 | 1,49 | 37116,41 | 97,52   | -8351248,17 | 37-4  | 200 |
| 37 | 800  | COMB1 | Combination | 3,74   | -17354,81 | 2,06 | 33077,19 | 501,36  | -7614980,54 | 37-5  | 0   |
| 37 | 1000 | COMB1 | Combination | 3,74   | -16978,23 | 2,06 | 33077,19 | 89,05   | -4181676,5  | 37-5  | 200 |
| 37 | 1000 | COMB1 | Combination | 10,47  | -15740,96 | 2,73 | 32199,32 | 606,24  | -3505297,88 | 37-6  | 0   |
| 37 | 1200 | COMB1 | Combination | 10,47  | -15364,38 | 2,73 | 32199,32 | 59,35   | -394763,77  | 37-6  | 200 |
| 37 | 1200 | COMB1 | Combination | 18,06  | -13888,11 | 3,48 | 33328,19 | 704,63  | 209911,05   | 37-7  | 0   |
| 37 | 1400 | COMB1 | Combination | 18,06  | -13511,53 | 3,48 | 33328,19 | 9,43    | 2949874,65  | 37-7  | 200 |
| 37 | 1400 | COMB1 | Combination | 26,45  | -11867,85 | 4,27 | 35675,34 | 794,29  | 3474461,03  | 37-8  | 0   |
| 37 | 1600 | COMB1 | Combination | 26,45  | -11491,27 | 4,27 | 35675,34 | -59,04  | 5810373,5   | 37-8  | 200 |
| 37 | 1600 | COMB1 | Combination | 35,54  | -9737,61  | 5,08 | 38716,3  | 872,05  | 6249148,84  | 37-9  | 0   |
| 37 | 1800 | COMB1 | Combination | 35,54  | -9361,03  | 5,08 | 38716,3  | -144,67 | 8159013,14  | 37-9  | 200 |
| 37 | 1800 | COMB1 | Combination | 45,25  | -7545,87  | 5,9  | 41995,26 | 934,63  | 8508439,71  | 37-10 | 0   |
| 37 | 2000 | COMB1 | Combination | 45,25  | -7169,3   | 5,9  | 41995,26 | -245,33 | 9979956,3   | 37-10 | 200 |
| 37 | 2000 | COMB1 | Combination | 55,41  | -5335,71  | 6,69 | 45091,7  | 978,62  | 10238385,66 | 37-11 | 0   |
| 37 | 2200 | COMB1 | Combination | 55,41  | -4959,13  | 6,69 | 45091,7  | -358,58 | 11267870,01 | 37-11 | 200 |
| 37 | 2200 | COMB1 | Combination | 65,87  | -3147,58  | 7,41 | 47597,38 | 1001,38 | 11435377,39 | 37-12 | 0   |
| 37 | 2400 | COMB1 | Combination | 65,87  | -2771     | 7,41 | 47597,38 | -480,9  | 12027235,92 | 37-12 | 200 |
| 37 | 2400 | COMB1 | Combination | 76,4   | -1021,77  | 8,04 | 49107,83 | 1000,2  | 12105562,59 | 37-13 | 0   |
| 37 | 2600 | COMB1 | Combination | 76,4   | -645,19   | 8,04 | 49107,83 | -608,55 | 12272258,95 | 37-13 | 200 |
| 37 | 2600 | COMB1 | Combination | 86,75  | 999,22    | 8,55 | 49198,19 | 974,66  | 12264854,08 | 37-14 | 0   |
| 37 | 2800 | COMB1 | Combination | 86,75  | 1375,8    | 8,55 | 49198,19 | -734,9  | 12027351,82 | 37-14 | 200 |

|    |      |       |             |        |          |        |           |           |             |       |      |
|----|------|-------|-------------|--------|----------|--------|-----------|-----------|-------------|-------|------|
| 37 | 2800 | COMB1 | Combination | 96,57  | 2868,17  | 8,88   | 47388,21  | 924,74    | 11939514,9  | 37-15 | 0    |
| 37 | 3000 | COMB1 | Combination | 96,57  | 3244,75  | 8,88   | 47388,21  | -850,27   | 11328222,91 | 37-15 | 200  |
| 37 | 3000 | COMB1 | Combination | 105,44 | 4530,23  | 8,97   | 42937,31  | 860,82    | 11167357,2  | 37-16 | 0    |
| 37 | 3200 | COMB1 | Combination | 105,44 | 4906,81  | 8,97   | 42937,31  | -933,99   | 10223653,71 | 37-16 | 200  |
| 37 | 3200 | COMB1 | Combination | 112,82 | 5919,51  | 8,9    | 34738,92  | 794,39    | 9999650,26  | 37-17 | 0    |
| 37 | 3400 | COMB1 | Combination | 112,82 | 6296,08  | 8,9    | 34738,92  | -986,14   | 8778090,9   | 37-17 | 200  |
| 37 | 3400 | COMB1 | Combination | 118,02 | 6953,06  | 9,7    | 18904,83  | 734,37    | 8503927,05  | 37-18 | 0    |
| 37 | 3600 | COMB1 | Combination | 118,02 | 7329,64  | 9,7    | 18904,83  | -1206,14  | 7075657,12  | 37-18 | 200  |
| 37 | 3600 | COMB1 | Combination | 119,95 | 7500,35  | 16,02  | -13990,3  | 333,16    | 6768580,55  | 37-19 | 0    |
| 37 | 3800 | COMB1 | Combination | 119,95 | 7876,93  | 16,02  | -13990,3  | -2870,03  | 5230852,36  | 37-19 | 200  |
| 37 | 3800 | COMB1 | Combination | 117,43 | 7197,59  | 33,93  | -117931,2 | -1771,29  | 4914719,17  | 37-20 | 0    |
| 37 | 4000 | COMB1 | Combination | 117,43 | 7574,16  | 33,93  | -117931,2 | -8557,99  | 3437544,15  | 37-20 | 200  |
| 38 | 0    | COMB1 | Combination | -58,2  | -4035,45 | -22,99 | -28928,76 | -46025,17 | -2644626,04 | 38-1  | 0    |
| 38 | 500  | COMB1 | Combination | -58,2  | -3094,01 | -22,99 | -28928,76 | -34529,62 | -862261,99  | 38-1  | 500  |
| 38 | 1000 | COMB1 | Combination | -58,2  | -2152,57 | -22,99 | -28928,76 | -23034,08 | 449382,85   | 38-1  | 1000 |
| 38 | 1500 | COMB1 | Combination | -58,2  | -1211,13 | -22,99 | -28928,76 | -11538,53 | 1290308,47  | 38-1  | 1500 |
| 38 | 2000 | COMB1 | Combination | -58,2  | -269,69  | -22,99 | -28928,76 | -42,99    | 1660514,89  | 38-1  | 2000 |
| 38 | 2500 | COMB1 | Combination | -58,2  | 671,74   | -22,99 | -28928,76 | 11452,56  | 1560002,1   | 38-1  | 2500 |
| 38 | 3000 | COMB1 | Combination | -58,2  | 1613,18  | -22,99 | -28928,76 | 22948,1   | 988770,1    | 38-1  | 3000 |
| 38 | 3500 | COMB1 | Combination | -58,2  | 2554,62  | -22,99 | -28928,76 | 34443,65  | -53181,11   | 38-1  | 3500 |
| 38 | 4000 | COMB1 | Combination | -58,2  | 3496,06  | -22,99 | -28928,76 | 45939,19  | -1565851,53 | 38-1  | 4000 |
| 39 | 0    | COMB1 | Combination | -58,2  | -3496,06 | 22,99  | 28928,76  | 45939,19  | -1565851,53 | 39-1  | 0    |
| 39 | 500  | COMB1 | Combination | -58,2  | -2554,62 | 22,99  | 28928,76  | 34443,65  | -53181,11   | 39-1  | 500  |
| 39 | 1000 | COMB1 | Combination | -58,2  | -1613,18 | 22,99  | 28928,76  | 22948,1   | 988770,1    | 39-1  | 1000 |
| 39 | 1500 | COMB1 | Combination | -58,2  | -671,74  | 22,99  | 28928,76  | 11452,56  | 1560002,1   | 39-1  | 1500 |
| 39 | 2000 | COMB1 | Combination | -58,2  | 269,69   | 22,99  | 28928,76  | -42,99    | 1660514,89  | 39-1  | 2000 |

|    |      |       |             |          |           |         |             |            |             |      |      |
|----|------|-------|-------------|----------|-----------|---------|-------------|------------|-------------|------|------|
| 39 | 2500 | COMB1 | Combination | -58,2    | 1211,13   | 22,99   | 28928,76    | -11538,53  | 1290308,47  | 39-1 | 2500 |
| 39 | 3000 | COMB1 | Combination | -58,2    | 2152,57   | 22,99   | 28928,76    | -23034,08  | 449382,85   | 39-1 | 3000 |
| 39 | 3500 | COMB1 | Combination | -58,2    | 3094,01   | 22,99   | 28928,76    | -34529,62  | -862261,99  | 39-1 | 3500 |
| 39 | 4000 | COMB1 | Combination | -58,2    | 4035,45   | 22,99   | 28928,76    | -46025,17  | -2644626,04 | 39-1 | 4000 |
| 40 | 0    | COMB1 | Combination | -4164,91 | -3601,89  | -12,24  | -163629,51  | -19687,48  | -2450298,41 | 40-1 | 0    |
| 40 | 500  | COMB1 | Combination | -4164,91 | -2660,45  | -12,24  | -163629,51  | -13567,25  | -884714,66  | 40-1 | 500  |
| 40 | 1000 | COMB1 | Combination | -4164,91 | -1719,01  | -12,24  | -163629,51  | -7447,03   | 210149,88   | 40-1 | 1000 |
| 40 | 1500 | COMB1 | Combination | -4164,91 | -777,57   | -12,24  | -163629,51  | -1326,81   | 834295,22   | 40-1 | 1500 |
| 40 | 2000 | COMB1 | Combination | -4164,91 | 163,87    | -12,24  | -163629,51  | 4793,41    | 987721,34   | 40-1 | 2000 |
| 40 | 2500 | COMB1 | Combination | -4164,91 | 1105,31   | -12,24  | -163629,51  | 10913,63   | 670428,25   | 40-1 | 2500 |
| 40 | 3000 | COMB1 | Combination | -4164,91 | 2046,74   | -12,24  | -163629,51  | 17033,85   | -117584,05  | 40-1 | 3000 |
| 40 | 3500 | COMB1 | Combination | -4164,91 | 2988,18   | -12,24  | -163629,51  | 23154,07   | -1376315,55 | 40-1 | 3500 |
| 40 | 4000 | COMB1 | Combination | -4164,91 | 3929,62   | -12,24  | -163629,51  | 29274,29   | -3105766,27 | 40-1 | 4000 |
| 41 | 0    | COMB1 | Combination | -4164,91 | -3929,62  | 12,24   | 163629,51   | 29274,29   | -3105766,27 | 41-1 | 0    |
| 41 | 500  | COMB1 | Combination | -4164,91 | -2988,18  | 12,24   | 163629,51   | 23154,07   | -1376315,55 | 41-1 | 500  |
| 41 | 1000 | COMB1 | Combination | -4164,91 | -2046,74  | 12,24   | 163629,51   | 17033,85   | -117584,05  | 41-1 | 1000 |
| 41 | 1500 | COMB1 | Combination | -4164,91 | -1105,31  | 12,24   | 163629,51   | 10913,63   | 670428,25   | 41-1 | 1500 |
| 41 | 2000 | COMB1 | Combination | -4164,91 | -163,87   | 12,24   | 163629,51   | 4793,41    | 987721,34   | 41-1 | 2000 |
| 41 | 2500 | COMB1 | Combination | -4164,91 | 777,57    | 12,24   | 163629,51   | -1326,81   | 834295,22   | 41-1 | 2500 |
| 41 | 3000 | COMB1 | Combination | -4164,91 | 1719,01   | 12,24   | 163629,51   | -7447,03   | 210149,88   | 41-1 | 3000 |
| 41 | 3500 | COMB1 | Combination | -4164,91 | 2660,45   | 12,24   | 163629,51   | -13567,25  | -884714,66  | 41-1 | 3500 |
| 41 | 4000 | COMB1 | Combination | -4164,91 | 3601,89   | 12,24   | 163629,51   | -19687,48  | -2450298,41 | 41-1 | 4000 |
| 42 | 0    | COMB1 | Combination | -1523,68 | -15104,55 | 4183,06 | -5458812    | 828215,43  | -3793072,53 | 42-1 | 0    |
| 42 | 200  | COMB1 | Combination | -1523,68 | -14574,99 | 4183,06 | -5458812    | -8396,28   | -825118,88  | 42-1 | 200  |
| 42 | 200  | COMB1 | Combination | -242,99  | -11480,04 | 1126,39 | -4240184,63 | -4022,68   | -653963,2   | 42-2 | 0    |
| 42 | 400  | COMB1 | Combination | -242,99  | -10950,48 | 1126,39 | -4240184,63 | -229300,27 | 1589088,34  | 42-2 | 200  |

|    |      |       |             |         |           |         |             |            |            |       |     |
|----|------|-------|-------------|---------|-----------|---------|-------------|------------|------------|-------|-----|
| 42 | 400  | COMB1 | Combination | 559,14  | -10010,96 | -30,81  | -3485182,82 | -218903,19 | 1732783,46 | 42-3  | 0   |
| 42 | 600  | COMB1 | Combination | 559,14  | -9481,4   | -30,81  | -3485182,82 | -212741,01 | 3682018,96 | 42-3  | 200 |
| 42 | 600  | COMB1 | Combination | 932,92  | -8352,29  | -302,56 | -2841282,6  | -204259,99 | 3801240,65 | 42-4  | 0   |
| 42 | 800  | COMB1 | Combination | 932,92  | -7822,73  | -302,56 | -2841282,6  | -143748,29 | 5418741,77 | 42-4  | 200 |
| 42 | 800  | COMB1 | Combination | 1054,26 | -6625,77  | -267,93 | -2252409,71 | -139090,2  | 5514972,95 | 42-5  | 0   |
| 42 | 1000 | COMB1 | Combination | 1054,26 | -6096,21  | -267,93 | -2252409,71 | -85503,37  | 6787170,85 | 42-5  | 200 |
| 42 | 1000 | COMB1 | Combination | 1064,22 | -4883,87  | -173,03 | -1696369,44 | -83367,94  | 6860283,41 | 42-6  | 0   |
| 42 | 1200 | COMB1 | Combination | 1064,22 | -4354,31  | -173,03 | -1696369,44 | -48762,41  | 7784100,66 | 42-6  | 200 |
| 42 | 1200 | COMB1 | Combination | 1040,68 | -3142,9   | -95,38  | -1164423,83 | -47971,37  | 7834047,55 | 42-7  | 0   |
| 42 | 1400 | COMB1 | Combination | 1040,68 | -2613,35  | -95,38  | -1164423,83 | -28895,97  | 8409672,56 | 42-7  | 200 |
| 42 | 1400 | COMB1 | Combination | 1016,81 | -1403,92  | -46,98  | -650135,59  | -28652,41  | 8436465,36 | 42-8  | 0   |
| 42 | 1600 | COMB1 | Combination | 1016,81 | -874,36   | -46,98  | -650135,59  | -19256,8   | 8664292,67 | 42-8  | 200 |
| 42 | 1600 | COMB1 | Combination | 1002,27 | 328,85    | -20,29  | -150342,59  | -19188,72  | 8667971,42 | 42-9  | 0   |
| 42 | 1800 | COMB1 | Combination | 1002,27 | 858,41    | -20,29  | -150342,59  | -15130,12  | 8549245,23 | 42-9  | 200 |
| 42 | 1800 | COMB1 | Combination | 997,5   | 2046,76   | -5,52   | 335850,8    | -15085,38  | 8529942,13 | 42-10 | 0   |
| 42 | 2000 | COMB1 | Combination | 997,5   | 2576,32   | -5,52   | 335850,8    | -13981,63  | 8067633,27 | 42-10 | 200 |
| 42 | 2000 | COMB1 | Combination | 1000,61 | 3738,22   | 5,33    | 807996,74   | -13925,78  | 8025618,85 | 42-11 | 0   |
| 42 | 2200 | COMB1 | Combination | 1000,61 | 4267,78   | 5,33    | 807996,74   | -14991,16  | 7225019,19 | 42-11 | 200 |
| 42 | 2200 | COMB1 | Combination | 1009,97 | 5391,02   | 18,9    | 1265511,74  | -14943,86  | 7160724,92 | 42-12 | 0   |
| 42 | 2400 | COMB1 | Combination | 1009,97 | 5920,58   | 18,9    | 1265511,74  | -18724,63  | 6029565,33 | 42-12 | 200 |
| 42 | 2400 | COMB1 | Combination | 1023,9  | 6994,82   | 41,99   | 1708905,47  | -18760,67  | 5943575,56 | 42-13 | 0   |
| 42 | 2600 | COMB1 | Combination | 1023,9  | 7524,37   | 41,99   | 1708905,47  | -27157,85  | 4491656,49 | 42-13 | 200 |
| 42 | 2600 | COMB1 | Combination | 1037,42 | 8543,72   | 81,54   | 2141053,09  | -27467,8   | 4384668,52 | 42-14 | 0   |
| 42 | 2800 | COMB1 | Combination | 1037,42 | 9073,28   | 81,54   | 2141053,09  | -43775,27  | 2622969,25 | 42-14 | 200 |
| 42 | 2800 | COMB1 | Combination | 1035,4  | 10037,95  | 140,08  | 2568204,81  | -44751,66  | 2495726,53 | 42-15 | 0   |
| 42 | 3000 | COMB1 | Combination | 1035,4  | 10567,5   | 140,08  | 2568204,81  | -72768,35  | 435181,48  | 42-15 | 200 |

|    |      |       |             |          |           |          |             |            |             |       |     |
|----|------|-------|-------------|----------|-----------|----------|-------------|------------|-------------|-------|-----|
| 42 | 3000 | COMB1 | Combination | 979,74   | 11482,25  | 198,93   | 3000964,32  | -75165,51  | 288390,18   | 42-16 | 0   |
| 42 | 3200 | COMB1 | Combination | 979,74   | 12011,81  | 198,93   | 3000964,32  | -114951,12 | -2061016,46 | 42-16 | 200 |
| 42 | 3200 | COMB1 | Combination | 792,63   | 12865,37  | 176,73   | 3453097,5   | -119770,21 | -2226660,75 | 42-17 | 0   |
| 42 | 3400 | COMB1 | Combination | 792,63   | 13394,93  | 176,73   | 3453097,5   | -155116,39 | -4852690,74 | 42-17 | 200 |
| 42 | 3400 | COMB1 | Combination | 346,7    | 14130,8   | -157,14  | 3951355,6   | -163252,43 | -5036380,78 | 42-18 | 0   |
| 42 | 3600 | COMB1 | Combination | 346,7    | 14660,36  | -157,14  | 3951355,6   | -131824,91 | -7915496,75 | 42-18 | 200 |
| 42 | 3600 | COMB1 | Combination | -494,8   | 15100     | -1305,1  | 4553248,19  | -140872,88 | -8117626    | 42-19 | 0   |
| 42 | 3800 | COMB1 | Combination | -494,8   | 15629,56  | -1305,1  | 4553248,19  | 120147,53  | -11190581,8 | 42-19 | 200 |
| 42 | 3800 | COMB1 | Combination | -1712,56 | 17691,6   | -4050,21 | 5612013,34  | 118226,9   | -11413365,7 | 42-20 | 0   |
| 42 | 4000 | COMB1 | Combination | -1712,56 | 18221,16  | -4050,21 | 5612013,34  | 928268,35  | -15004641,5 | 42-20 | 200 |
| 43 | 0    | COMB1 | Combination | -1712,56 | -18221,16 | 4050,21  | -5612013,34 | 928268,35  | -15004641,5 | 43-1  | 0   |
| 43 | 200  | COMB1 | Combination | -1712,56 | -17691,6  | 4050,21  | -5612013,34 | 118226,9   | -11413365,7 | 43-1  | 200 |
| 43 | 200  | COMB1 | Combination | -494,8   | -15629,56 | 1305,1   | -4553248,19 | 120147,53  | -11190581,8 | 43-2  | 0   |
| 43 | 400  | COMB1 | Combination | -494,8   | -15100    | 1305,1   | -4553248,19 | -140872,88 | -8117626    | 43-2  | 200 |
| 43 | 400  | COMB1 | Combination | 346,7    | -14660,36 | 157,14   | -3951355,6  | -131824,91 | -7915496,75 | 43-3  | 0   |
| 43 | 600  | COMB1 | Combination | 346,7    | -14130,8  | 157,14   | -3951355,6  | -163252,43 | -5036380,78 | 43-3  | 200 |
| 43 | 600  | COMB1 | Combination | 792,63   | -13394,93 | -176,73  | -3453097,5  | -155116,39 | -4852690,74 | 43-4  | 0   |
| 43 | 800  | COMB1 | Combination | 792,63   | -12865,37 | -176,73  | -3453097,5  | -119770,21 | -2226660,75 | 43-4  | 200 |
| 43 | 800  | COMB1 | Combination | 979,74   | -12011,81 | -198,93  | -3000964,32 | -114951,12 | -2061016,46 | 43-5  | 0   |
| 43 | 1000 | COMB1 | Combination | 979,74   | -11482,25 | -198,93  | -3000964,32 | -75165,51  | 288390,18   | 43-5  | 200 |
| 43 | 1000 | COMB1 | Combination | 1035,4   | -10567,5  | -140,08  | -2568204,81 | -72768,35  | 435181,48   | 43-6  | 0   |
| 43 | 1200 | COMB1 | Combination | 1035,4   | -10037,95 | -140,08  | -2568204,81 | -44751,66  | 2495726,53  | 43-6  | 200 |
| 43 | 1200 | COMB1 | Combination | 1037,42  | -9073,28  | -81,54   | -2141053,09 | -43775,27  | 2622969,25  | 43-7  | 0   |
| 43 | 1400 | COMB1 | Combination | 1037,42  | -8543,72  | -81,54   | -2141053,09 | -27467,8   | 4384668,52  | 43-7  | 200 |
| 43 | 1400 | COMB1 | Combination | 1023,9   | -7524,37  | -41,99   | -1708905,47 | -27157,85  | 4491656,49  | 43-8  | 0   |
| 43 | 1600 | COMB1 | Combination | 1023,9   | -6994,82  | -41,99   | -1708905,47 | -18760,67  | 5943575,56  | 43-8  | 200 |

|    |      |       |             |          |          |          |             |            |             |       |     |
|----|------|-------|-------------|----------|----------|----------|-------------|------------|-------------|-------|-----|
| 43 | 1600 | COMB1 | Combination | 1009,97  | -5920,58 | -18,9    | -1265511,74 | -18724,63  | 6029565,33  | 43-9  | 0   |
| 43 | 1800 | COMB1 | Combination | 1009,97  | -5391,02 | -18,9    | -1265511,74 | -14943,86  | 7160724,92  | 43-9  | 200 |
| 43 | 1800 | COMB1 | Combination | 1000,61  | -4267,78 | -5,33    | -807996,74  | -14991,16  | 7225019,19  | 43-10 | 0   |
| 43 | 2000 | COMB1 | Combination | 1000,61  | -3738,22 | -5,33    | -807996,74  | -13925,78  | 8025618,85  | 43-10 | 200 |
| 43 | 2000 | COMB1 | Combination | 997,5    | -2576,32 | 5,52     | -335850,8   | -13981,63  | 8067633,27  | 43-11 | 0   |
| 43 | 2200 | COMB1 | Combination | 997,5    | -2046,76 | 5,52     | -335850,8   | -15085,38  | 8529942,13  | 43-11 | 200 |
| 43 | 2200 | COMB1 | Combination | 1002,27  | -858,41  | 20,29    | 150342,59   | -15130,12  | 8549245,23  | 43-12 | 0   |
| 43 | 2400 | COMB1 | Combination | 1002,27  | -328,85  | 20,29    | 150342,59   | -19188,72  | 8667971,42  | 43-12 | 200 |
| 43 | 2400 | COMB1 | Combination | 1016,81  | 874,36   | 46,98    | 650135,59   | -19256,8   | 8664292,67  | 43-13 | 0   |
| 43 | 2600 | COMB1 | Combination | 1016,81  | 1403,92  | 46,98    | 650135,59   | -28652,41  | 8436465,36  | 43-13 | 200 |
| 43 | 2600 | COMB1 | Combination | 1040,68  | 2613,35  | 95,38    | 1164423,83  | -28895,97  | 8409672,56  | 43-14 | 0   |
| 43 | 2800 | COMB1 | Combination | 1040,68  | 3142,9   | 95,38    | 1164423,83  | -47971,37  | 7834047,55  | 43-14 | 200 |
| 43 | 2800 | COMB1 | Combination | 1064,22  | 4354,31  | 173,03   | 1696369,44  | -48762,41  | 7784100,66  | 43-15 | 0   |
| 43 | 3000 | COMB1 | Combination | 1064,22  | 4883,87  | 173,03   | 1696369,44  | -83367,94  | 6860283,41  | 43-15 | 200 |
| 43 | 3000 | COMB1 | Combination | 1054,26  | 6096,21  | 267,93   | 2252409,71  | -85503,37  | 6787170,85  | 43-16 | 0   |
| 43 | 3200 | COMB1 | Combination | 1054,26  | 6625,77  | 267,93   | 2252409,71  | -139090,2  | 5514972,95  | 43-16 | 200 |
| 43 | 3200 | COMB1 | Combination | 932,92   | 7822,73  | 302,56   | 2841282,6   | -143748,29 | 5418741,77  | 43-17 | 0   |
| 43 | 3400 | COMB1 | Combination | 932,92   | 8352,29  | 302,56   | 2841282,6   | -204259,99 | 3801240,65  | 43-17 | 200 |
| 43 | 3400 | COMB1 | Combination | 559,14   | 9481,4   | 30,81    | 3485182,82  | -212741,01 | 3682018,96  | 43-18 | 0   |
| 43 | 3600 | COMB1 | Combination | 559,14   | 10010,96 | 30,81    | 3485182,82  | -218903,19 | 1732783,46  | 43-18 | 200 |
| 43 | 3600 | COMB1 | Combination | -242,99  | 10950,48 | -1126,39 | 4240184,63  | -229300,27 | 1589088,34  | 43-19 | 0   |
| 43 | 3800 | COMB1 | Combination | -242,99  | 11480,04 | -1126,39 | 4240184,63  | -4022,68   | -653963,2   | 43-19 | 200 |
| 43 | 3800 | COMB1 | Combination | -1523,68 | 14574,99 | -4183,06 | 5458812     | -8396,28   | -825118,88  | 43-20 | 0   |
| 43 | 4000 | COMB1 | Combination | -1523,68 | 15104,55 | -4183,06 | 5458812     | 828215,43  | -3793072,53 | 43-20 | 200 |

