**PC Underground Forecaster**

**Window NT Version 2.10**

**Database Description**

Note: Wildcard characters '\*' and '?' can appear in certain fields (indicated below).

CASE : Table

CAL\_ID - calendar id to be used in forecast.

NUM\_WEEKS - number of weeks to run forecast.

PERIOD - reporting period for forecast: Daily, Weekly, Monthly (default).

QUALITY\_DB - sample database to be used.

CALENDAR : Table

CAL\_NO - numeric id.

MON\_DATE - Monday date.

MON,...,SUN - 'X' day will be worked,

' ' day will not be worked.

COMMENTS - memo field.

RATES : Table

UNIT - id (can include wildcards).

TYPE - section type, must begin with 'LW' (longwall) or 'CM' (continuous miner).

FT\_P\_MS - linear feet mined per machine shift.

TNS\_P\_MS - tons mined per machine shift.

TNS\_P\_FT - tons mined per linear foot.

MS\_P\_DAY - machine shifts per day.

COAL - 'C' above tons are clean,

'R' above tons are raw.

MAX\_TPMS - maximum allowable tons mined per machine shift.

MAX\_FTPMS - maximum allowable linear feet mined per machine shift.

*Notes* - the same UNIT can appear with different TYPE's - this allows for differing production rates based on section type.

Standard suffixes for type are as follows:

G – Gate, S – Setup, B – Blender, X – bleeder eXtension,

T – Tailgate bleeder, A – Advance CM panel, R – Retreat CM panel

- either FT\_P\_MS or TNS\_P\_MS must be greater than zero (FT\_P\_MS will be used if both given).

- TNS\_P\_FT is necessary to calculate tonnages for timing purposes and to estimate feet of advance when TNS\_P\_MS is used - it is not necessary when quality is to be forecast, it will be estimated in this case.

- MS\_P\_DAY must be greater than zero.

- MAX\_TPMS and MAX\_FTPMS (if non-zero) are used as "governors" - MAX\_TPMS is checked if FT\_P\_MS is being used as the production rate and MAX\_FTPMS if TNS\_P\_MS is being used.

GEOMETRY : Table

SECT - id.

TYPE - must begin with 'LW' (longwall) or 'CM' (continuous miner). (See Rate Datatable notes.)

INIT\_STN - survey station number (plus) of initial point.

X\_COORD - x coordinate of initial point.

Y\_COORD - y coordinate of initial point.

AZIMUTH - orientation of section at initial point.

LENGTH - length of section.

WIDTH - width of section.

RECOV - percentage of material recovered when mining in section.

LINEAR\_FACTOR - linear ft / section ft

*Note* - both LENGTH & WIDTH must be greater than zero.

* LINEAR\_FACTOR must be >= 1.0
* RECOV must be > 0 and < 100

The following fields in the Geometry table are used by the Forecaster ‘add-in’ in Microstation:

BARRIER - either bleeder barrier width or LW barrier width depending upon KIND

PANEL\_CO -

PANEL\_LV -

PANEL\_WT -

TEXT\_CO -

TEXT\_LV -

TEXT\_WT -

TEXT\_FONT -

KIND - 0 – None, 1 – Mains, 2 – LW, 3 – Gate, 4 – Bleeder Extension,

5 – Setup, 6 – Bleeder, 7 – Tailgate Bleeder, 8 – Bleeder Tap, 9 –CMA,

10 – CMR, 11 – Individual LW, 12 Individual CM, 13 – Mains Advance,

14 – Mains Retreat

PREVIOUS - previous section when using auto-sequencing

LEAPFROG\_OVERIDE - Yes/No

ENTRIES -

ENTRY\_WIDTH -

ENTRY\_CENTERS -

CROSSCUT\_CENTERS -

CROSSCUT\_ANGLE -

GOB\_EYE\_DEPTH -

BELT\_PILLARS\_SPLIT - Yes/No

SEQUENCE : Table

SECT - id of section [SECT] in GEOMETRY table being sequenced.

START - station in section where mining to begin.

END - station in section where mining to end.

UNIT - id of unit [UNIT] in RATE table.

BEGIN - date SECT can start.

REF1 - id of section [SECT] in GEOMETRY table being used as the primary reference.

STN1 - station in REF1 to be reached before SECT can start.

D1 - days after REF1 has reached STN1 before SECT can start.

REF2 - id of section [SECT] in GEOMETRY table being used as the secondary reference.

STN2 - station in REF2 to be reached before SECT can start.

D2 - days after REF2 has reached STN2 before SECT can start.

DIRTY\_FLAG - mark as dirty if not to be deleted by auto sequencing in Microstation

ORDERING - ordered mining sequence (annotation only), generated by auto

sequencing in microstation

*Notes -* UNIT must have a TYPE in the RATE table corresponding to the sections’

TYPE in the GEOMETRY table.

- BEGIN or REF1 must be specified.

- SECT is not unique, there can be multiple entries for the same section.

- if there is a REF2 and STN2 is reached after REF1 has reached STN1, then D1 is not applied until REF2 has reached STN2 and D2 has been applied.

- all the stations (START, END, STN1, STN2) must be within the

bounds defined by the corresponding sections’ geometry

CAL\_EXCEPTIONS : Table

ID - section or unit where exception to be used (can include wildcards).

START\_MON - monday exception to start.

END\_MON - monday exception to end.

CAL\_NO - entry [CAL\_NO] in CALENDAR table to be used for exception.

MON,...,SUN - 'X' day will be worked,

' ' day will not be worked.

*Note* - END\_MON must be later than START\_MON.

MON, through SUN will be used only if CAL\_NO is blank.

DATE\_EXCEPTIONS : Table

ID - section or unit where exception to be used (can include wildcards).

START\_DATE - date exception to start.

END\_DATE - date exception to end.

UNIT - id of additional or replacement unit.

FT\_P\_MS, TNS\_P\_MS, TNS\_P\_FT, MS\_P\_DAY - for description see RATE table.

INCRS - percentage productivity increase.

*Notes* - END\_DATE must be later than START\_DATE.

END\_DATE can be blank in which case the exception is applied permanently when START\_DATE is reached - the section or unit does not have to be in use.

- UNIT is added if ID is a section and there are not already two units in section.

- UNIT is removed if ID is a section and it matches the second unit.

- UNIT replaces ID if ID is unit, wherever unit is mining.

- if there are two units in a section, then the advance rate is doubled.

- the advance rate parameters are updated only if they are non- zero, unless they are all zero (or unless a UNIT is being added/replaced in which case they are not updated).

- INCRS increases whatever advance rate (ft/ms or tons/ms) is currently being used - increases are compounded.

AREA\_EXCEPTIONS : Table

ID - id of section [SECT] in GEOMETRY where exception to be applied.

START\_STN - station in section where exception to start.

END\_STN - station in section where exception to end.

FT\_P\_MS, TNS\_P\_MS, TNS\_P\_FT, MS\_P\_DAY - for description see RATE datatable.

INCRS - percentage productivity increase.

*Notes -* START\_STN and END\_STN must be within the bounds defined by the sections’ geometry.

REF\_EXCEPTIONS : Table

ID - section or unit where exception to be used (can include wildcards).

REF\_ID - section id [SECT] in GEOMETRY table to be used as a reference.

REF\_STN - station in reference section to be reached before exception to be applied.

UNIT - id of additional or replacement unit.

FT\_P\_MS, TNS\_P\_MS, TNS\_P\_FT, MS\_P\_DAY - for description see RATE table

INCRS - percentage productivity increase.

*Note* - REF\_STN must be within the bounds defined by the sections’ geometry.

SHUTDOWNS : Table

ID - section or unit where exception to be used (can include wildcards).

UNIT - id of unit to be monitored.

START\_DATE - date after which monitoring can start.

END\_DATE - date after which monitoring stops.

*Note* - UNIT (usually a longwall) is monitored to check when it is being moved (not idle or working), when this occurs ID is shutdown.

* Both dates must be specified and END\_DATE must fall after START\_DATE.

The following table is used by Microstation when auto-sequencing a LW group

GROUPING : Table

FIRST\_SECT

MAINS

ANGLE - angle LW panel makes with mains

START\_DIST

LW\_UNIT

LW\_MOVEDELAY

LW\_SETUPDELAY

LW\_BEGIN

CM\_UNIT1

CM\_UNIT2

CM\_DELAY

CM\_BEGIN

JIT\_MAINS - “Just In Time” mains auto-sequencing

REVERSED

ON\_LEFT