

SPCS WV-S NAD 27: N344,400

SELECTED SYMBOLS used in WVOMHS&T Mappin (and selected pre-explosion mine ventilation information)

- OBSERVED CONDITION OF ROOF PANS**
- No well-defined bending of roof pans by wind forces
  - Minor to Moderate bending of roof pans by wind forces
  - Severe bending of roof pans
  - Indicated wind-force direction (pans bent >90°, except when gray)
  - Indicated "final force" direction (usually "non-pan" light-weight structures like paper or plastic)
  - Roof pans not rusted
  - Roof pan edges, only, rusted
  - Roof pans are rusted
  - Initial wind-force direction
  - Subsequent wind-force direction
  - Pan bending from reflected forces
- VENTILATION \***
- Intake airway
  - Neutral airway
  - Return airway
  - Temporary curtain (these were installed post-explosion)
- OTHER SYMBOLS**
- Approx. location of victims (names are listed in Section 5.2)
  - Approx. location of water pool
- \* Depiction is approximate; not all air paths are indicated.

Map Symbols used to indicate the Direction of Dust Impacted onto Protruding or Standing Structures

- Roof Bolt Heads
  - Pipe Couplers = PC
  - Standing Jacks = SJ
  - Other Structures (see abbreviations, below)
  - Belt Structure = BS
  - Belt Roller = BR
  - Monorail Hanger = MH
  - Belt Chain = BC
  - Cable Bolts = CB
  - Proprietary = PS
  - Roof Ridge = RL
  - Belt Plate = BP
  - Chain Hanger = CH
  - Light Fixture = LF
  - Roof Plan = RP
  - Wire Roof Mesh = WRM
- The following notation is used to indicate where coal samples or dust samples were collected:
- Channel Samples (coal) = CS (#)
  - Impact Samples (dust) = IS (# - source)

SCALE



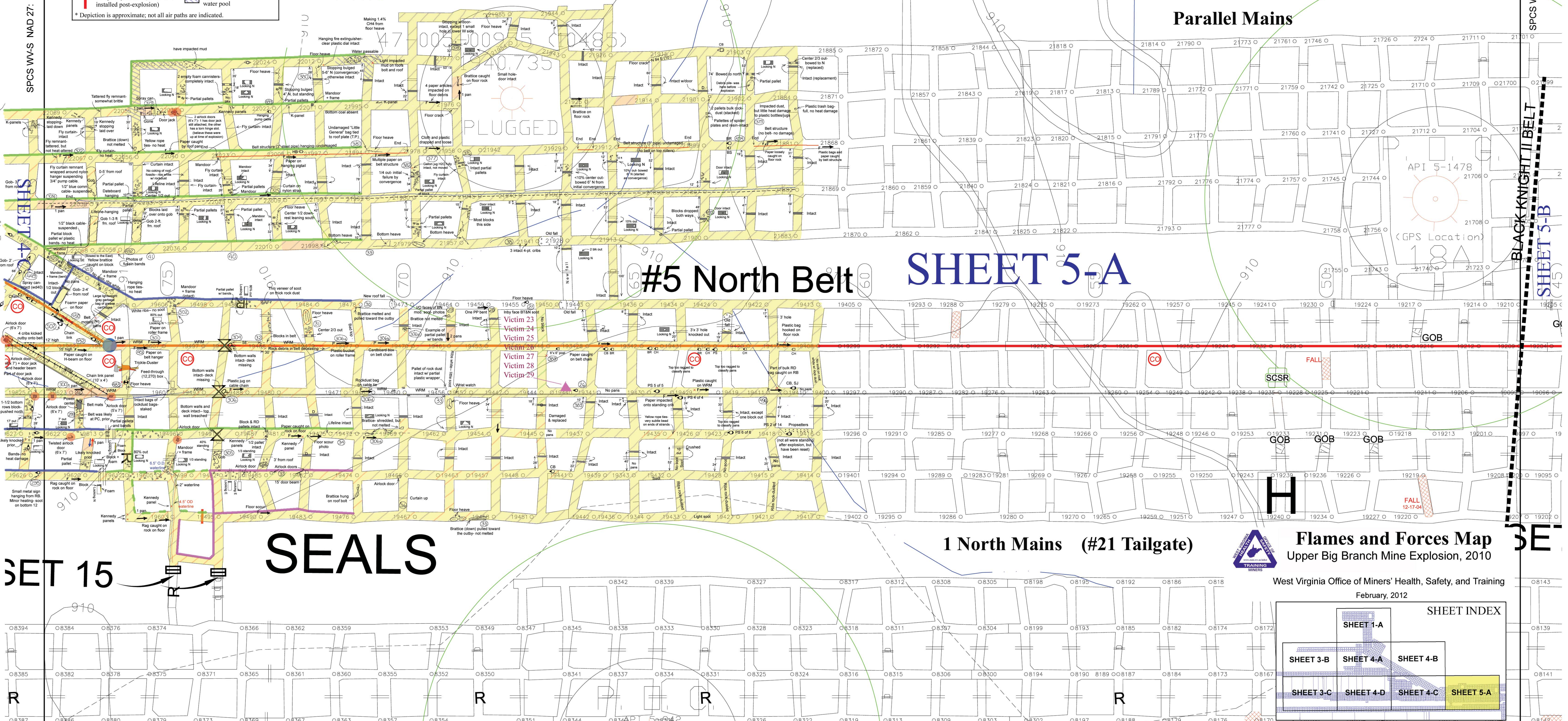
SELECTED SYMBOLS FROM UBB BASE MAP (Base map supplied by UBB shortly after April 5, 2010)

- BELT HEAD
- TRACK
- EXISTING BELT
- CO MONITOR
- BOX CHECK
- MAN DOOR
- ACTIVE OR INACTIVE GAS WELL
- PLUGGED GAS WELL
- PERMANENT STOPPINGS
- WET SEALS
- OVERCAST
- AIRLOCK DOOR
- REGULATOR
- COAL CONTOURS
- STREAM
- INTERMITTENT STREAM



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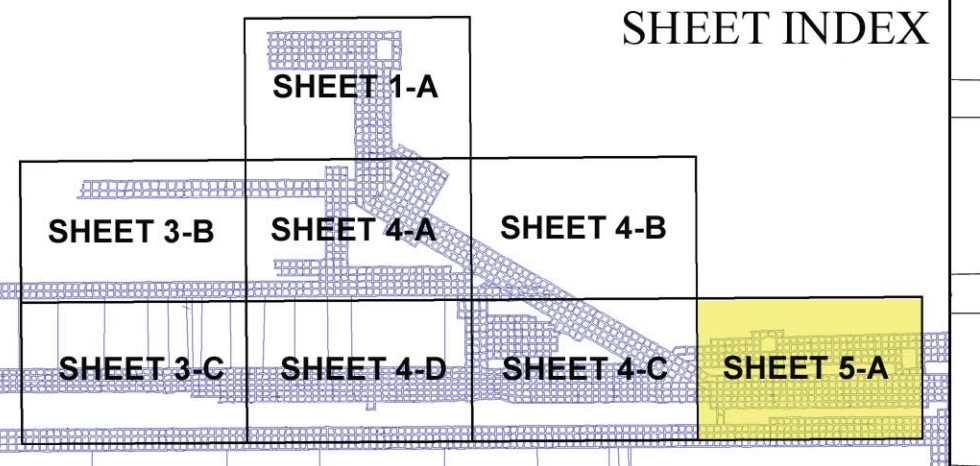
SPCS WV-S NAD 27: E1,833,800



Flames and Forces Map Upper Big Branch Mine Explosion, 2010

West Virginia Office of Miners' Health, Safety, and Training

February, 2012



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SHEET 5-A