RED LODGE DRILLING INVESTIGATION

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY, ABANDONED MINE LANDS DIVISION

Bill Snoddy – Project Manager at DEQ
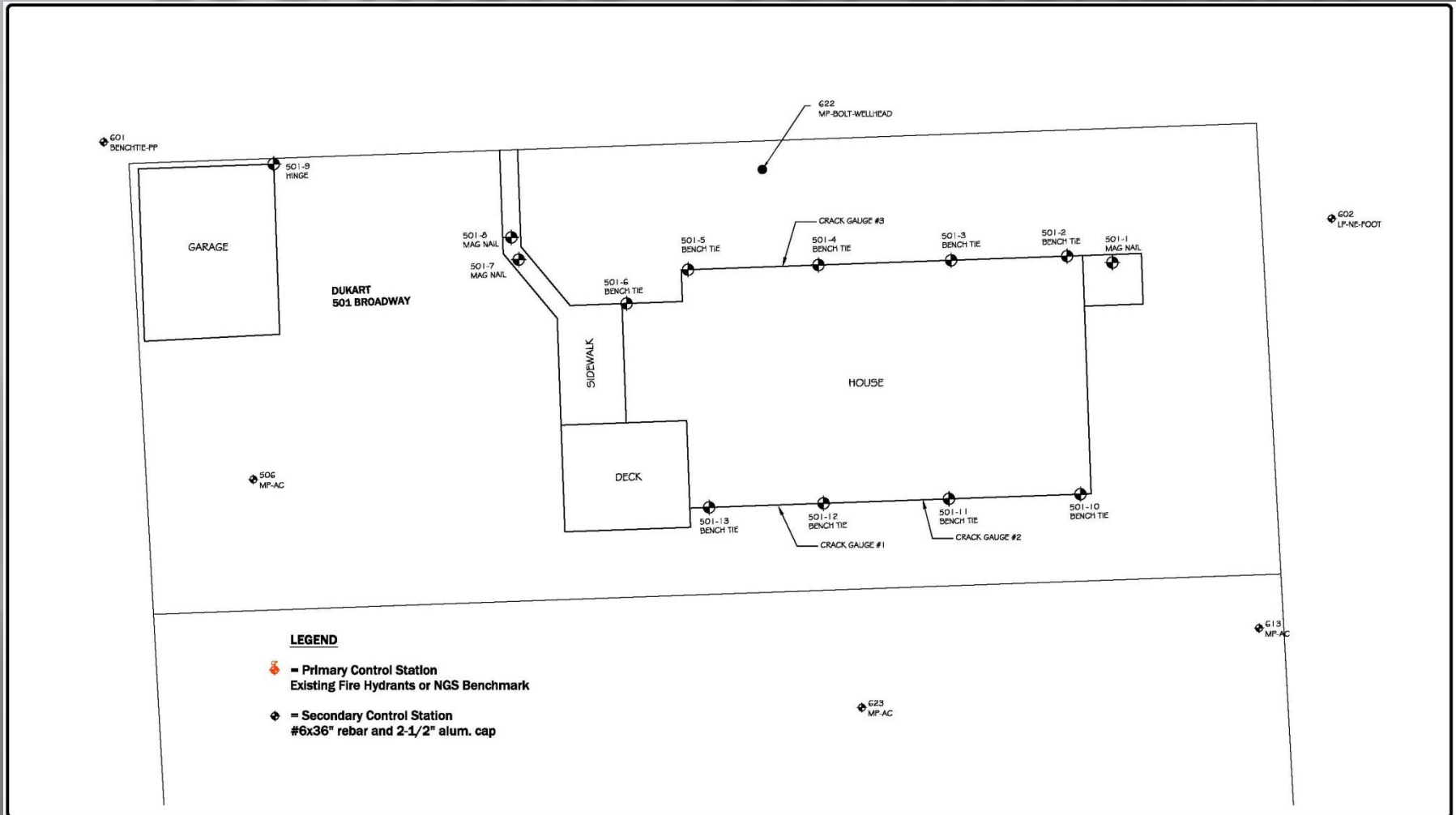
PIONEER TECHNICAL SERVICES, INC.

Tim Ranf – Project Manager at Pioneer

RED LODGE DRILLING INVESTIGATION

- Work Ongoing this year (since January):
  - Survey and Monitoring of 3 residences:
    - 501 Broadway
    - 505 Platt
    - 404 S. Broadway
  - Established survey monitoring points and control, crack gauges.
  - Monitoring quarterly to determine if active settlement is occurring. Next event – July.
  - No settlement measured to date (January & April).
- Additional House to be added at 207 S. Hauser

RED LODGE MONITORING LOCATIONS

Figure 1 — Monitoring Point Locations

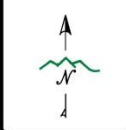# RED LODGE MONITORING LOCATIONS – 501 BROADWAY

FIGURE 2 — 501 BROADWAY

RED LODGE DRILLING INVESTIGATION

- OBJECTIVE – Determine whether historic underground coal mines have any potential for causing (or have caused) ground subsidence.
  - In response to concerns from several citizens.
  - Based on previous investigations and historic mine maps, the mine workings are very deep – 250- to 900-feet below the ground surface in this area.
- Outcome from the drilling investigation and survey monitoring will be used to determine whether or not ground subsidence has or could occur as a result of collapsing underground mine workings.

RED LODGE DRILLING INVESTIGATION
SITE MAP SHOWING PROPOSED BOREHOLE LOCATIONS

KEY:
- DENOTES PROPOSED BOREHOLE LOCATIONS
- DH-2; CHEN-NORTHERN, 1987

DISPLAYED AS:
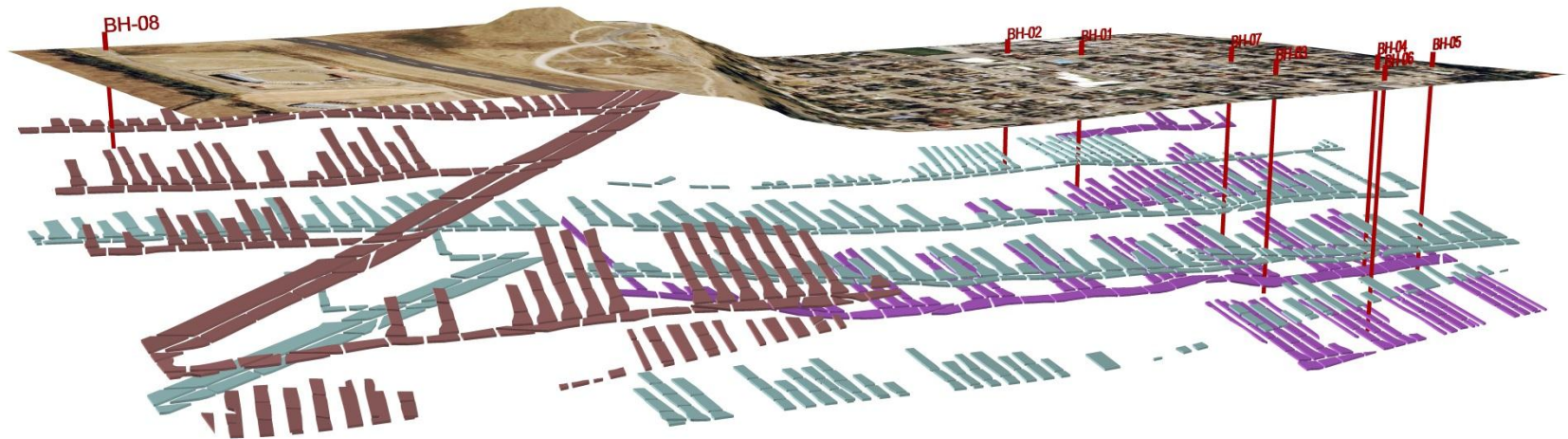COORD SYS/ZONE: MSP
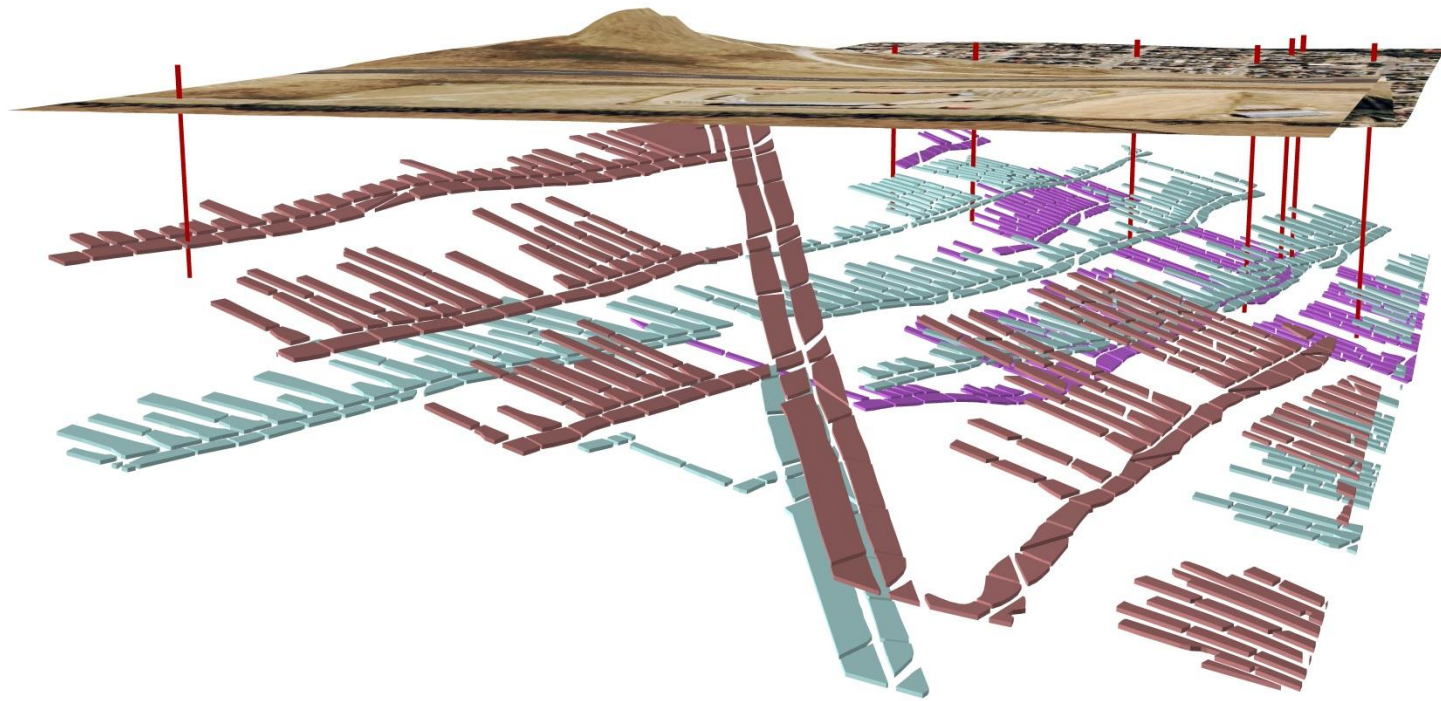DATUM: NAD83
UNITS: FT
SOURCE: NAIP 2013

SCALE IN FEET
0   150   300

FIGURE 1

PIONEER
TECHNICAL SERVICES, INC.
201 E. BROADWAY, SUITE C
HELENA, MT 59601
(406) 457-8252

RED LODGE DRILLING
INVESTIGATION
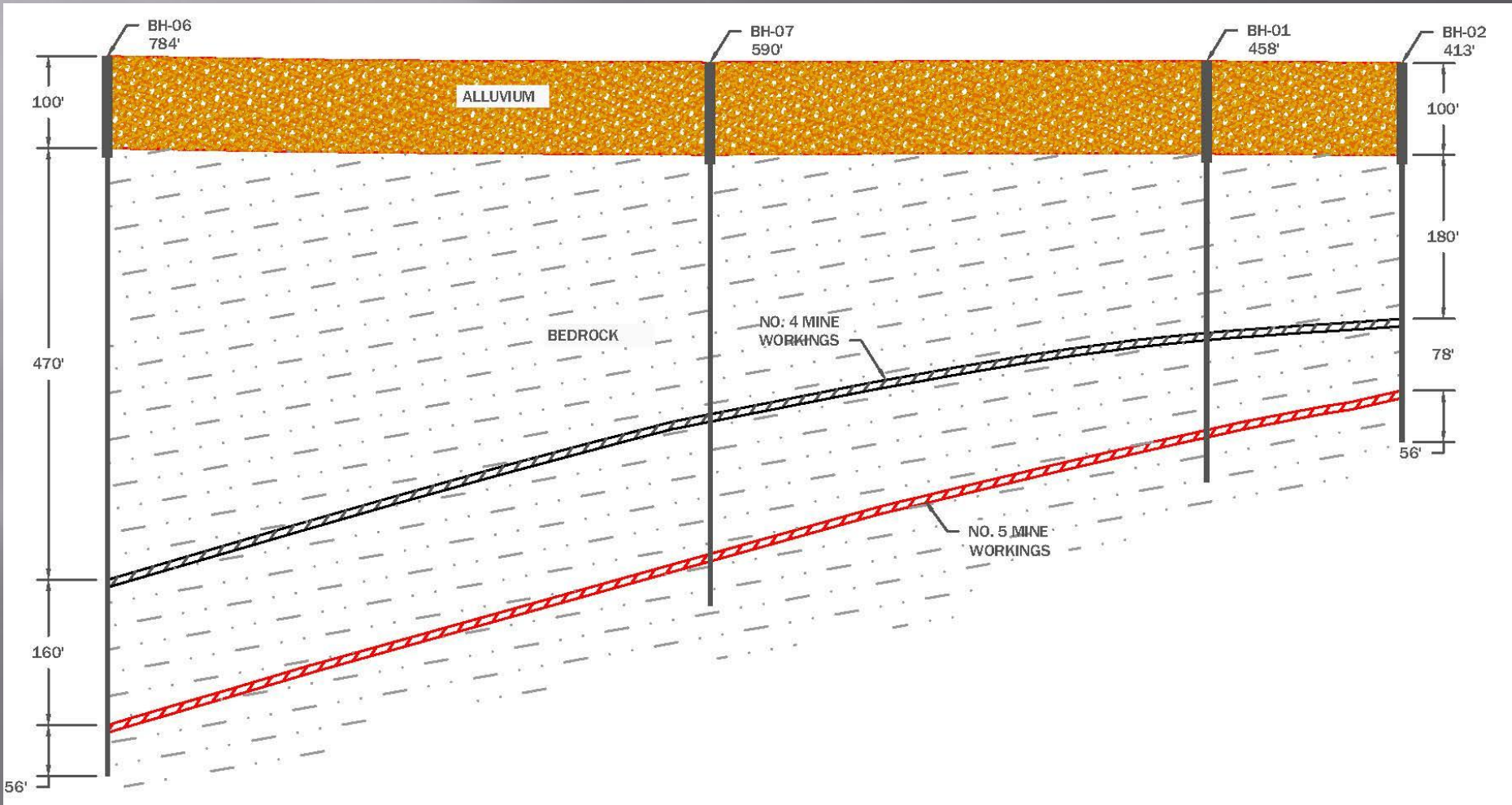BORE HOLE
LOCATIONS

DATE: 6/19/14

RED LODGE DRILLING INVESTIGATION MINE WORKINGS VIEW

RED LODGE DRILLING INVESTIGATION MINE WORKINGS VIEW

RED LODGE DRILLING INVESTIGATION CONCEPTUAL CROSS SECTION

RED LODGE DRILLING INVESTIGATION

- SCHEDULE
  - Requests for Bids for drilling contractor currently out.
  - Select Drillers July 1
  - Start Drilling August 4
    - Drilling activities 8 AM to 6 PM Monday – Saturday
    - Possibly have two drill rigs operating simultaneously for a couple weeks
  - Drilling complete September 26
  - Final Report December 22