

Excel Tools for Blasting

Ken Eltschlager

Mining/Explosives Engineer

OSM – Appalachian Region



Excel for Blasting

Book1 - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Add-Ins PDF

Cut Copy Format Painter

Font Alignment Number Conditional Formatting as Table Cell Styles Cells Cells Insert Delete Format Editing

A1 A B C D E F G H I J K L M N O P Q R S

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38

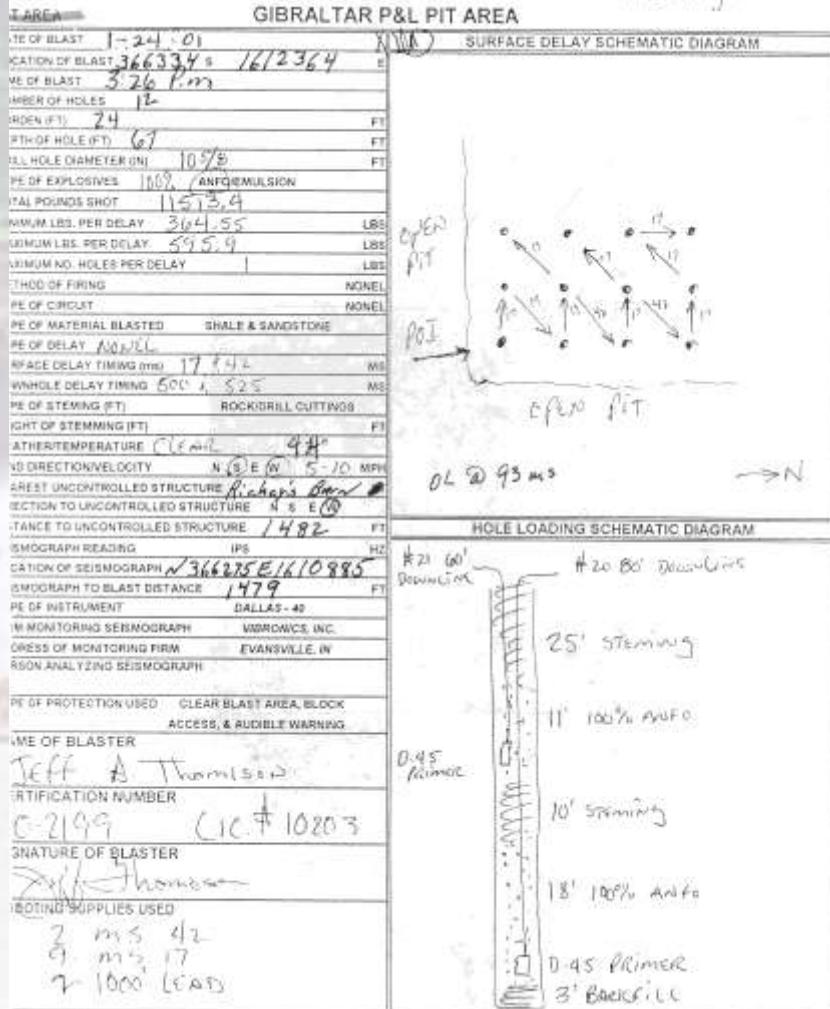
Excel is a spread sheet program capable of tracking, compiling, analyzing and plotting data.

ESPECIALLY SCIENTIFIC DATA!

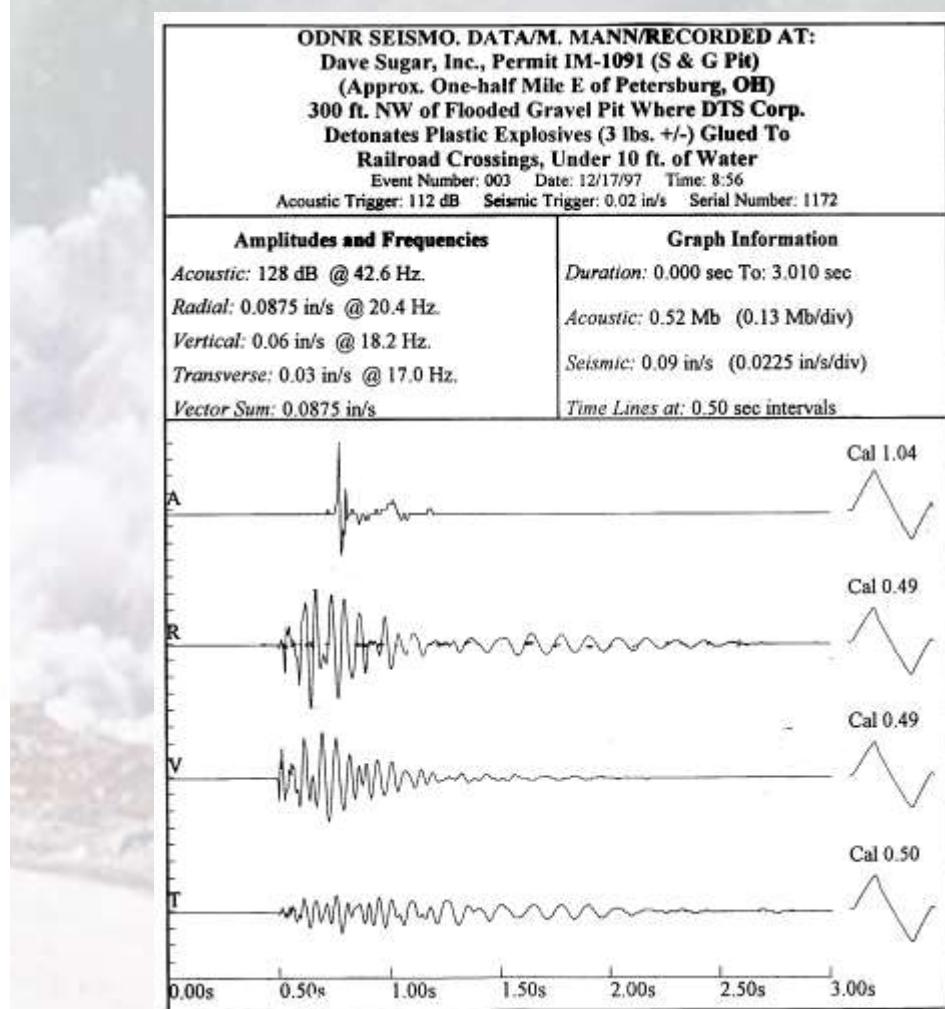


Excel for Blasting

Perfect for Blasting



Blast log data



Blasting Seismograph data



Excel for Blasting

26N1-HW
14th August 2001







Other Uses?

- Forms
- Vibration trends (surface and UG)
- Illustrate conversions
- Cross tabulate blast log data fields
- Complaint review
- Quality control reviews (blast crew)
- Blaster evaluations
- Fumes
- Flyrock
- Time out blasts



Excel for Blasting

- Explore some of the Existing spreadsheets from around the country as examples of the possibilities.....



Excel for Blasting

Data Forms

- Blast Logs
- Drill logs
- Blast Design
- 8-ms per delay table



Excel for Blasting

Scientific

- [OSM Latitude – Longitude distance calculator](#)
- [ATF Lat-Long distance calculator](#)
- [Displacement – Velocity – Acceleration plots](#)
- [Wind to decibel conversion](#)



Excel for Blasting

Predictions

- PA ground vibrations
- PA airblast
- Unconfined Airblast



Excel for Blasting

Compliance

- Timing
- Blast Log Evaluation Program (BLEP)
- Blast Log Evaluation Program (BLEP) – PA
- BLEP (Milliren) – Vibration and Regression
- Flyrock
- Modified scaled distance - Regression check



Excel for Blasting

Graphics

- [RI 8507 Appendix B](#)
- [RI 8507 Appendix B – OSM Blasting Level Chart](#)
- [OSM Blasting Level Chart](#)



Excel for Blasting

Specialty Applications

- 10+ years of Data (Torbay)
- Multiple trends (Gray)



Excel for Blasting

Conclusion

- Explore Excel
- Help do your job
- See the trends ... that you think exist
- Provides permanent record of review
- Illustrates scientific concepts
- Once you get over the “data entry hang up”..... Its fun!



Excel for Blasting