New wells at Priddis

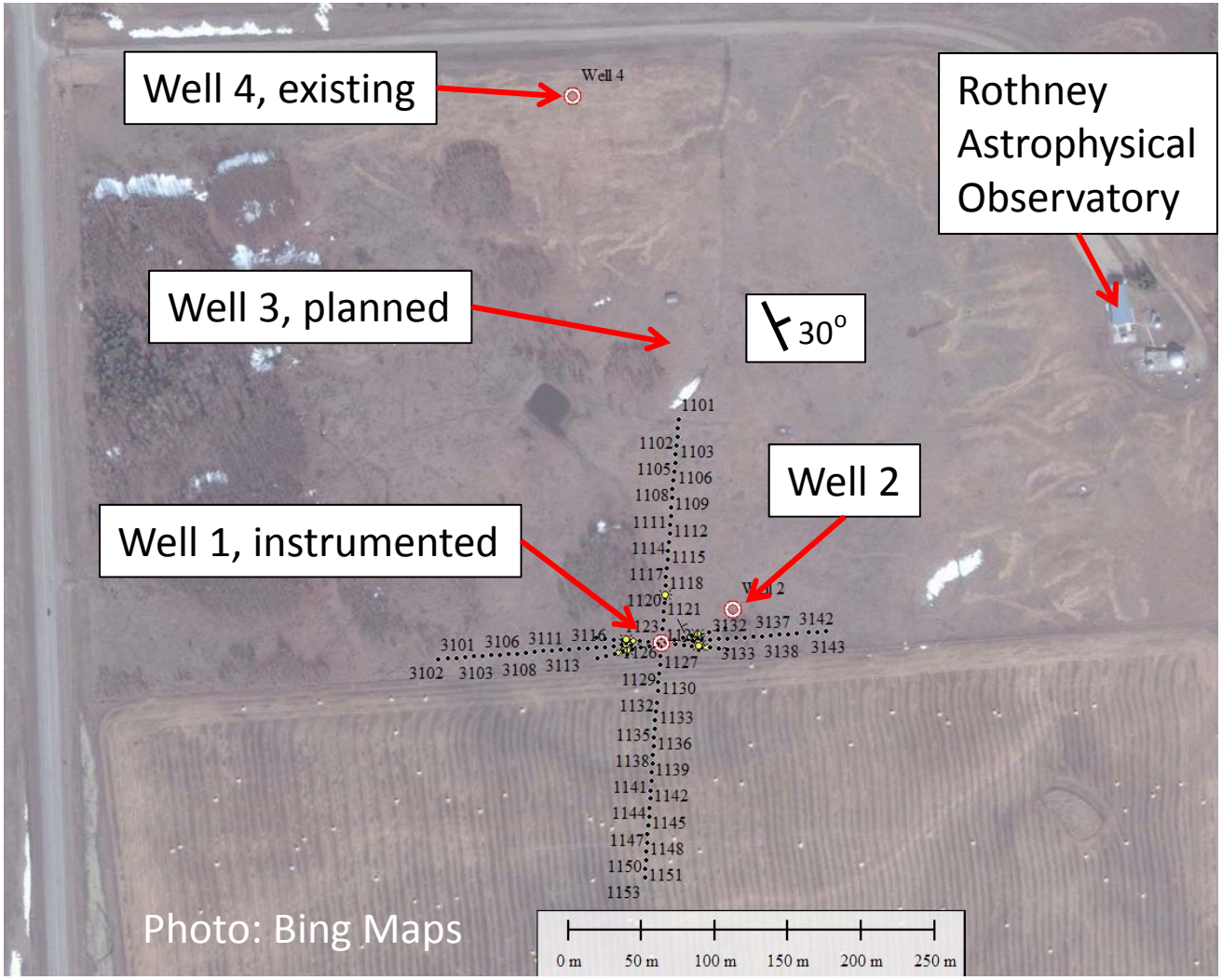
Installation of new observation wells at the Priddis Geophysical Observatory

Kevin W. Hall, Kevin L. Bertram, Malcolm B. Bertram, Eric V. Gallant, Gary F. Margrave and Don C. Lawton

Objectives

- Education
  - Undergraduate and graduate student introduction to borehole seismic and well-logging methods
- Research
  - Near surface Vp/Vs, Q
  - Receiver testing and comparisons
  - Source testing
  - VSP, Reverse VSP, Crosswell, Microseismic

Location

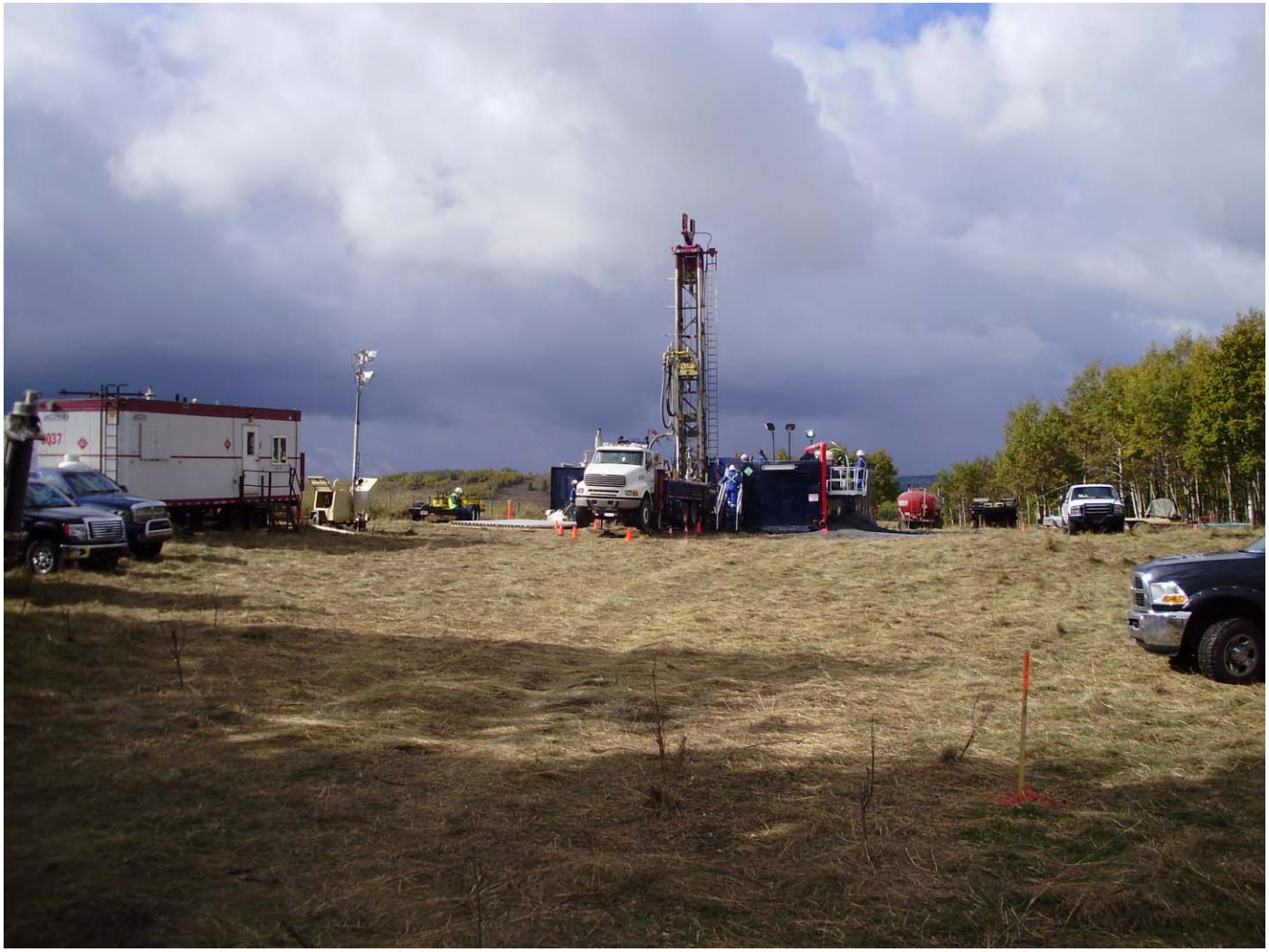

Well 4, existing
Well 4
Rothney Astrophysical Observatory
Well 3, planned
30°
Well 2
Well 1, instrumented
Well 2
1101
1102
1103
1105
1106
1108
1109
1111
1112
1114
1115
1117
1118
1120
1121
1123
1126
1127
1129
1130
1132
1133
1135
1136
1138
1139
1141
1142
1144
1145
1147
1148
1150
1151
1153
3101 3106 3111 3116
3102 3103 3108 3113
3132 3137 3142
3133 3138 3143
Photo: Bing Maps
0 m
50 m
100 m
150 m
200 m
250 m

Priddis: Scenery and geophone cables

Well 1: Shothole rig, Well 2: Drill rig

Well 1: Drill rig

Well 1: Drill rig



Well 1: Core, 7.3cm (2 7/8”), 31.5 m-124.0 m

Well 1: Geophone cables

Well 1: Geophone cable 12 of 12

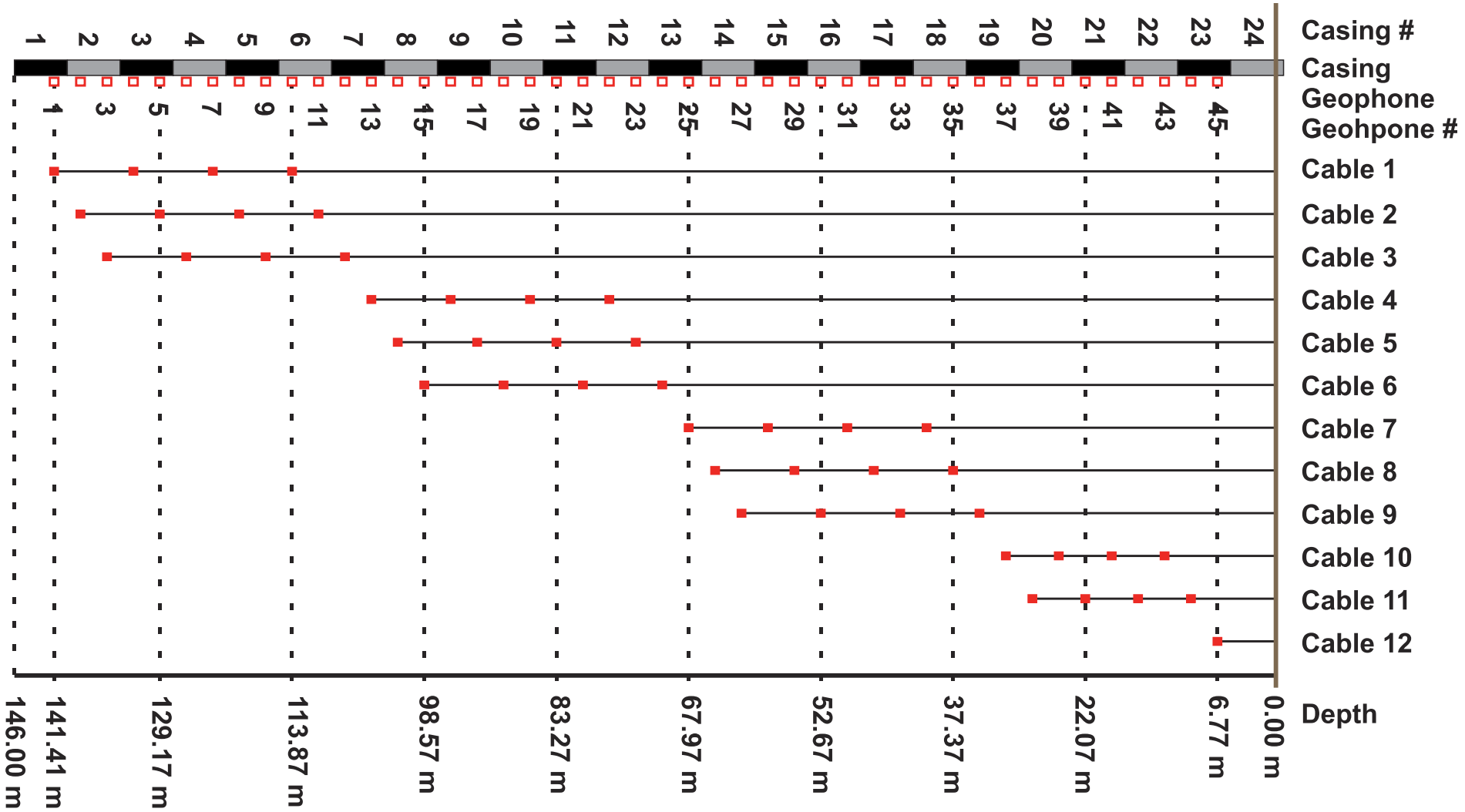
Well 1: Optical fibre

Well 1: PVC casing

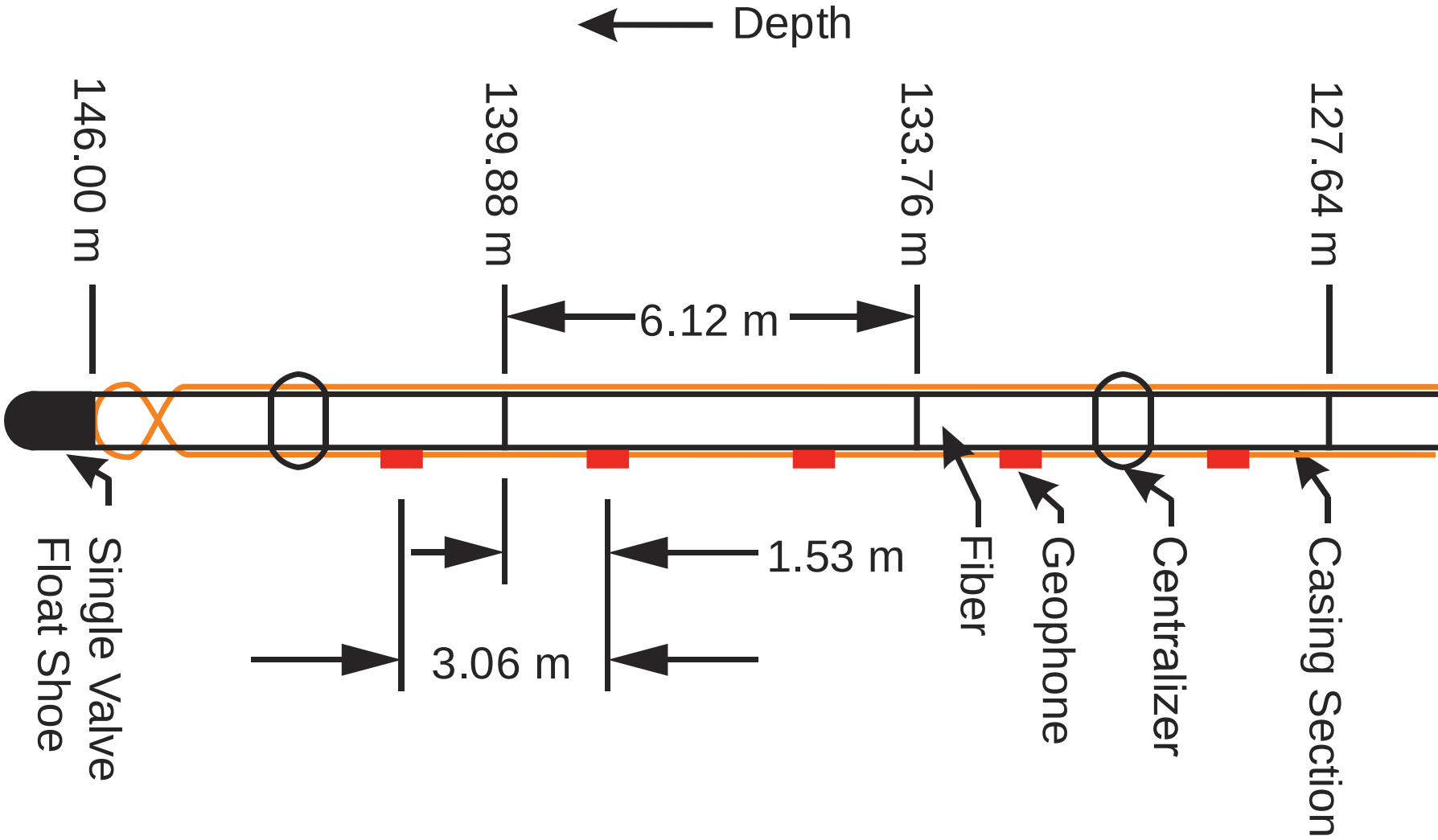
Well 1: Float shoe

Well 1: Centralizer

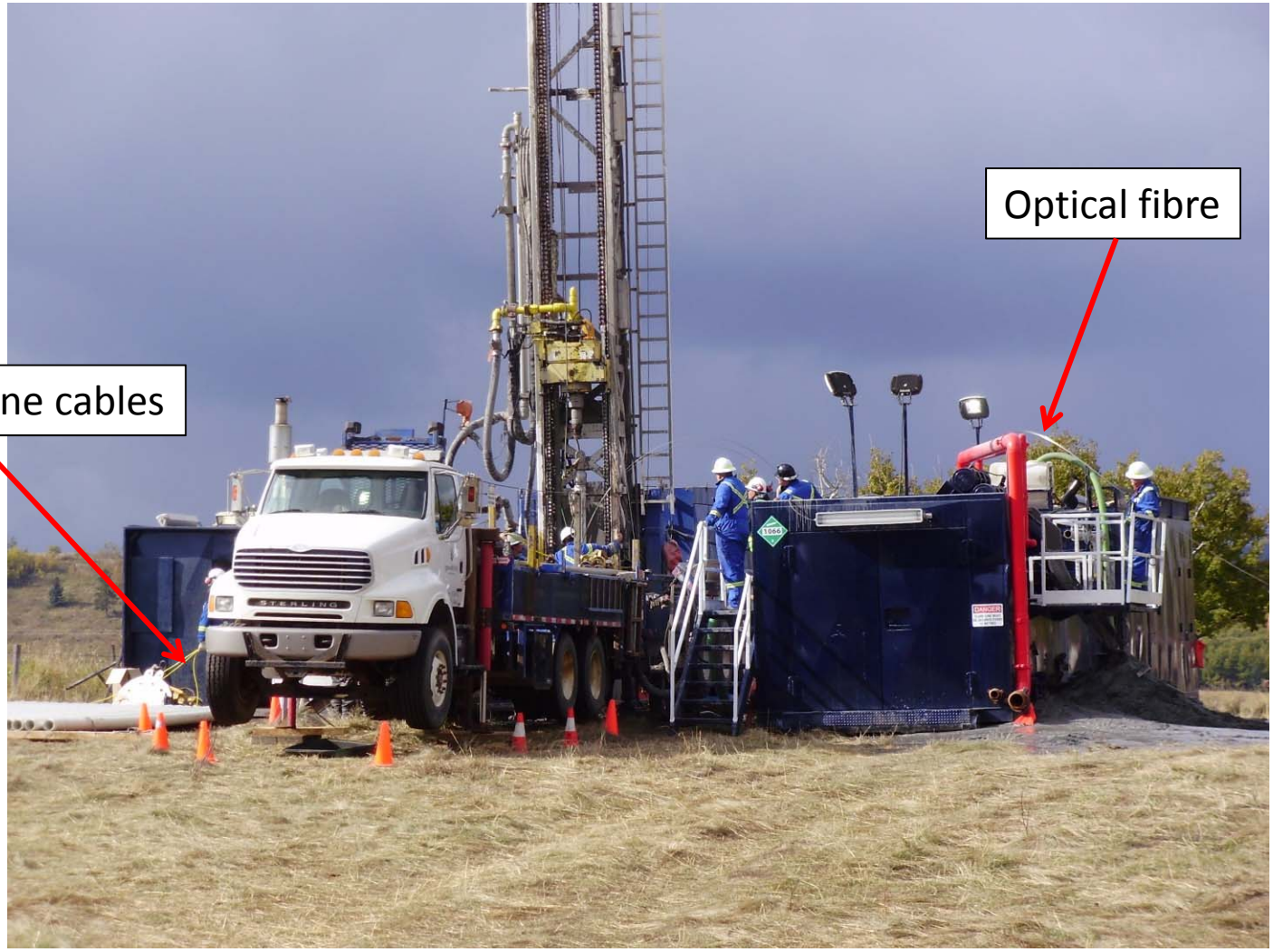
Well 1: Installation, geophone cables



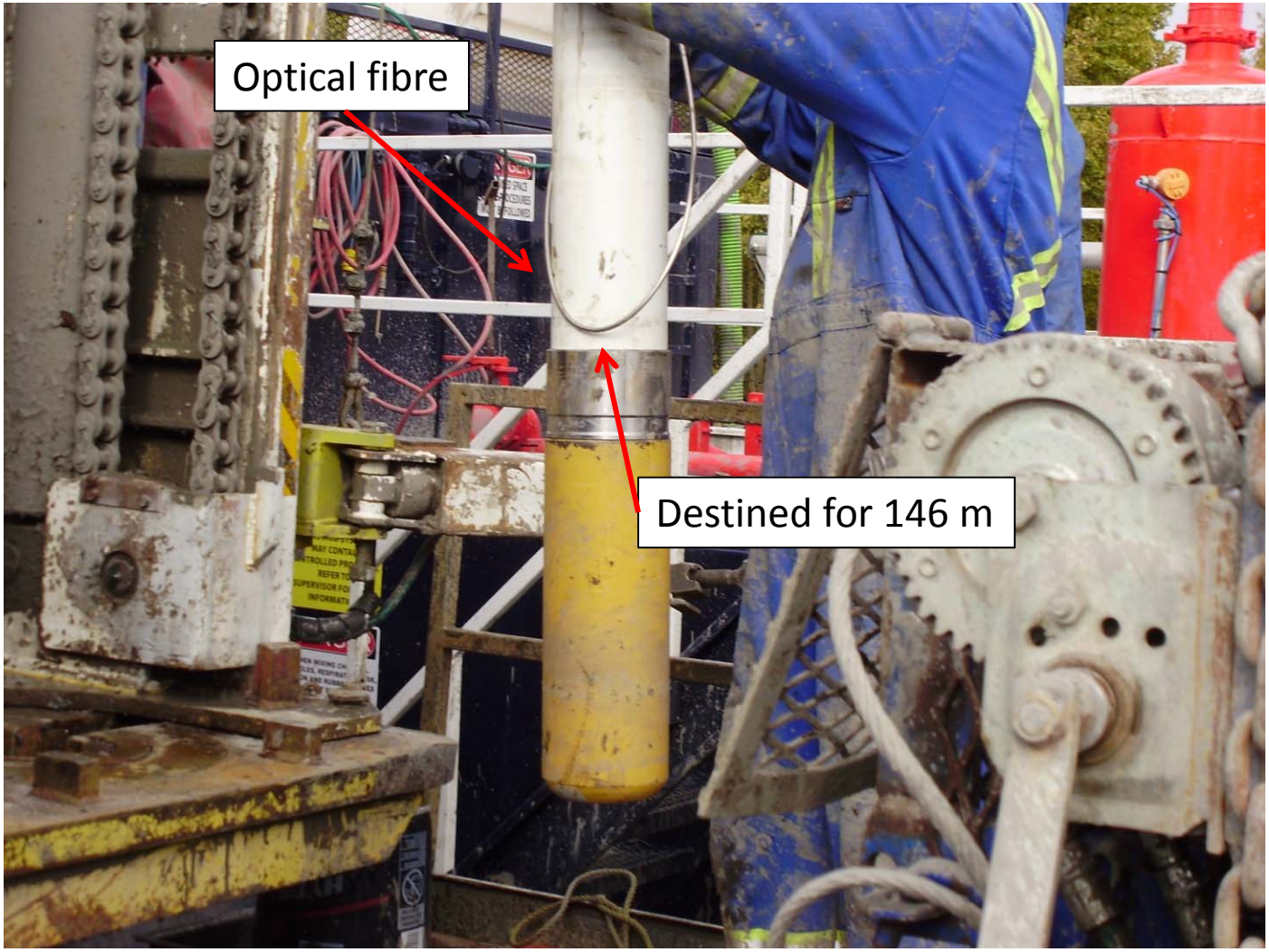
Well 1: Installation, bottom of well



Well 1: Installation



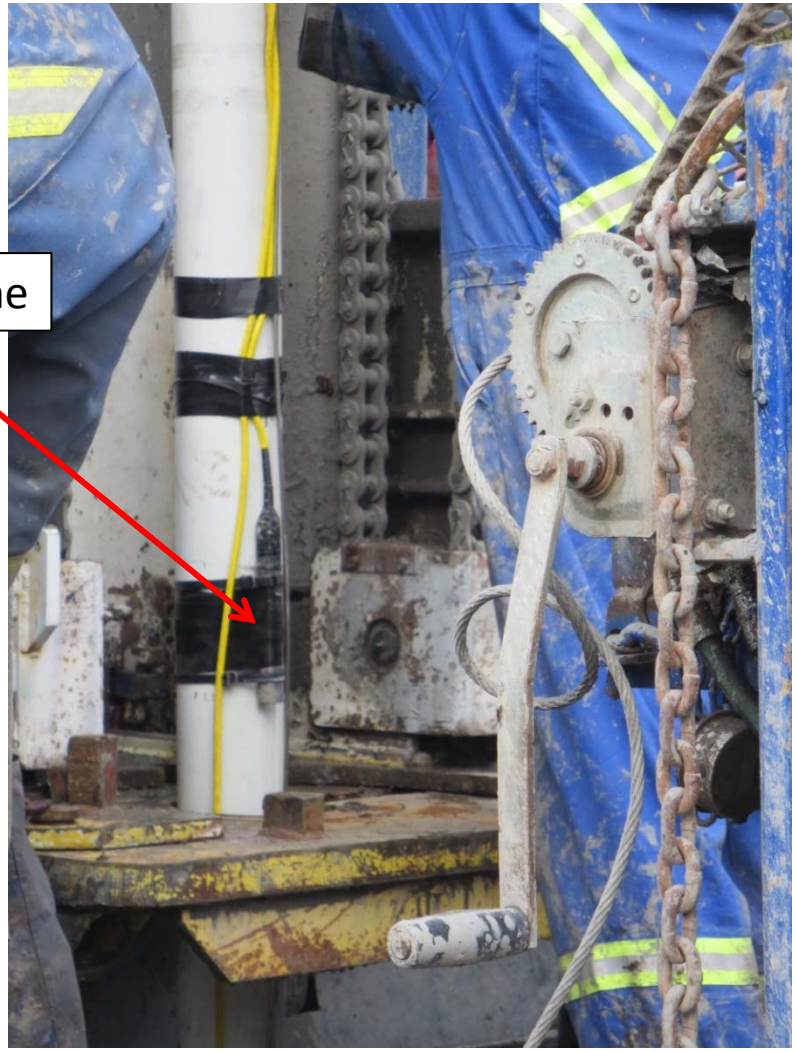
Well 1: Installation, Optical fibre



Well 1: Installation, geophone cables

Well 1: Installation, geophone cables

Well 1: Installation, geophone cables



Well 1: Post-installation, geophone cables

Well 1: Post-installation, optical fibre

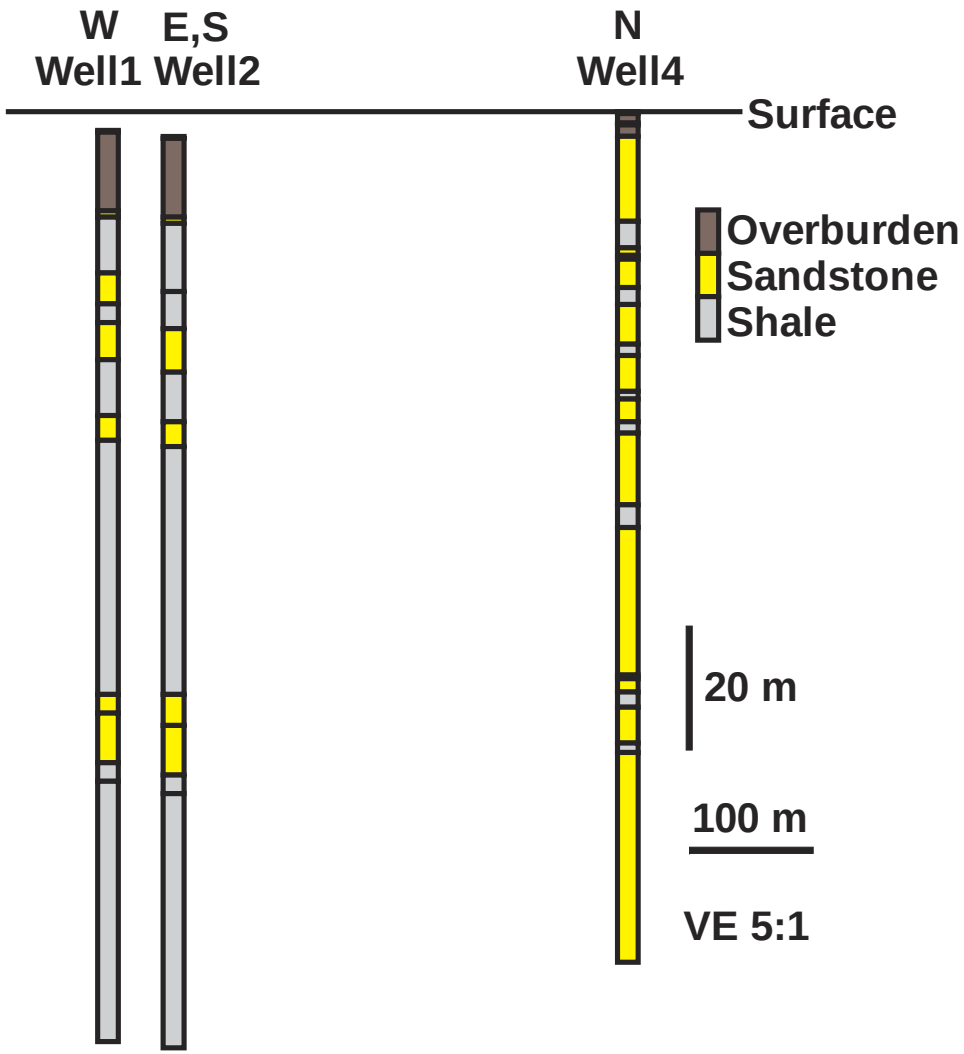
Well 1: Post-installation, geophone cables

Well 1: Post-installation, geophone cables

Well 1: Post-installation

Wells 2 and 4: Post-installation

Wells 1,2 and 4: Simplified geology



Acknowledgements

- Outsource Seismic (Gord Johnson and others)
- GroundForce geoDrilling Solutions Brett Fizzell, Rick Cronin and others
- Halliburton/Pinnacle (Henry Bland and others)
- NSERC
- Carbon Management Canada
- CREWES and CREWES Sponsors