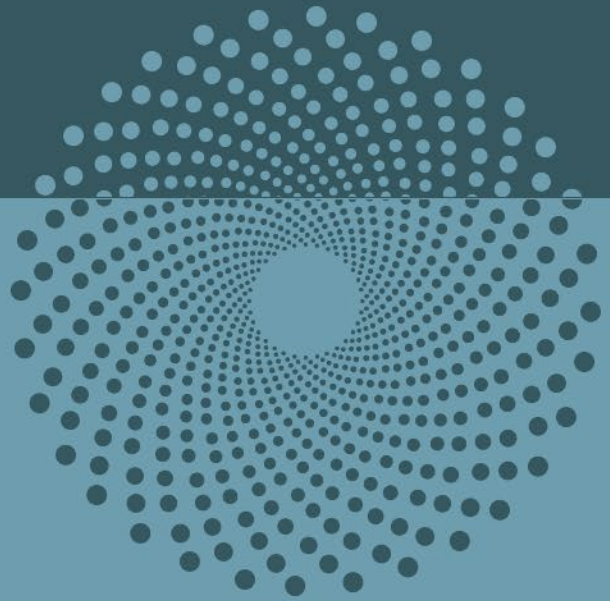
Cenovus Energy Inc.
Christina Lake In-situ Progress Report
Scheme 8591
2018 appendices

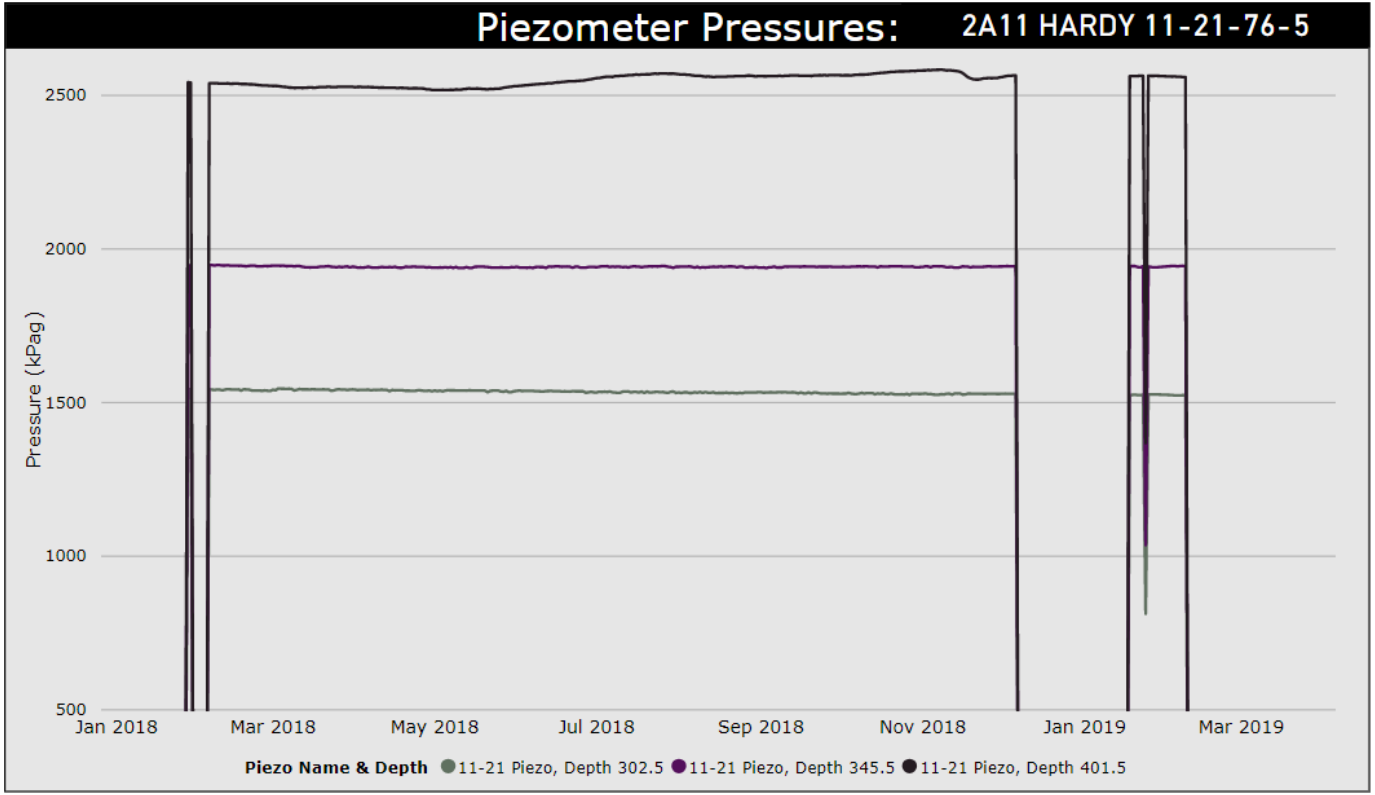
Subsurface

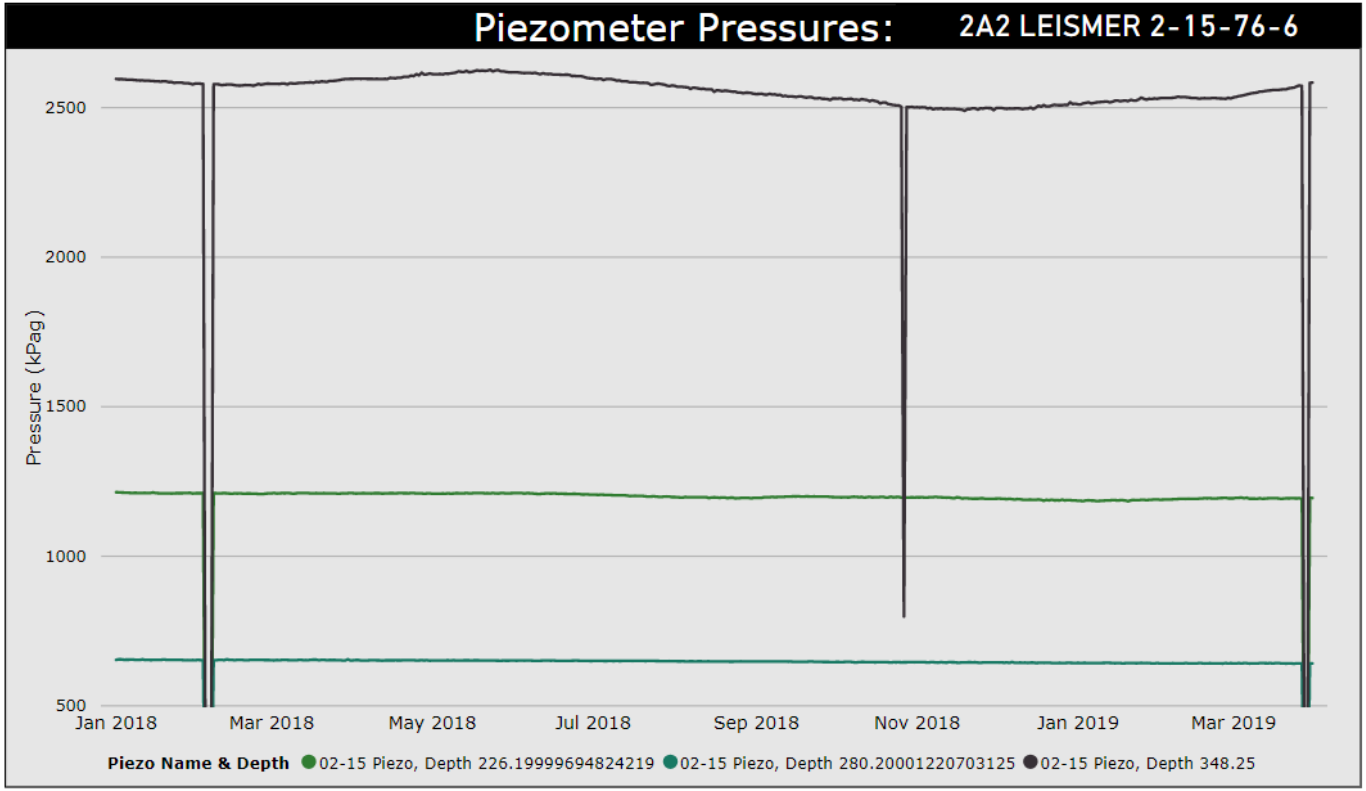
June 12, 2019

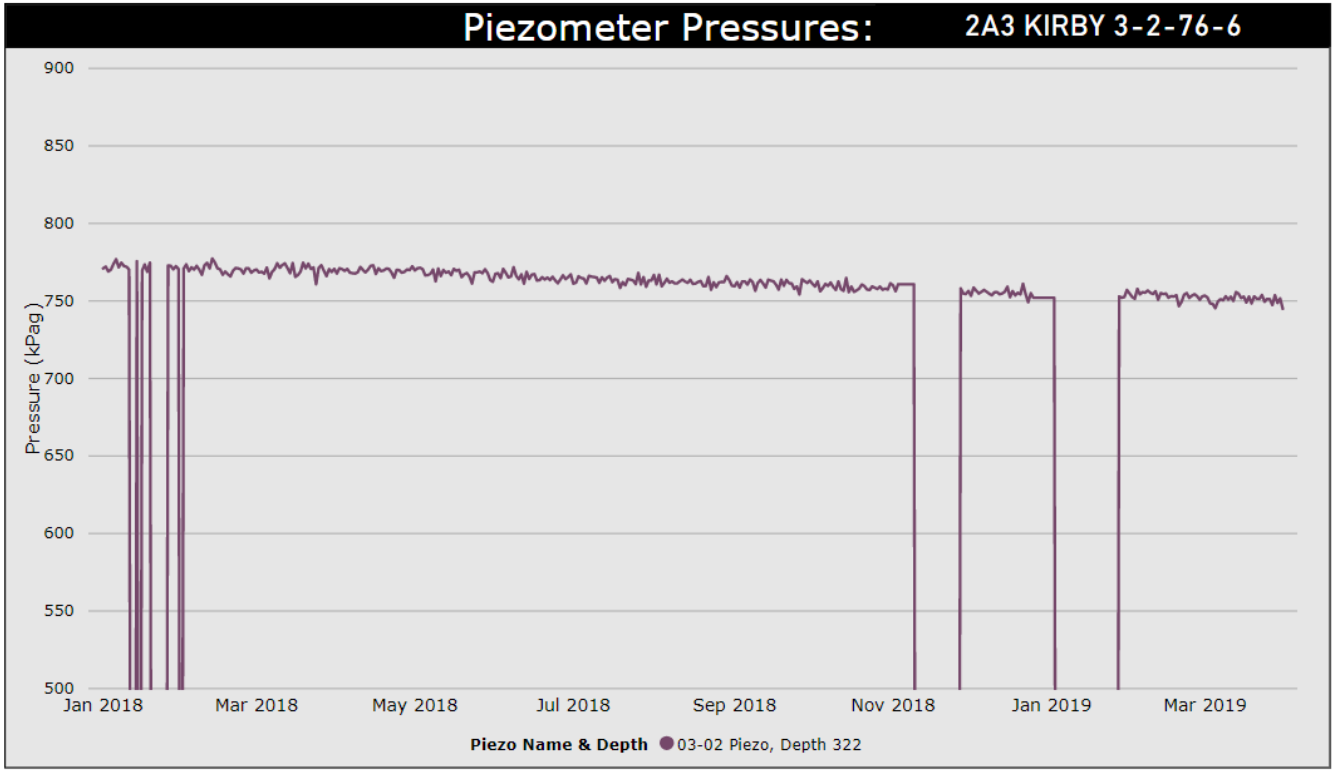
Appendix 2
Subsection 3.1.1 – 5d)

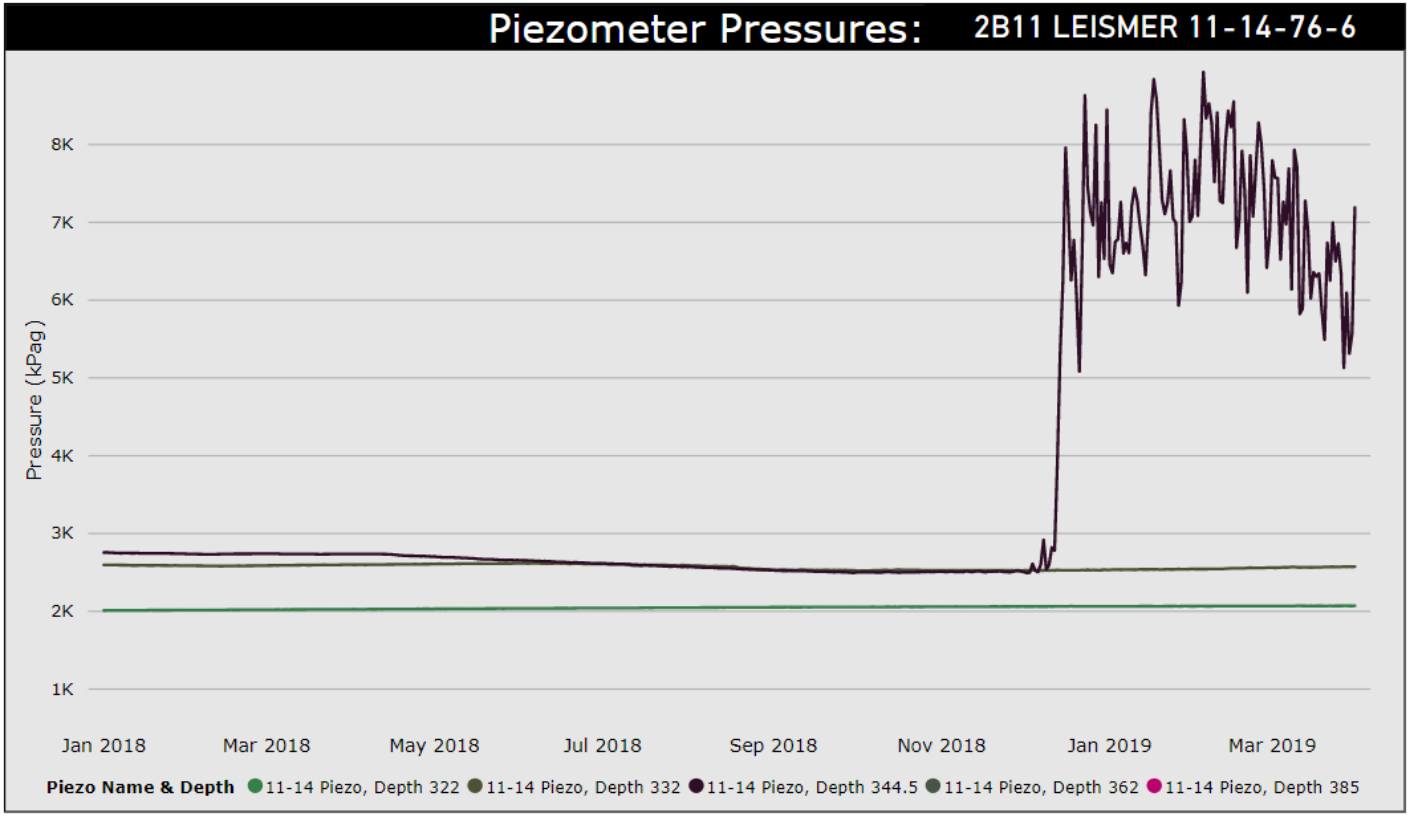
Piezometer Data

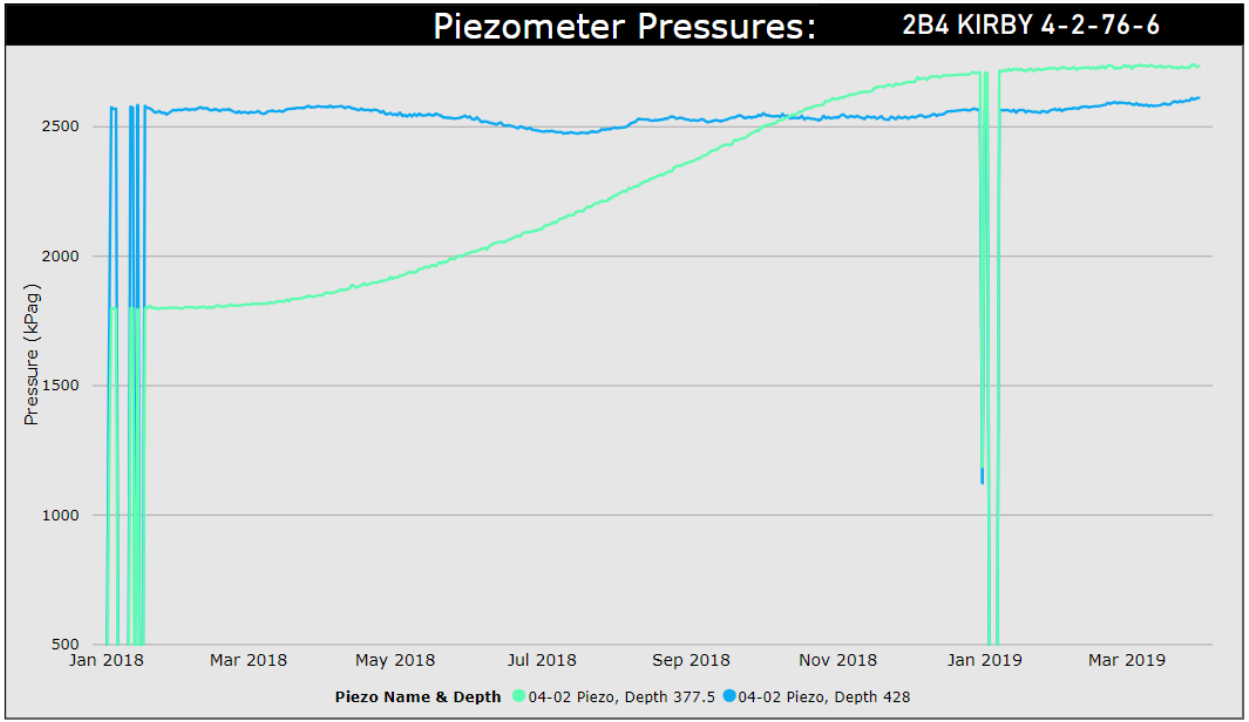


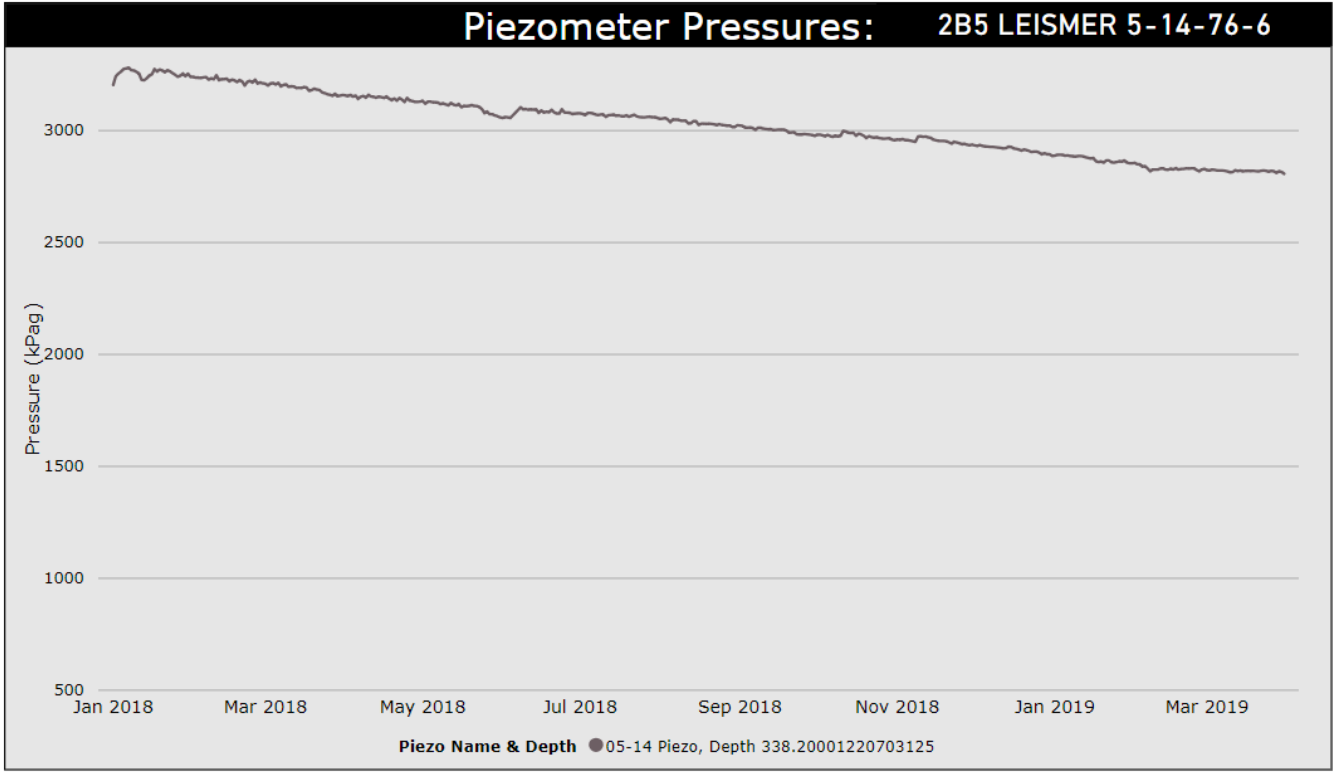

Piezometer Pressures: 2A11 HARDY 11-21-76-5
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
11-21 Piezo, Depth 302.5
11-21 Piezo, Depth 345.5
11-21 Piezo, Depth 401.5

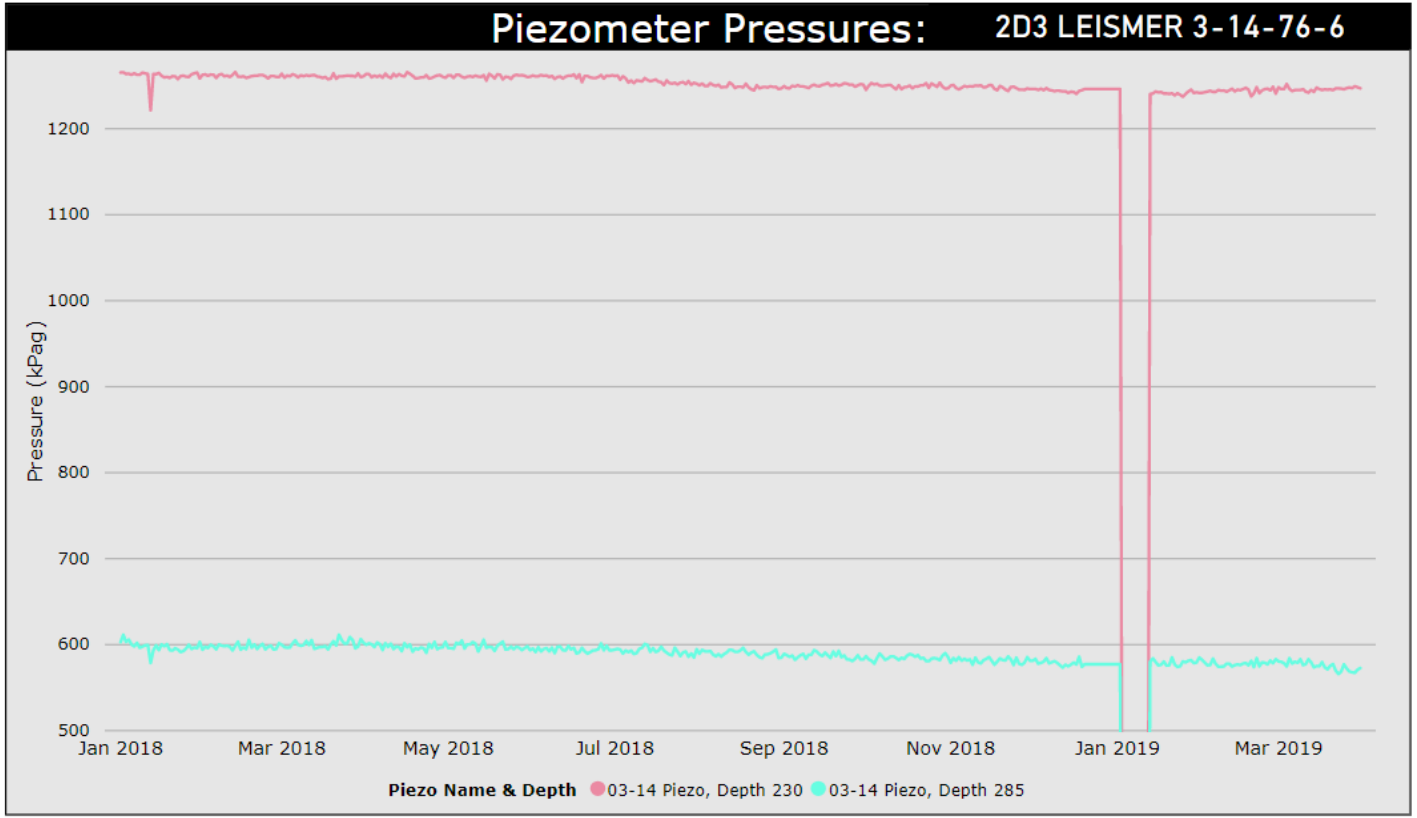

Piezometer Pressures: 2A2 LEISMER 2-15-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
02-15 Piezo, Depth 226.19999694824219
02-15 Piezo, Depth 280.20001220703125
02-15 Piezo, Depth 348.25

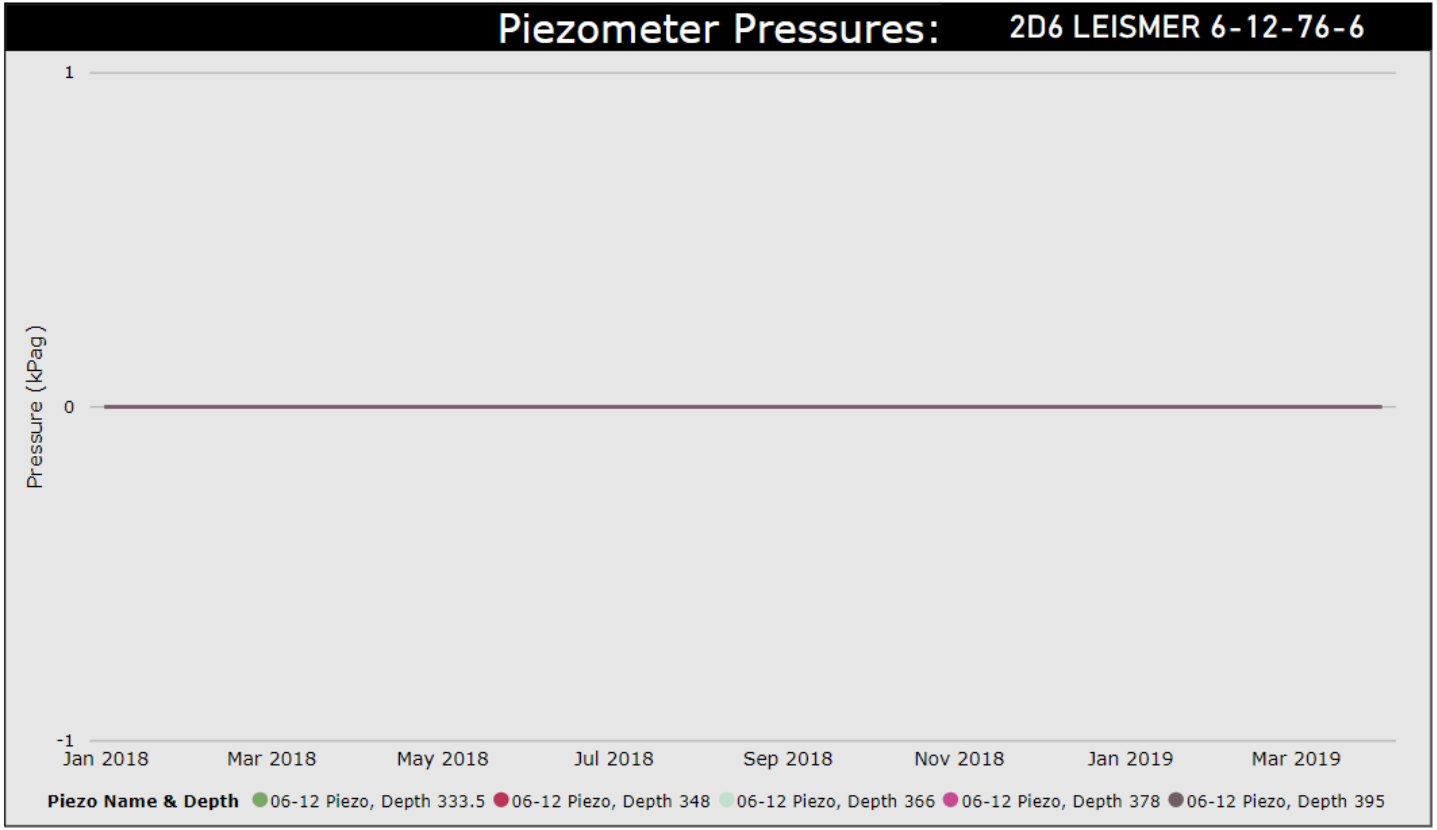

Piezometer Pressures:
2A3 KIRBY 3-2-76-6
900
850
800
750
700
650
600
550
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
03-02 Piezo, Depth 322


Piezometer Pressures: 2B11 LEISMER 11-14-76-6
Pressure (kPag)
8K
7K
6K
5K
4K
3K
2K
1K
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
11-14 Piezo, Depth 322
11-14 Piezo, Depth 332
11-14 Piezo, Depth 344.5
11-14 Piezo, Depth 362
11-14 Piezo, Depth 385
Failed
Failed


Piezometer Pressures:
2B4 KIRBY 4-2-76-6
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
04-02 Piezo, Depth 377.5
04-02 Piezo, Depth 428


Piezometer Pressures: 2B5 LEISMER 5-14-76-6
Pressure (kPag)
3000
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
05-14 Piezo, Depth 338.20001220703125


Piezometer Pressures: 2D3 LEISMER 3-14-76-6
Pressure (kPag)
1200
1100
1000
900
800
700
600
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
03-14 Piezo, Depth 230
03-14 Piezo, Depth 285


Piezometer Pressures: 2D6 LEISMER 6-12-76-6
1
0
-1
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
06-12 Piezo, Depth 333.5
06-12 Piezo, Depth 348
06-12 Piezo, Depth 366
06-12 Piezo, Depth 378
06-12 Piezo, Depth 395

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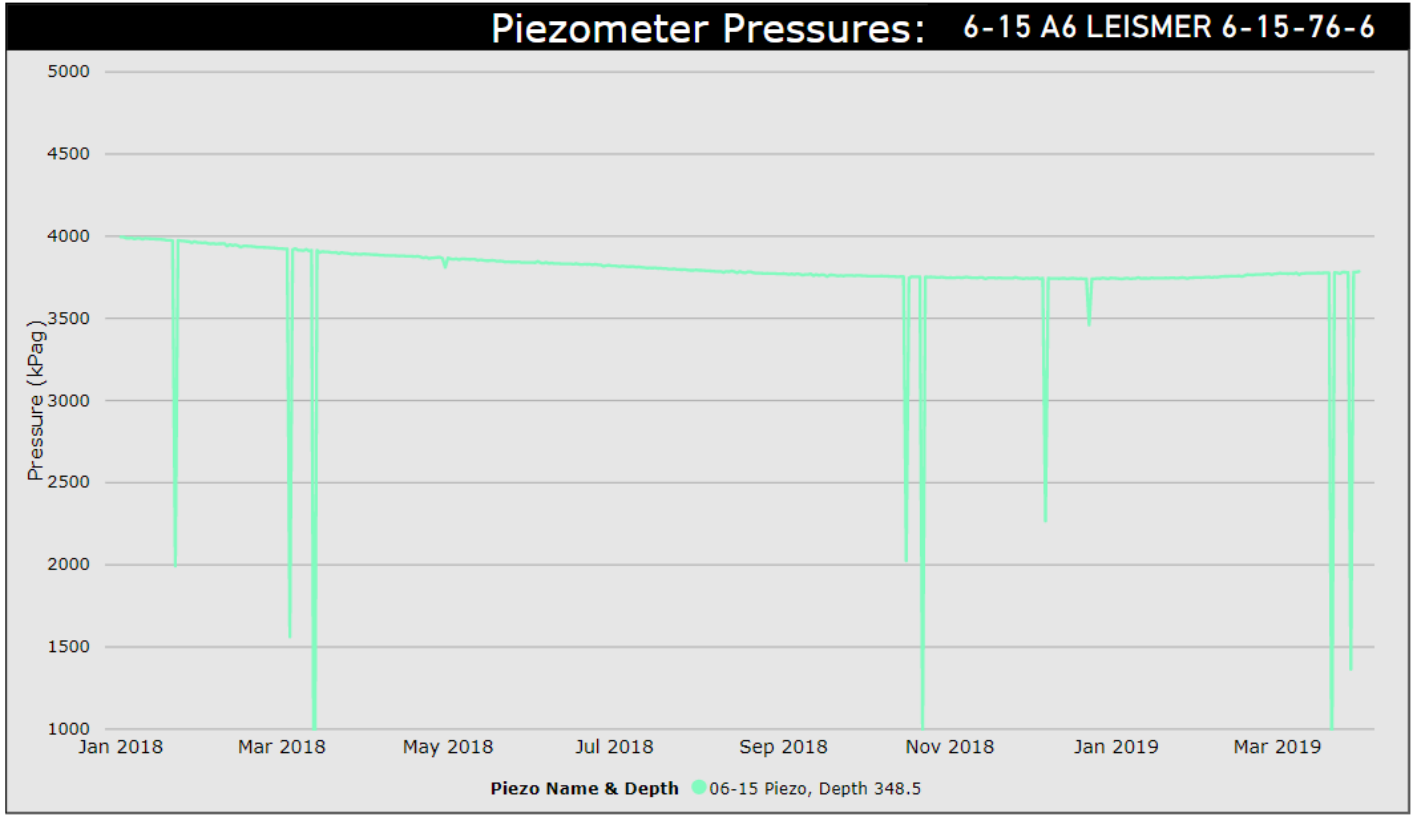
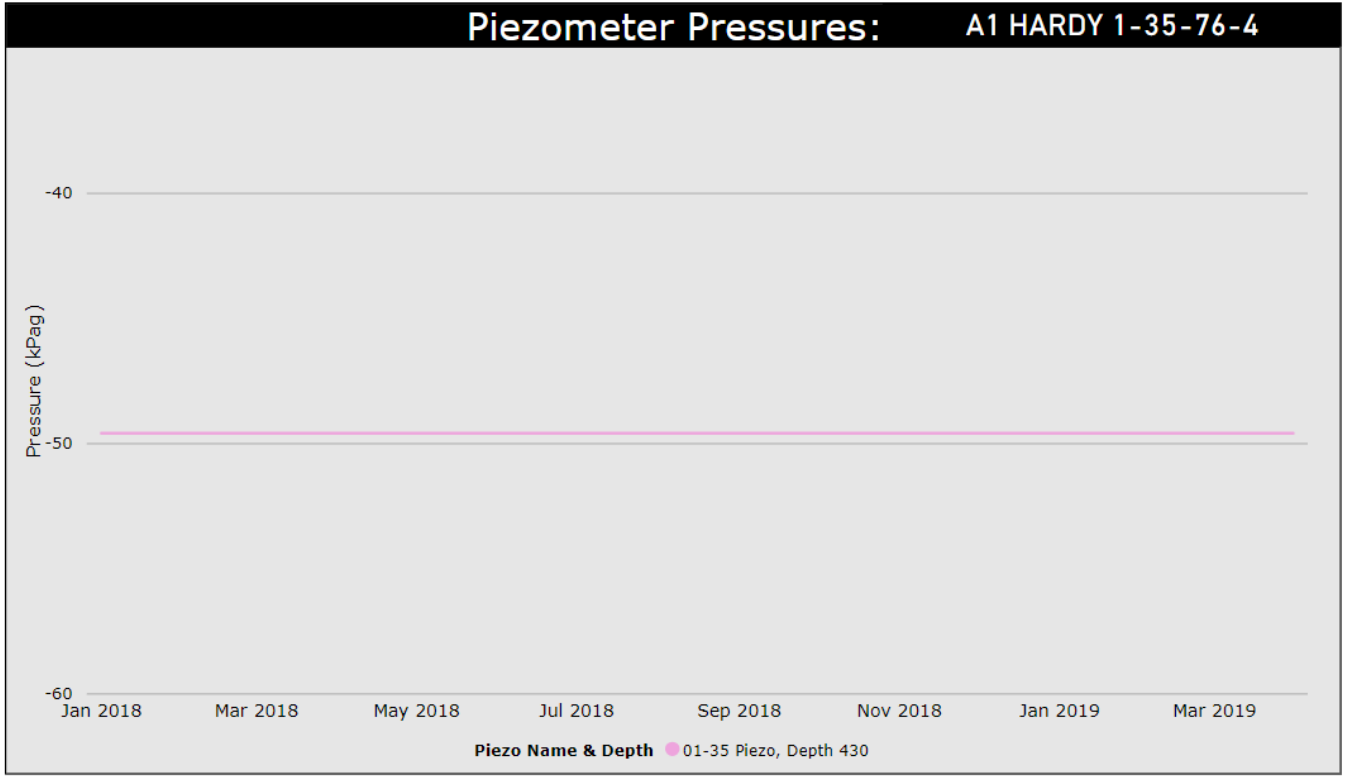

Piezometer Pressures: 6-15 A6 LEISMER 6-15-76-6
5000
4500
4000
3500
3000
2500
2000
1500
1000
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
06-15 Piezo, Depth 348.5


Piezometer Pressures:
A1 HARDY 1-35-76-4
-40
-50
-60
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
01-35 Piezo, Depth 430

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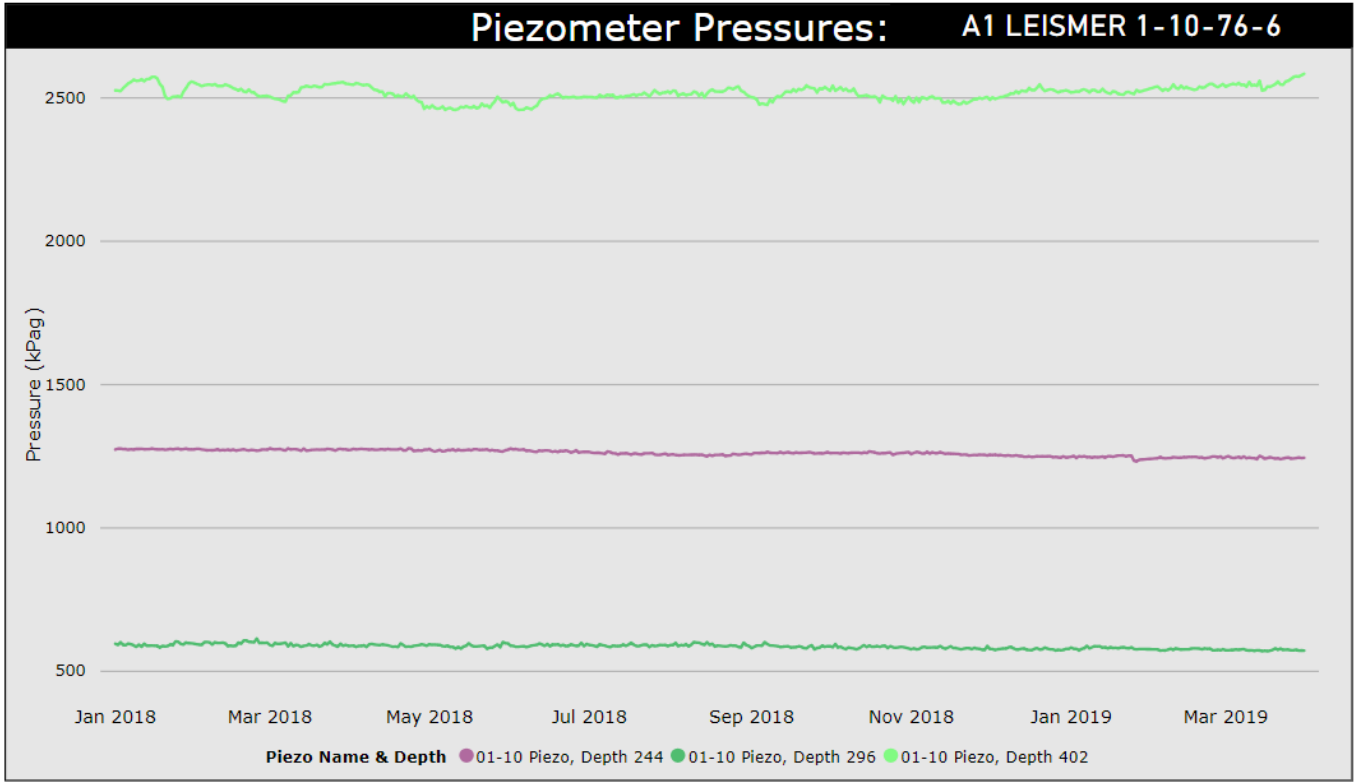
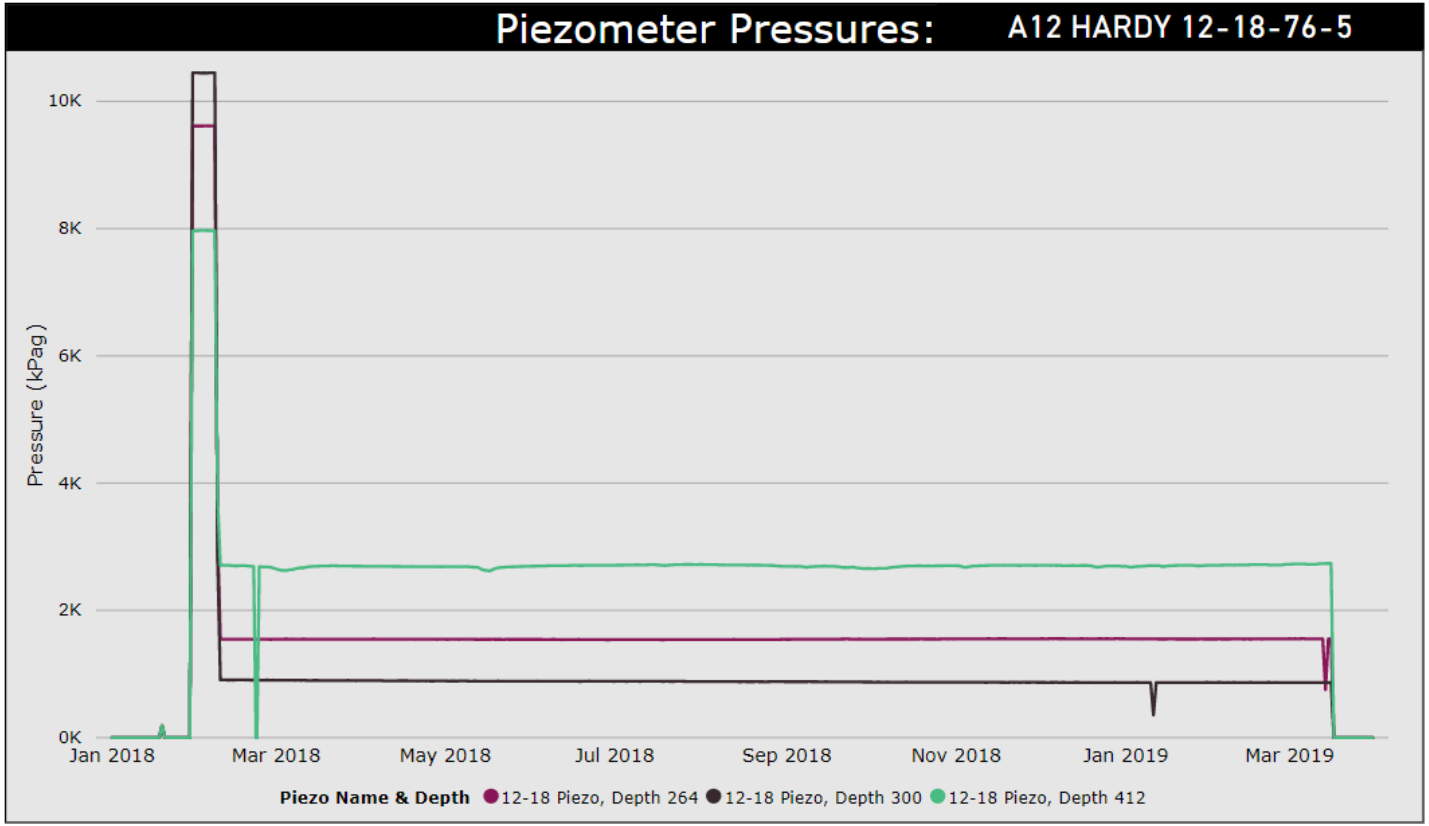
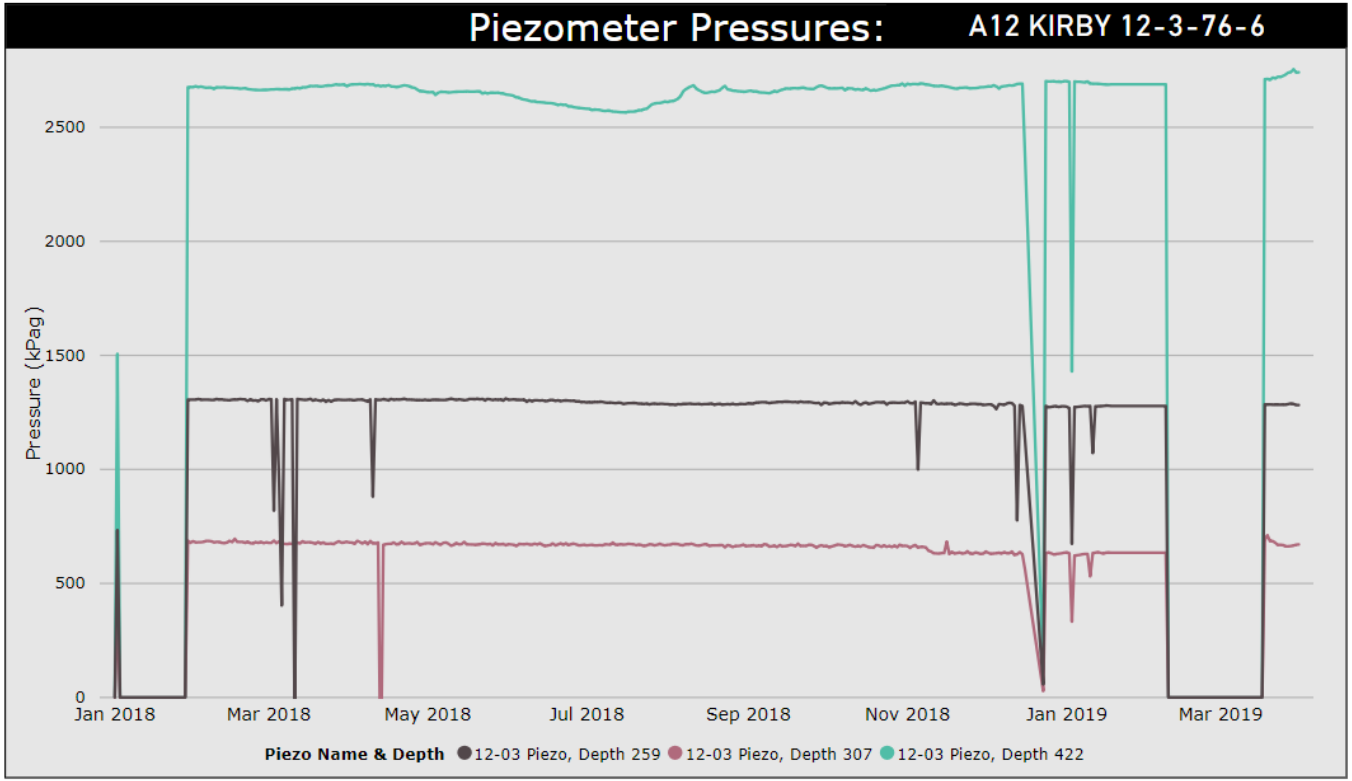
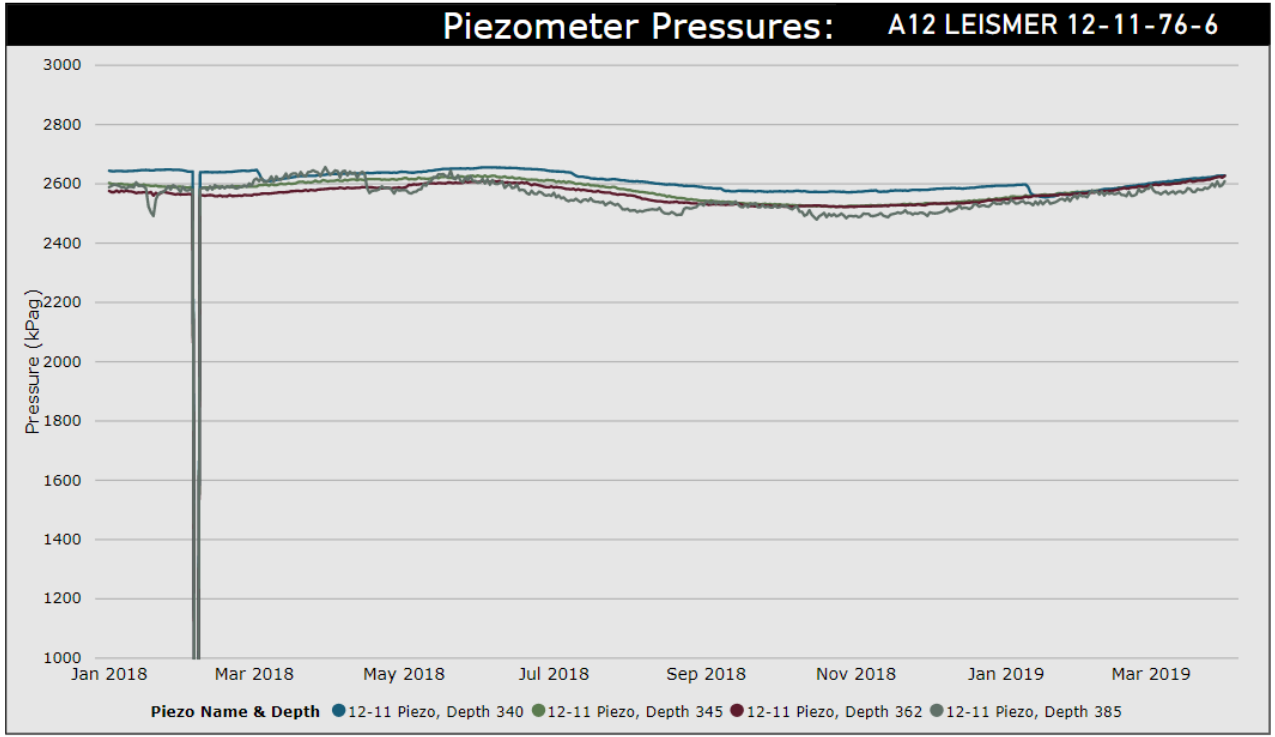
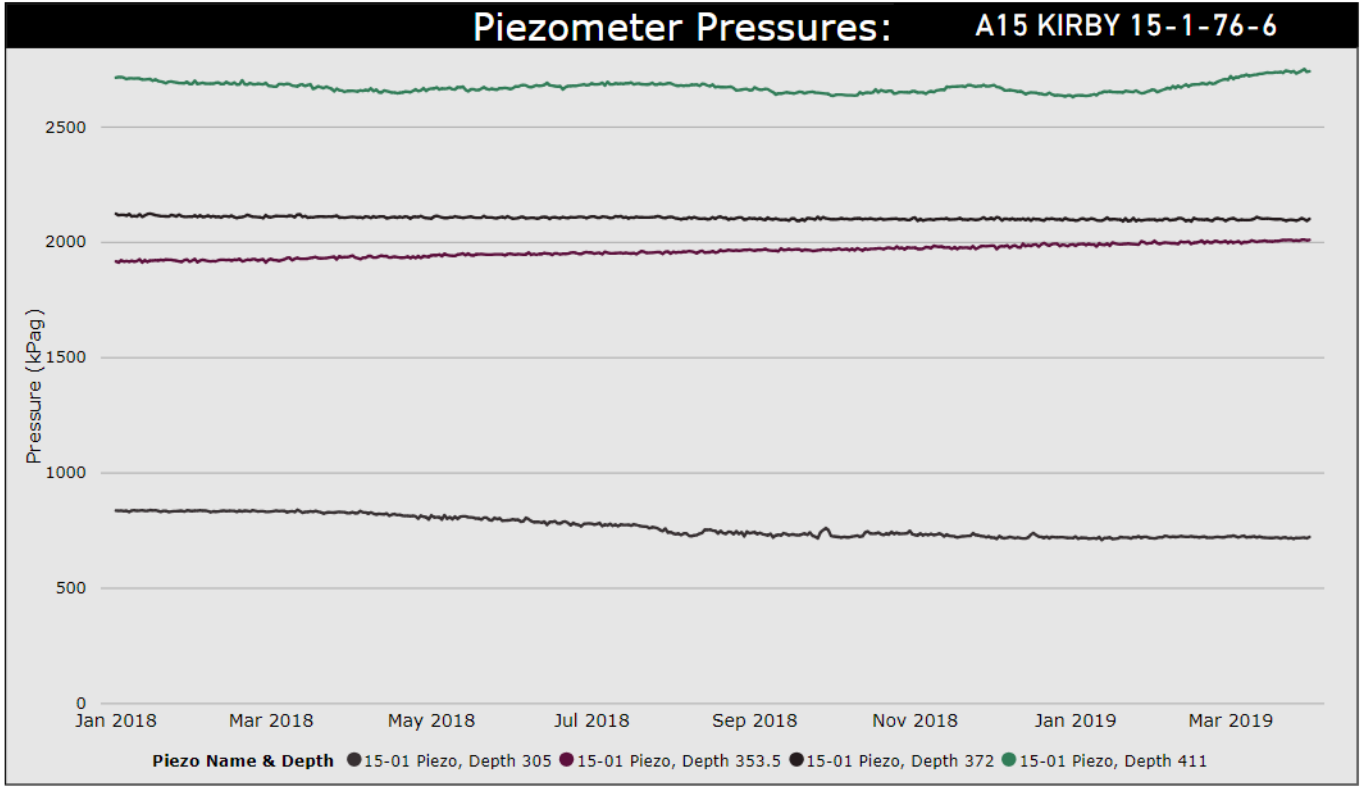
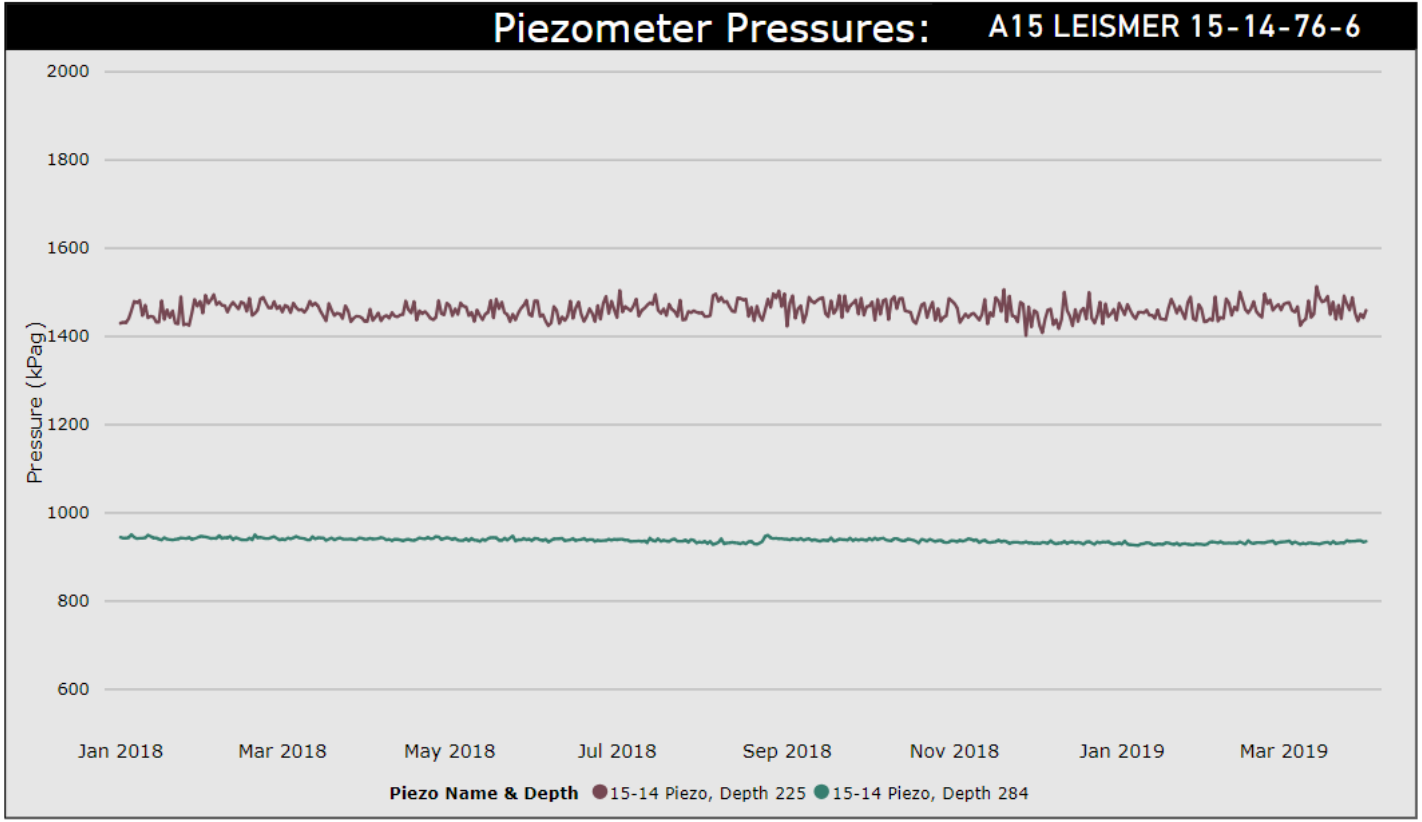

Piezometer Pressures: A1 LEISMER 1-10-76-6
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
01-10 Piezo, Depth 244
01-10 Piezo, Depth 296
01-10 Piezo, Depth 402

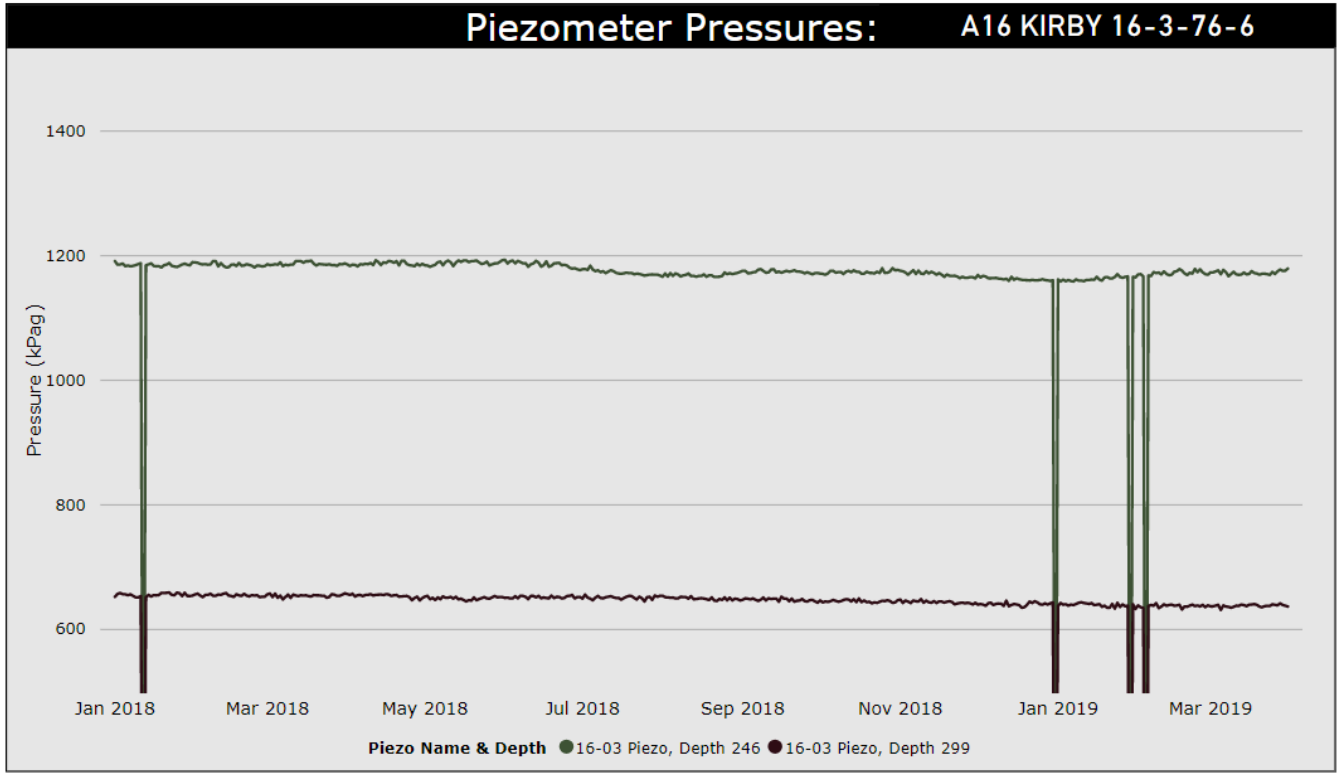

Piezometer Pressures:
A12 HARDY 12-18-76-5
10K
8K
6K
4K
2K
0K
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
12-18 Piezo, Depth 264
12-18 Piezo, Depth 300
12-18 Piezo, Depth 412

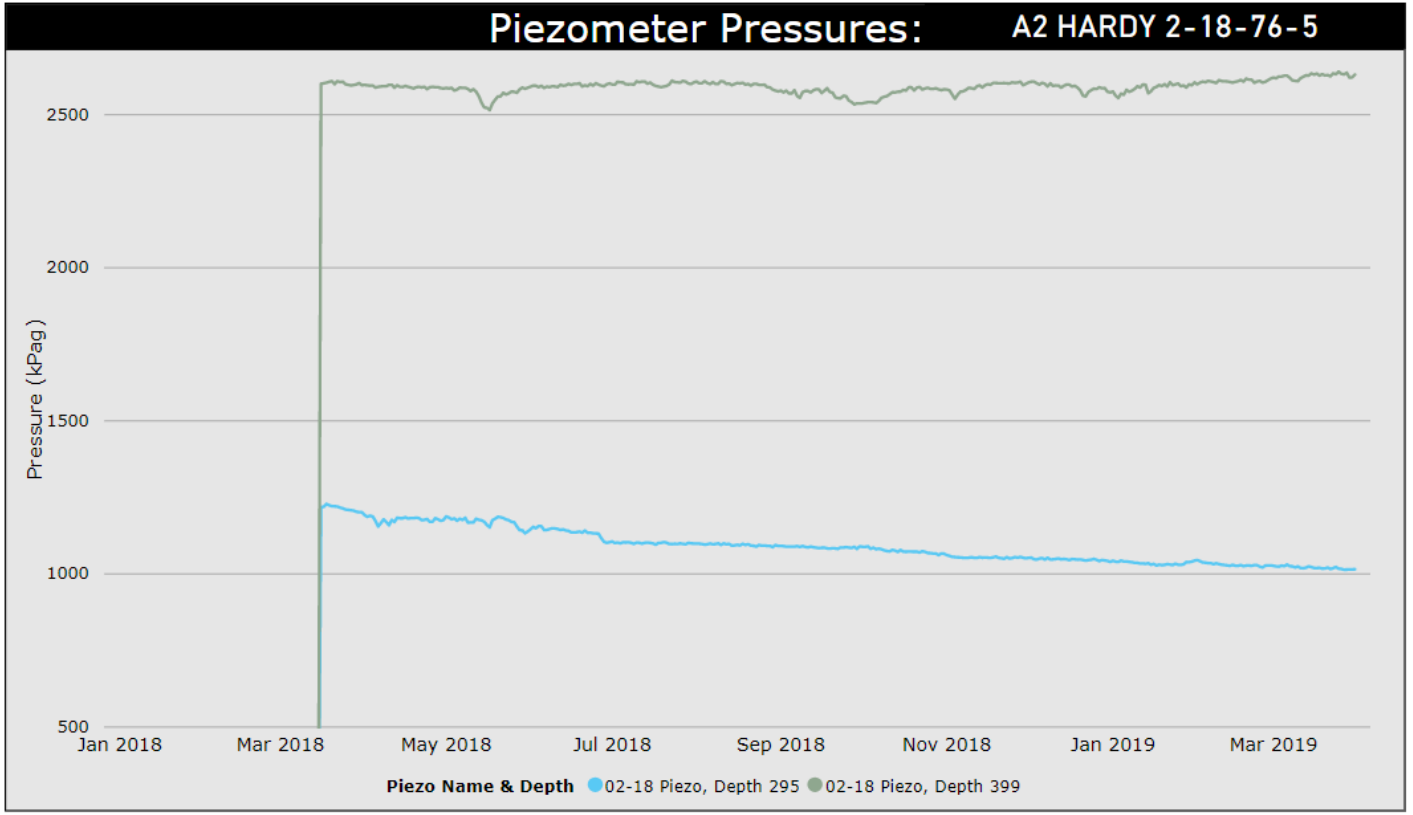

Piezometer Pressures:
A12 KIRBY 12-3-76-6
Pressure (kPag)
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
12-03 Piezo, Depth 259
12-03 Piezo, Depth 307
12-03 Piezo, Depth 422


Piezometer Pressures: A12 LEISMER 12-11-76-6
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
12-11 Piezo, Depth 340
12-11 Piezo, Depth 345
12-11 Piezo, Depth 362
12-11 Piezo, Depth 385

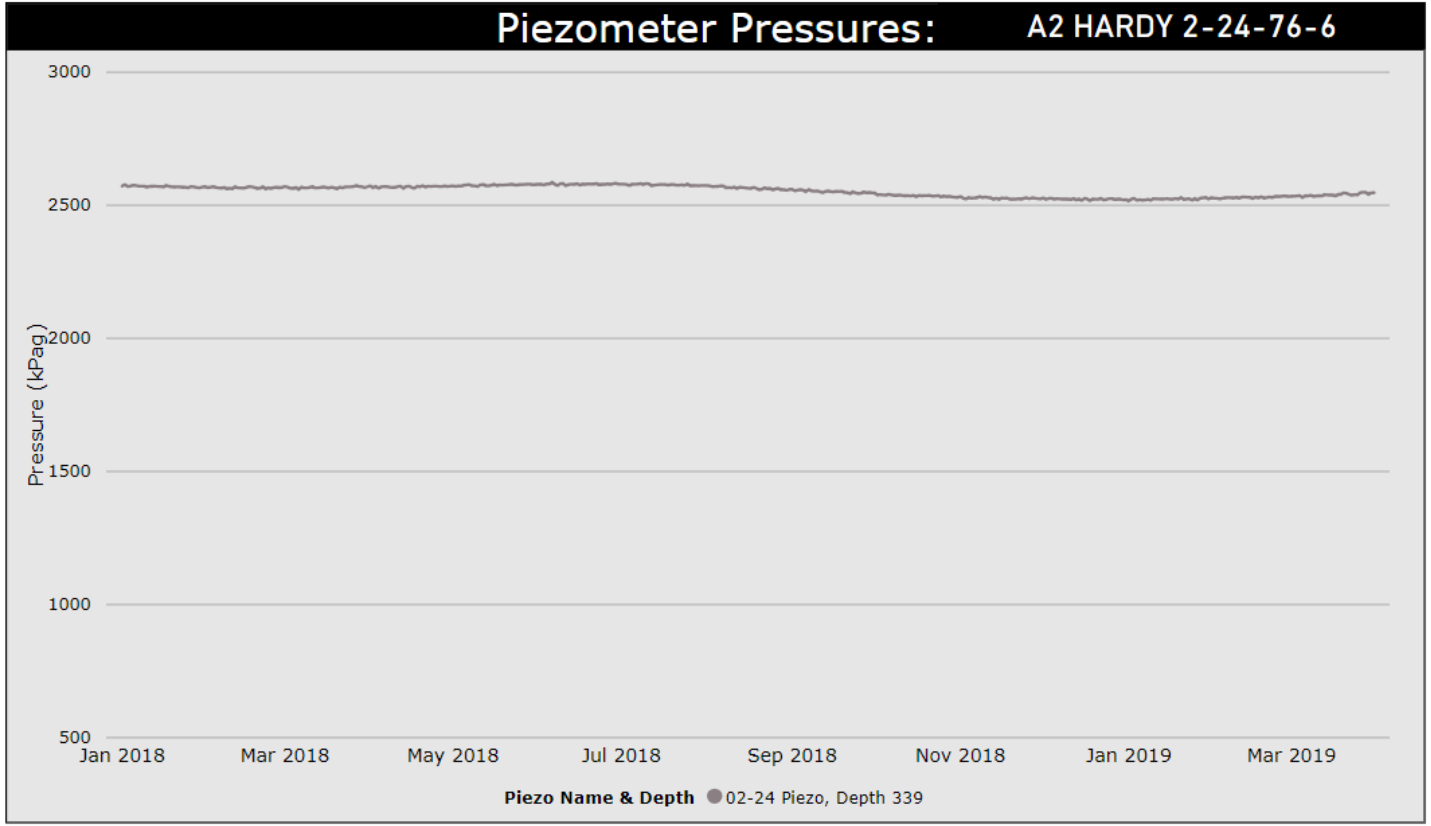

Piezometer Pressures:
A15 KIRBY 15-1-76-6
Pressure (kPag)
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
15-01 Piezo, Depth 305
15-01 Piezo, Depth 353.5
15-01 Piezo, Depth 372
15-01 Piezo, Depth 411

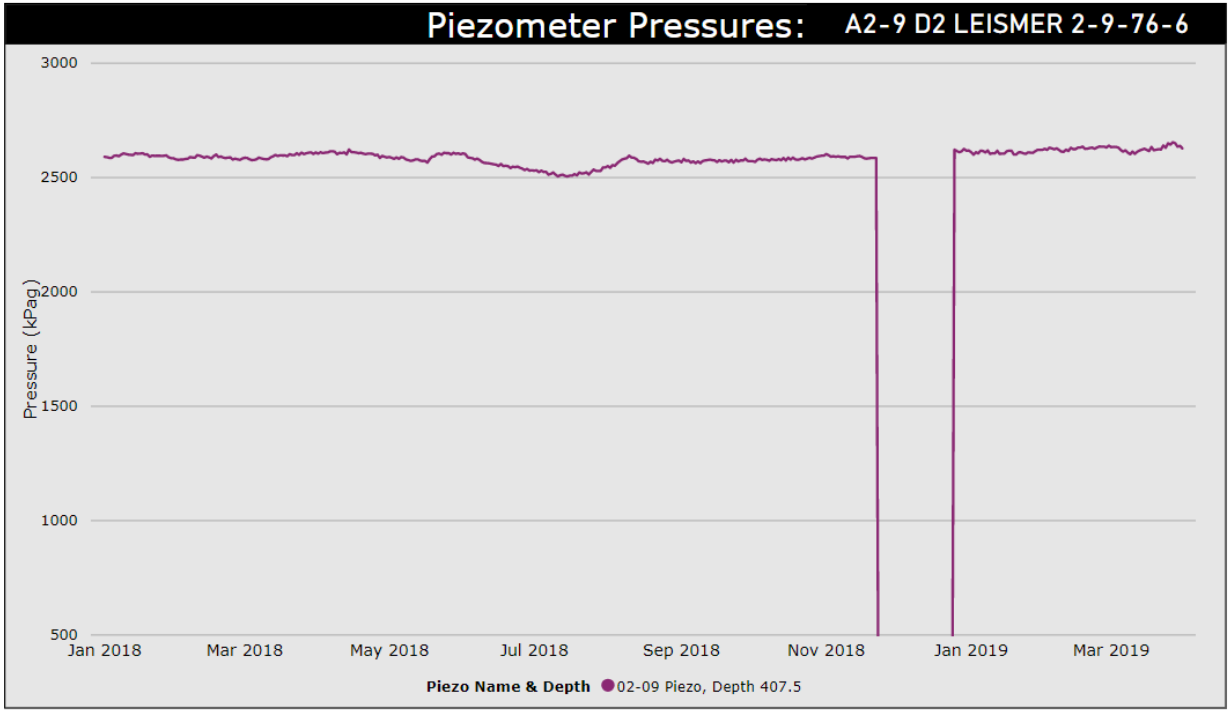

Piezometer Pressures: A15 LEISMER 15-14-76-6
2000
1800
1600
1400
1200
1000
800
600
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
15-14 Piezo, Depth 225
15-14 Piezo, Depth 284

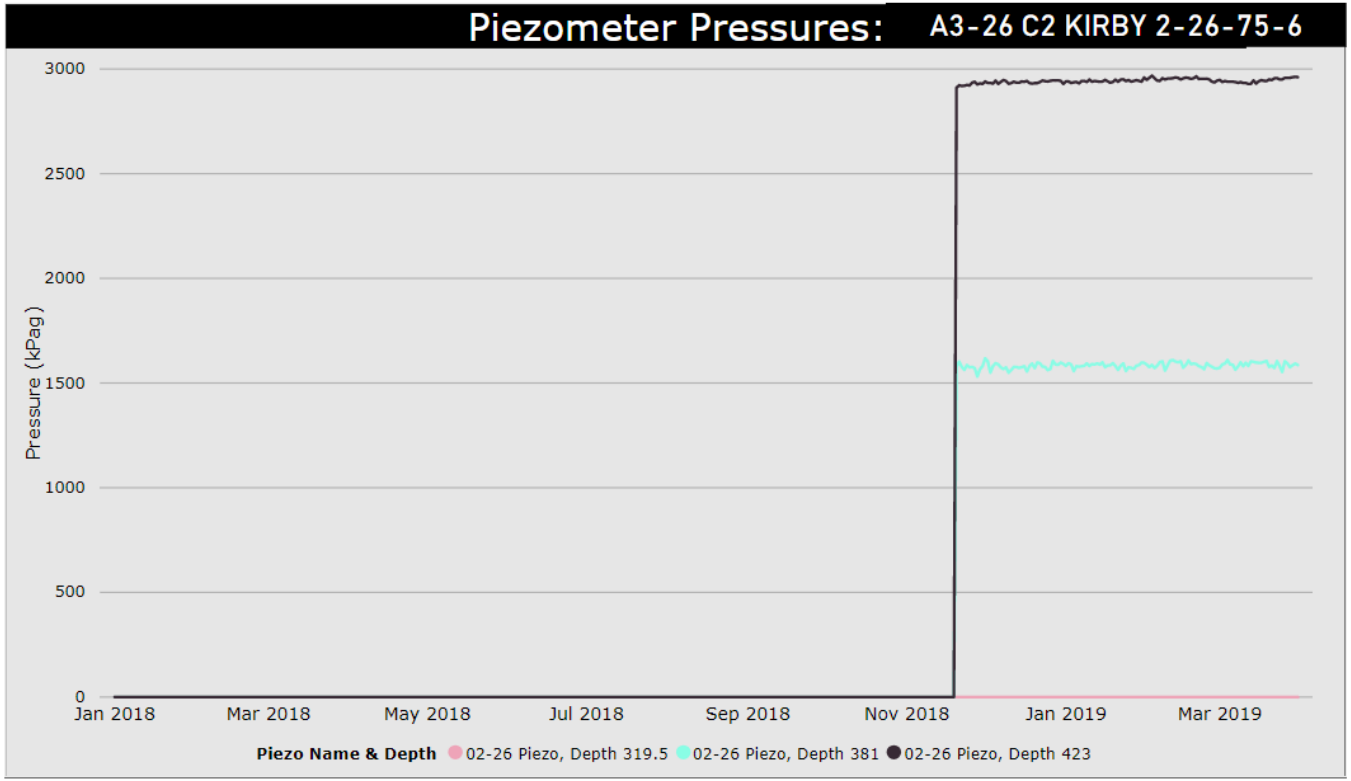

Piezometer Pressures:
A16 KIRBY 16-3-76-6
1400
1200
1000
800
600
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
16-03 Piezo, Depth 246
16-03 Piezo, Depth 299

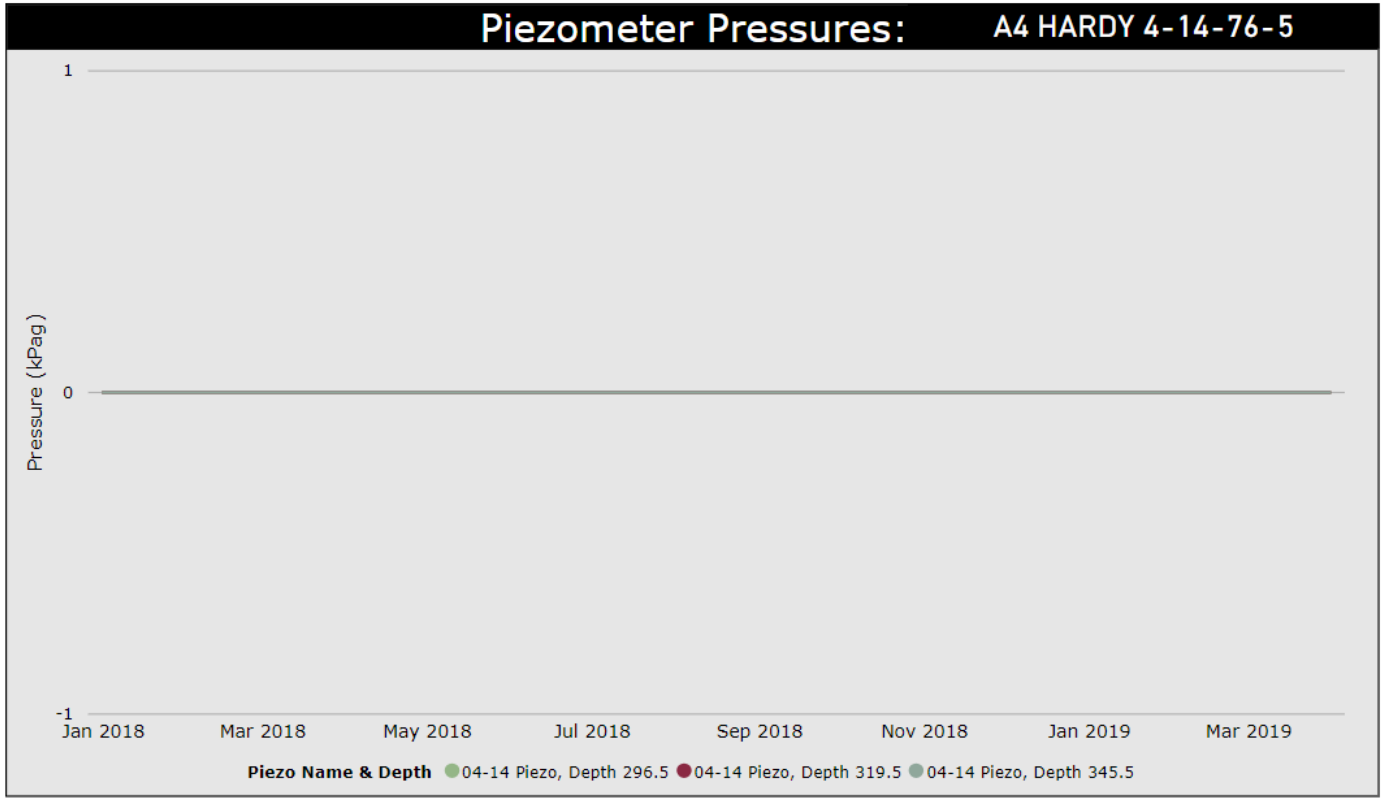


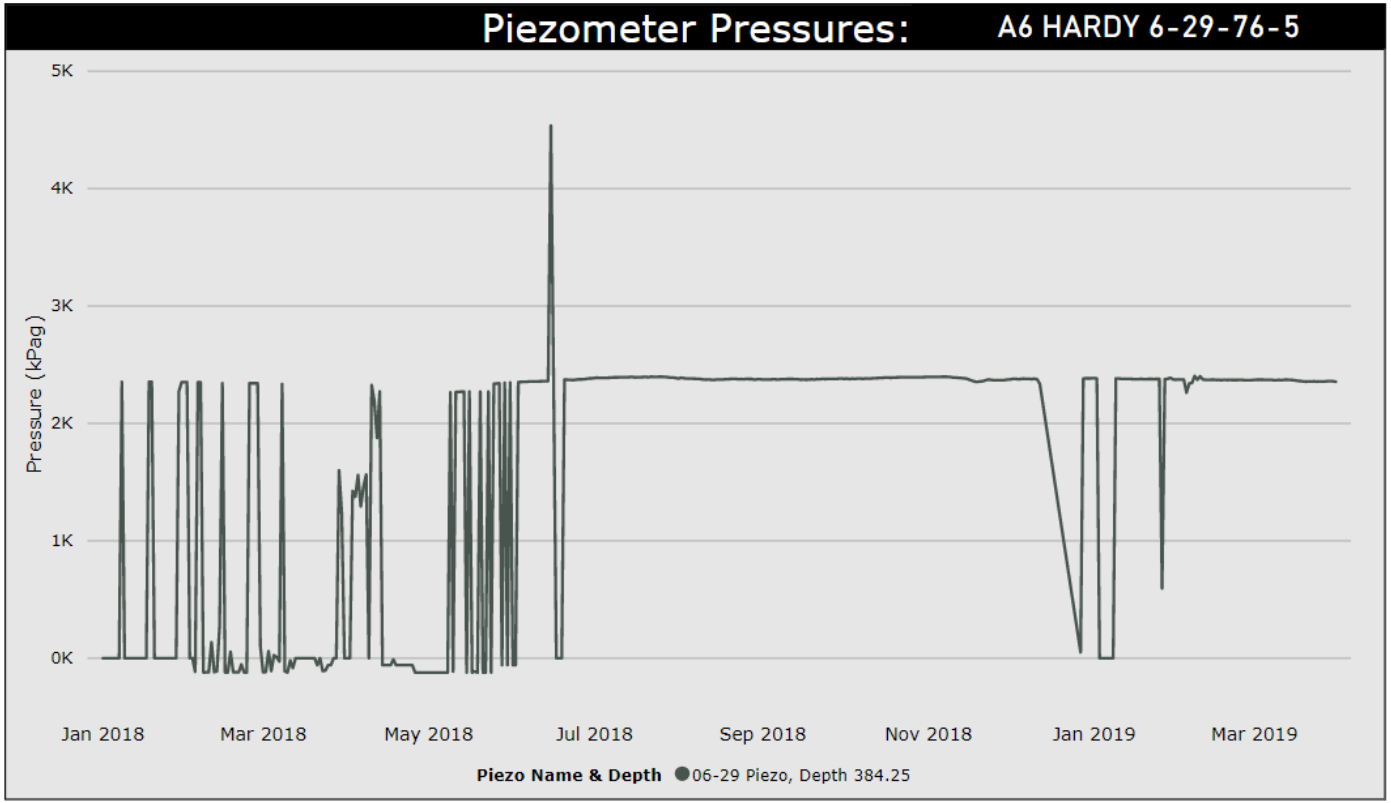
2018 Cenovus Energy Inc.

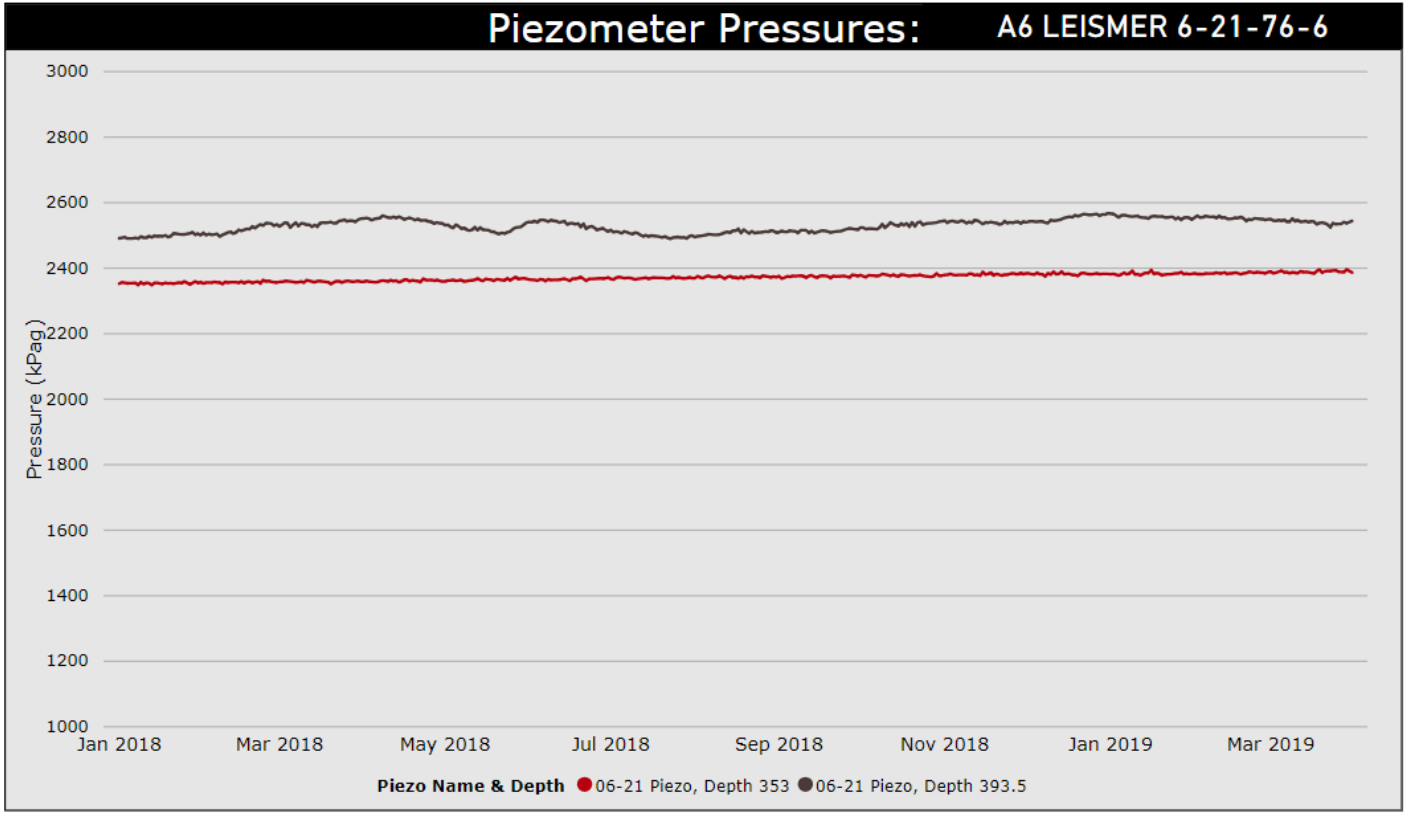

Piezometer Pressures:
A2 HARDY 2-24-76-6
3000
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
02-24 Piezo, Depth 339


Piezometer Pressures: A2-9 D2 LEISMER 2-9-76-6
3000
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
02-09 Piezo, Depth 407.5


Piezometer Pressures: A3-26 C2 KIRBY 2-26-75-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
02-26 Piezo, Depth 319.5
02-26 Piezo, Depth 381
02-26 Piezo, Depth 423


Piezometer Pressures: A4 HARDY 4-14-76-5
1
0
-1
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
04-14 Piezo, Depth 296.5
04-14 Piezo, Depth 319.5
04-14 Piezo, Depth 345.5


Piezometer Pressures:
A6 HARDY 6-29-76-5
5K
4K
3K
2K
1K
0K
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
06-29 Piezo, Depth 384.25



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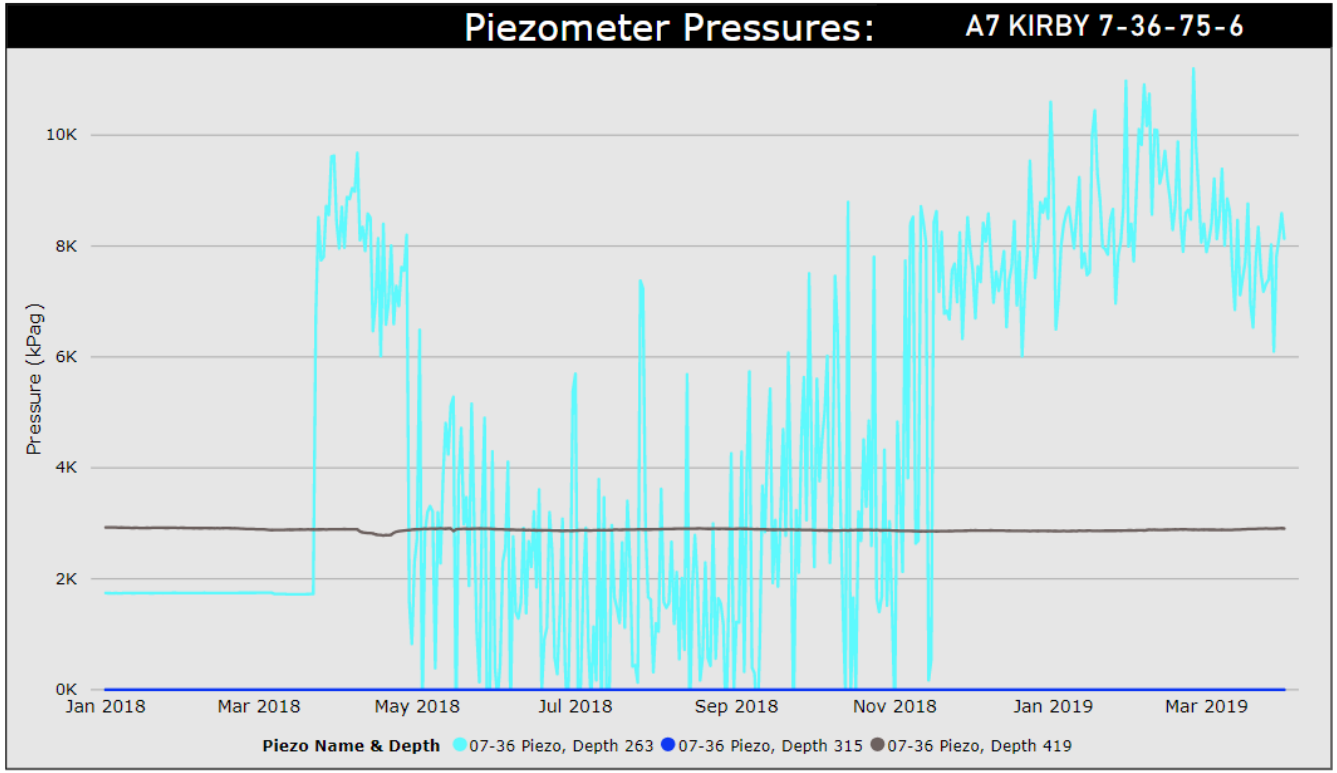
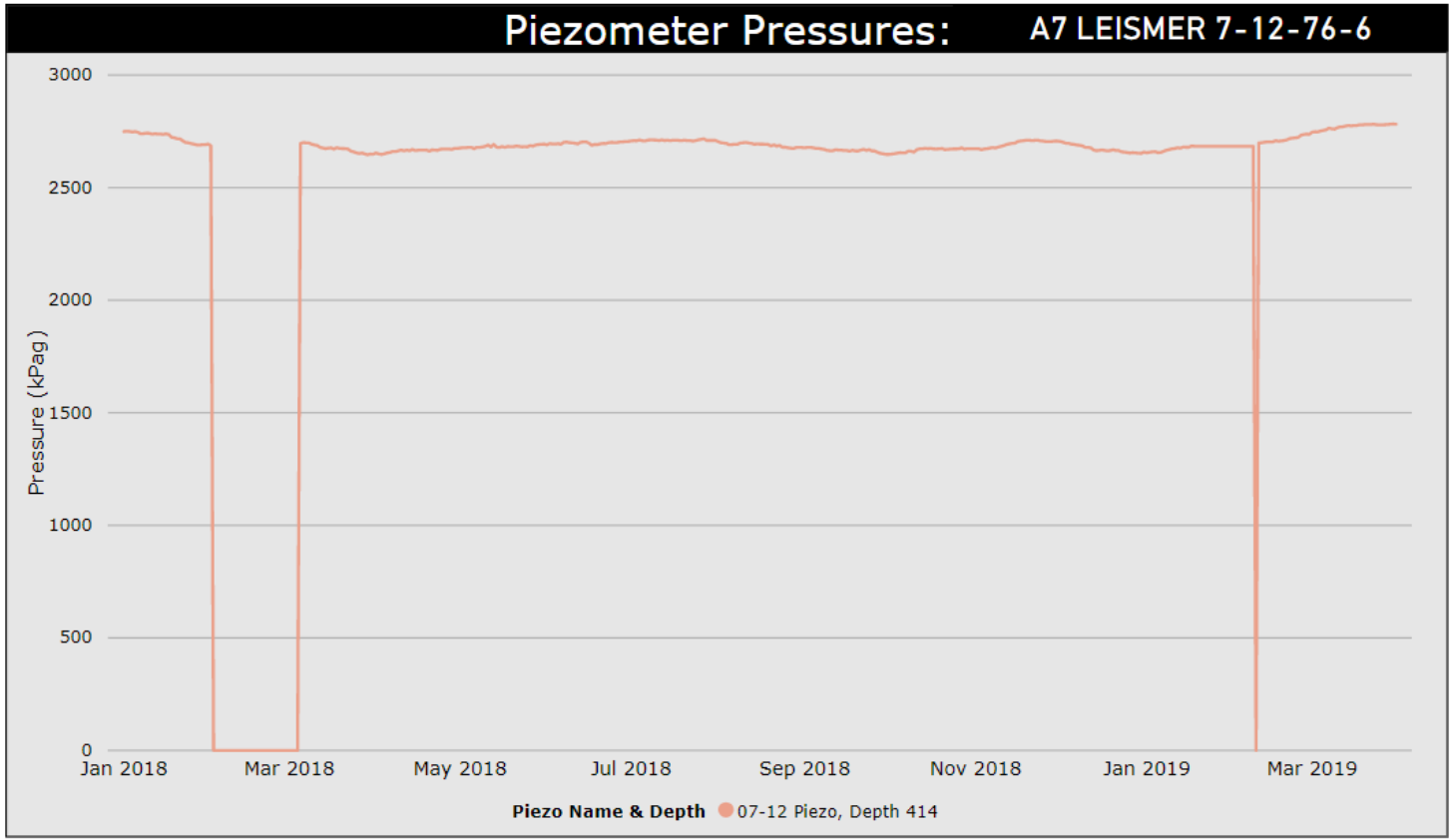
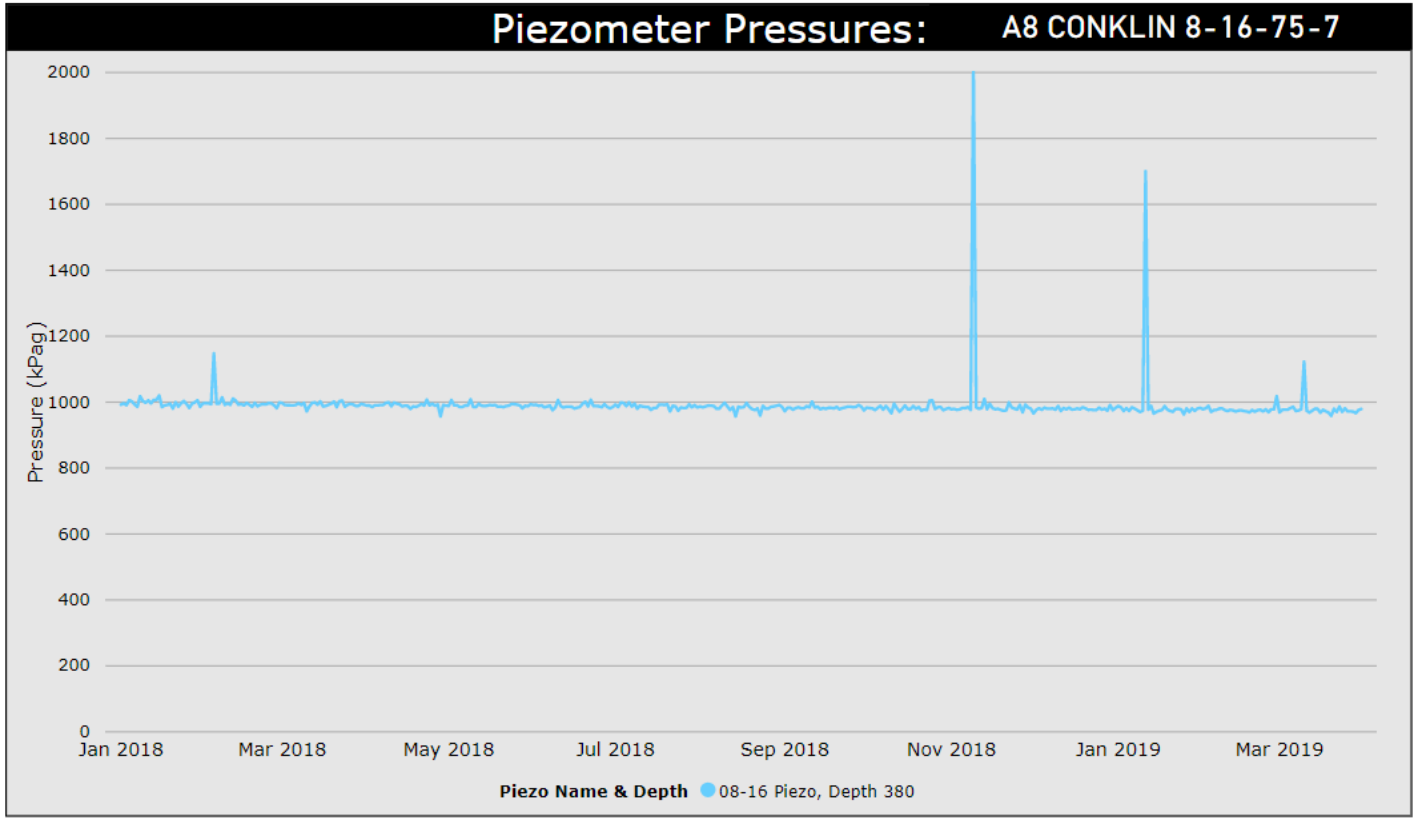
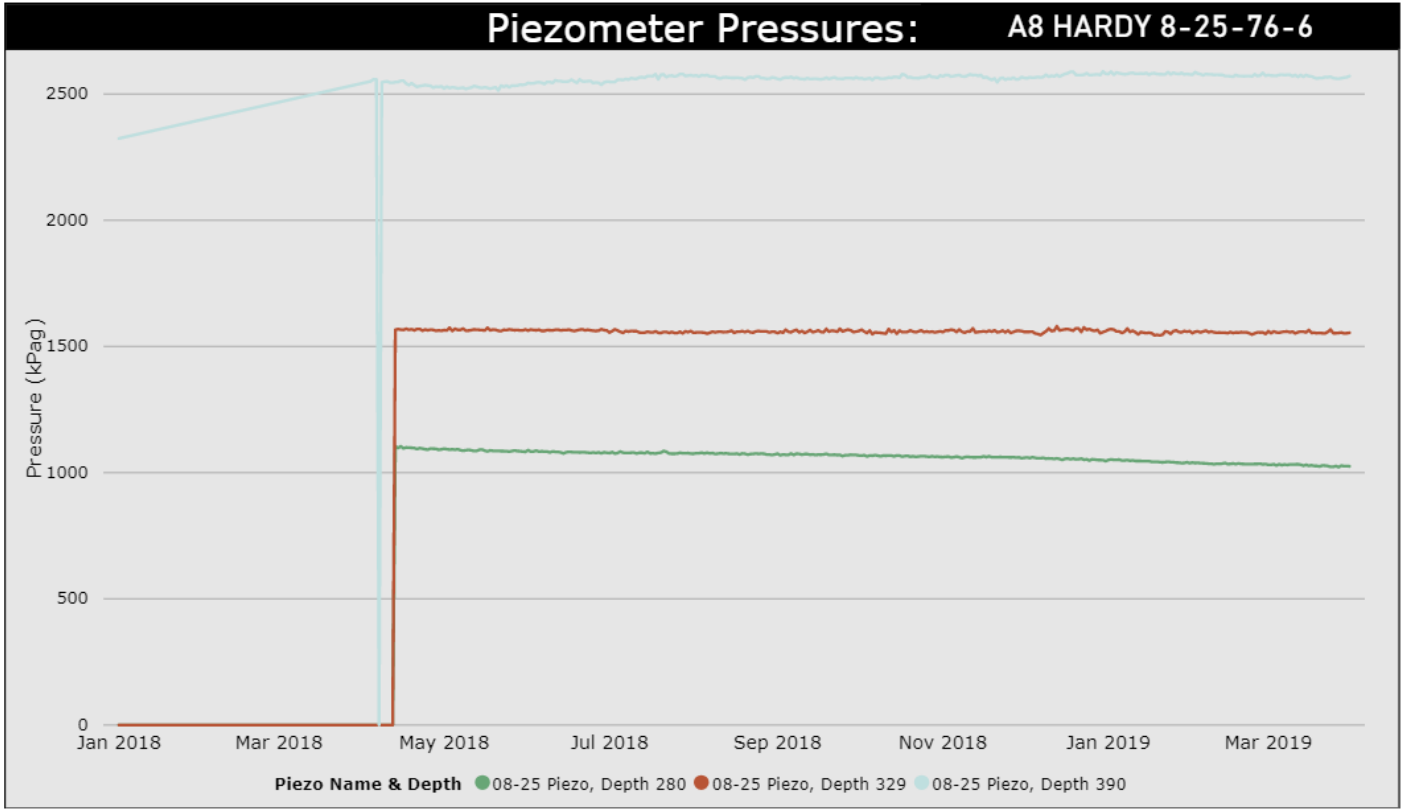
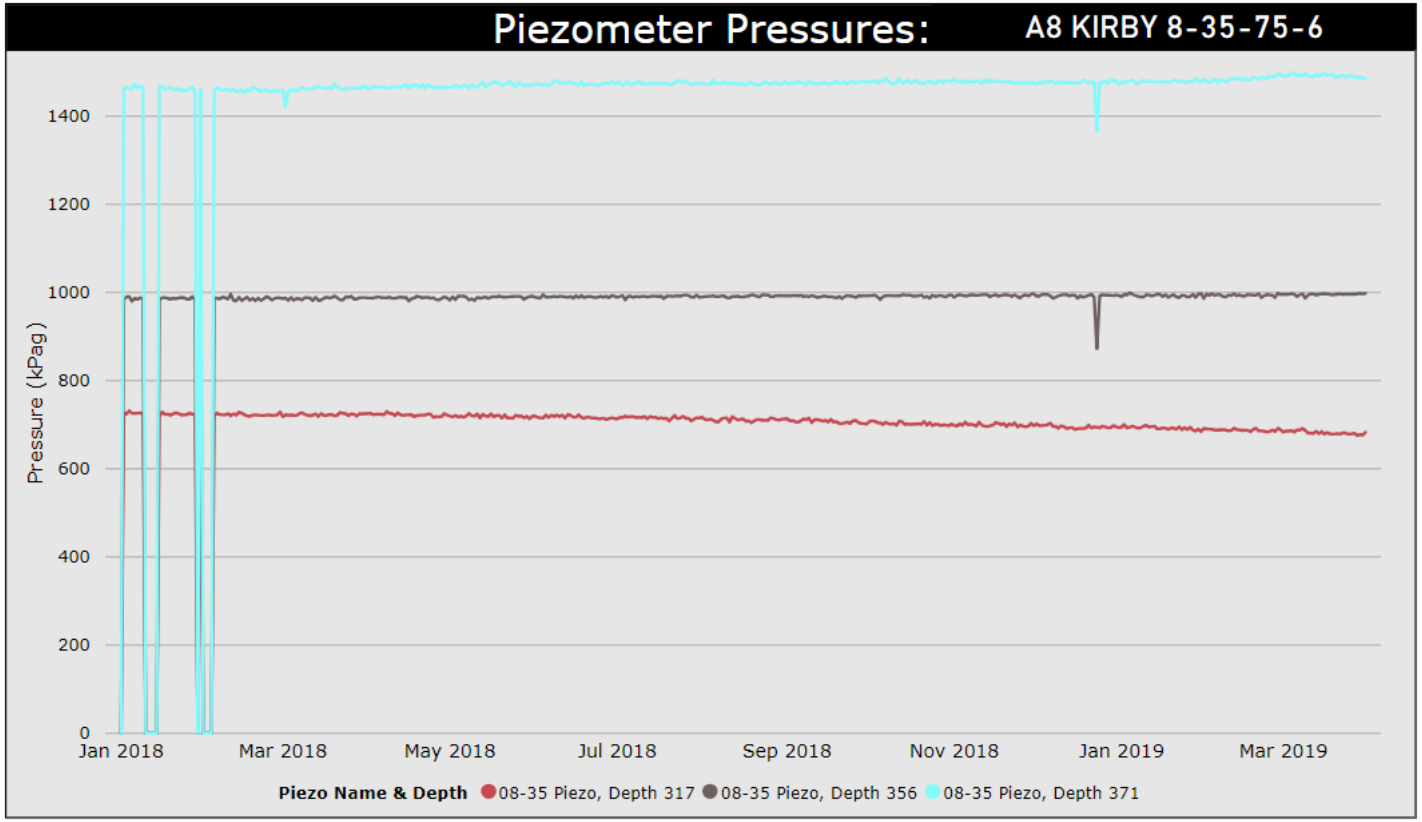


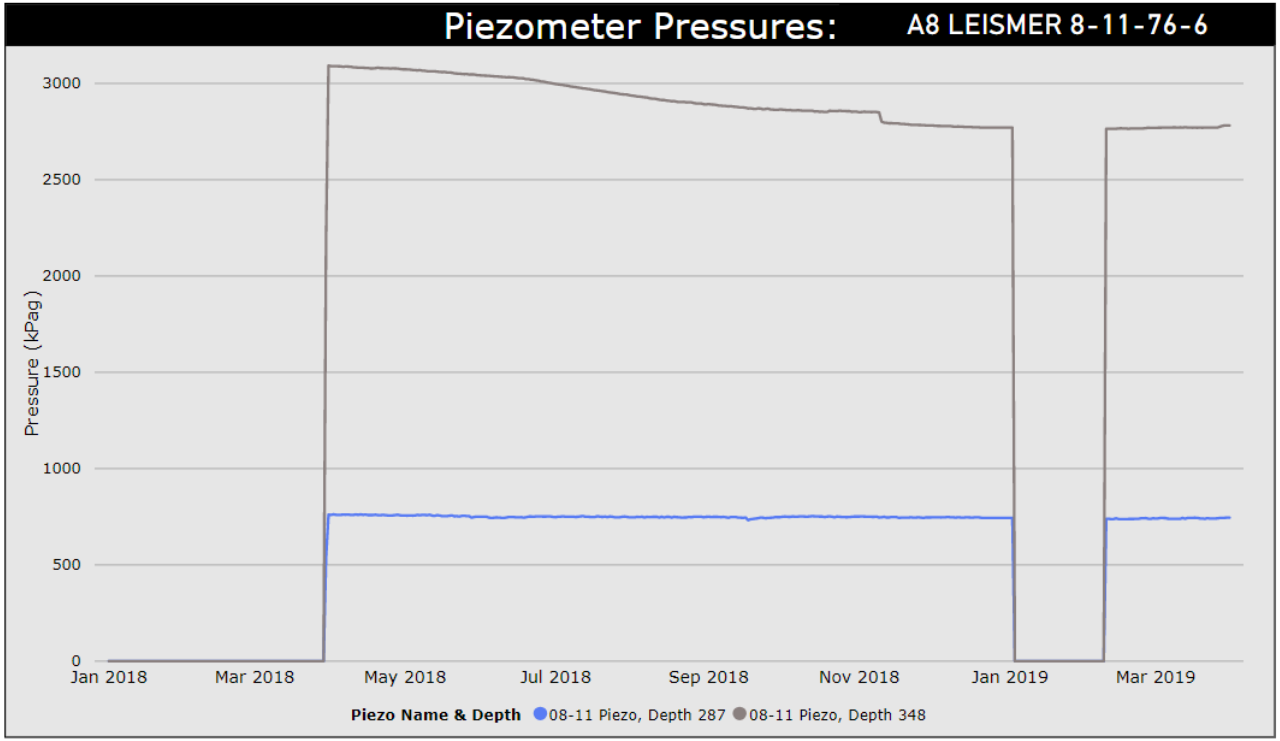
2018 Cenovus Energy Inc.

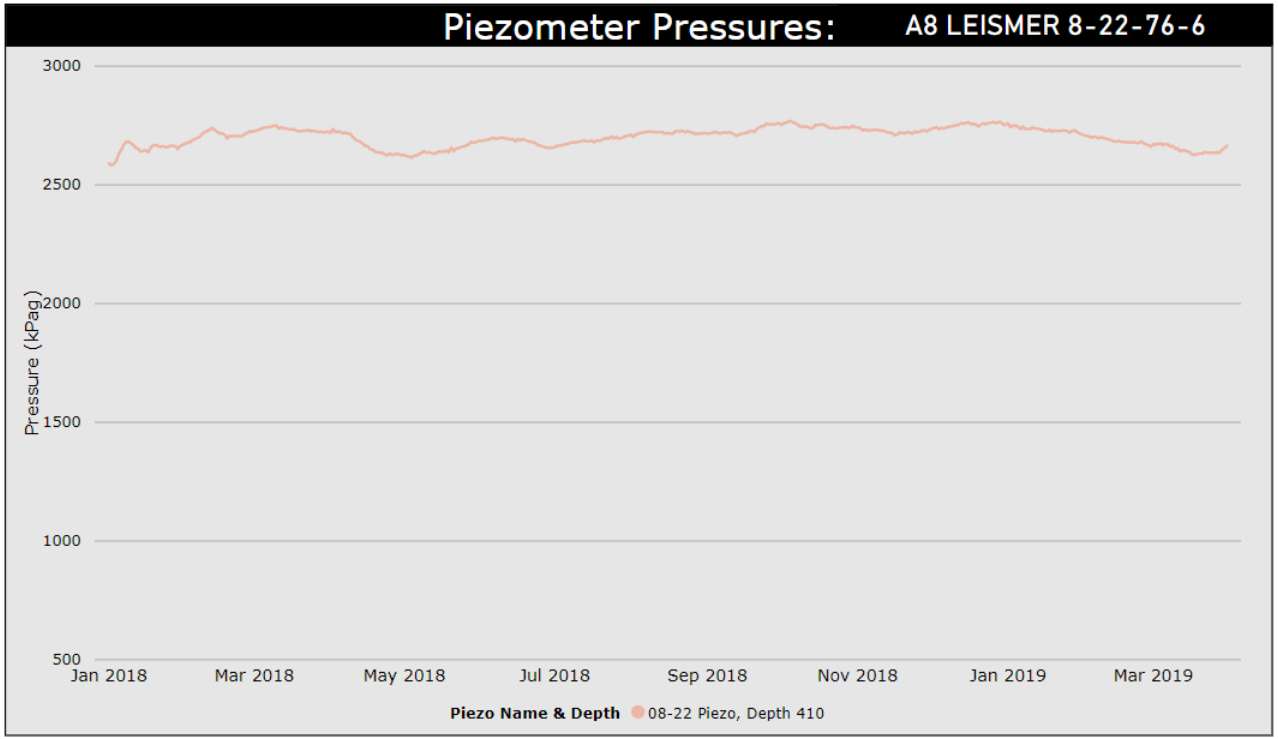

Piezometer Pressures:
A7 LEISMER 7-12-76-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
07-12 Piezo, Depth 414

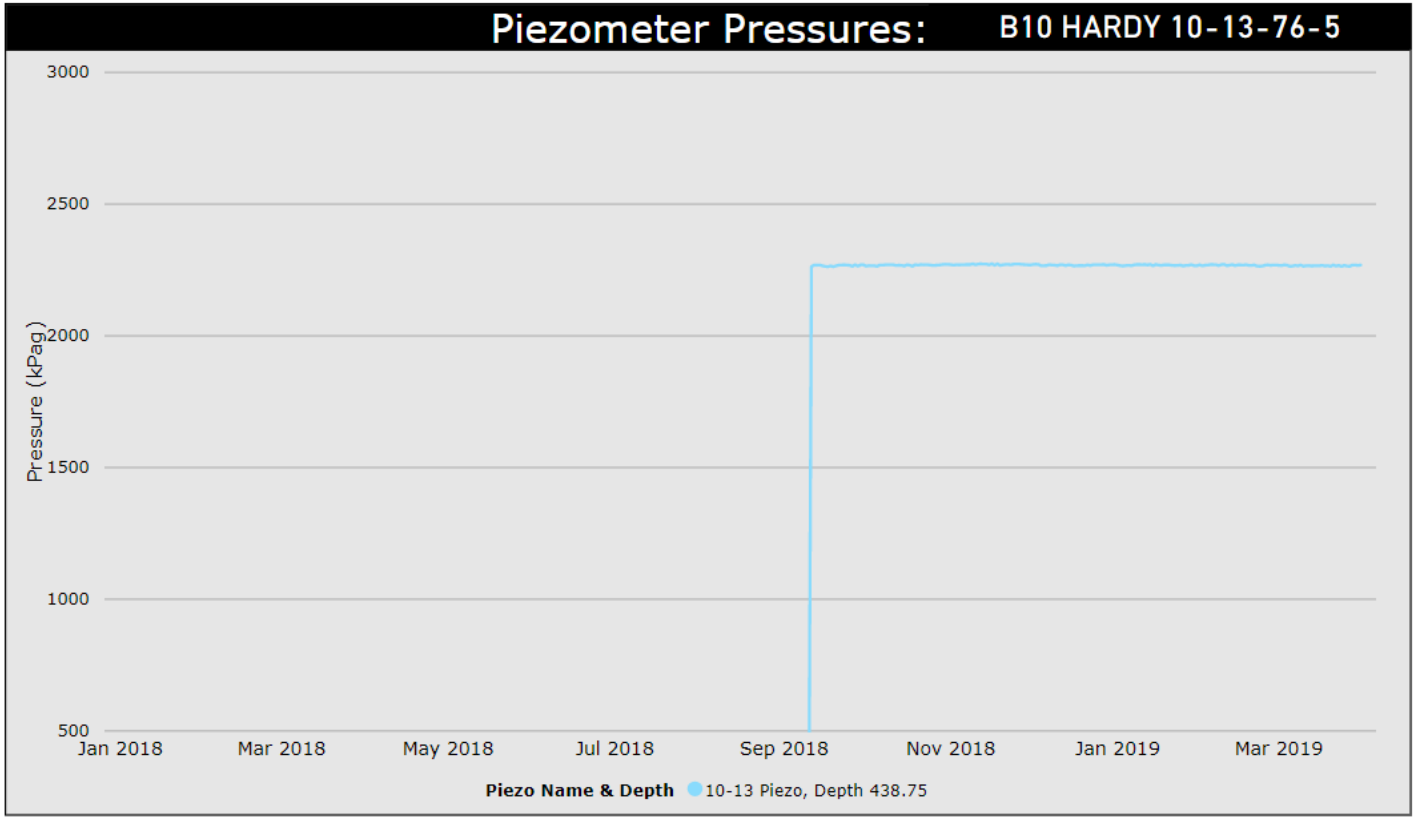

Piezometer Pressures:
A8 CONKLIN 8-16-75-7
2000
1800
1600
1400
1200
1000
800
600
400
200
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-16 Piezo, Depth 380

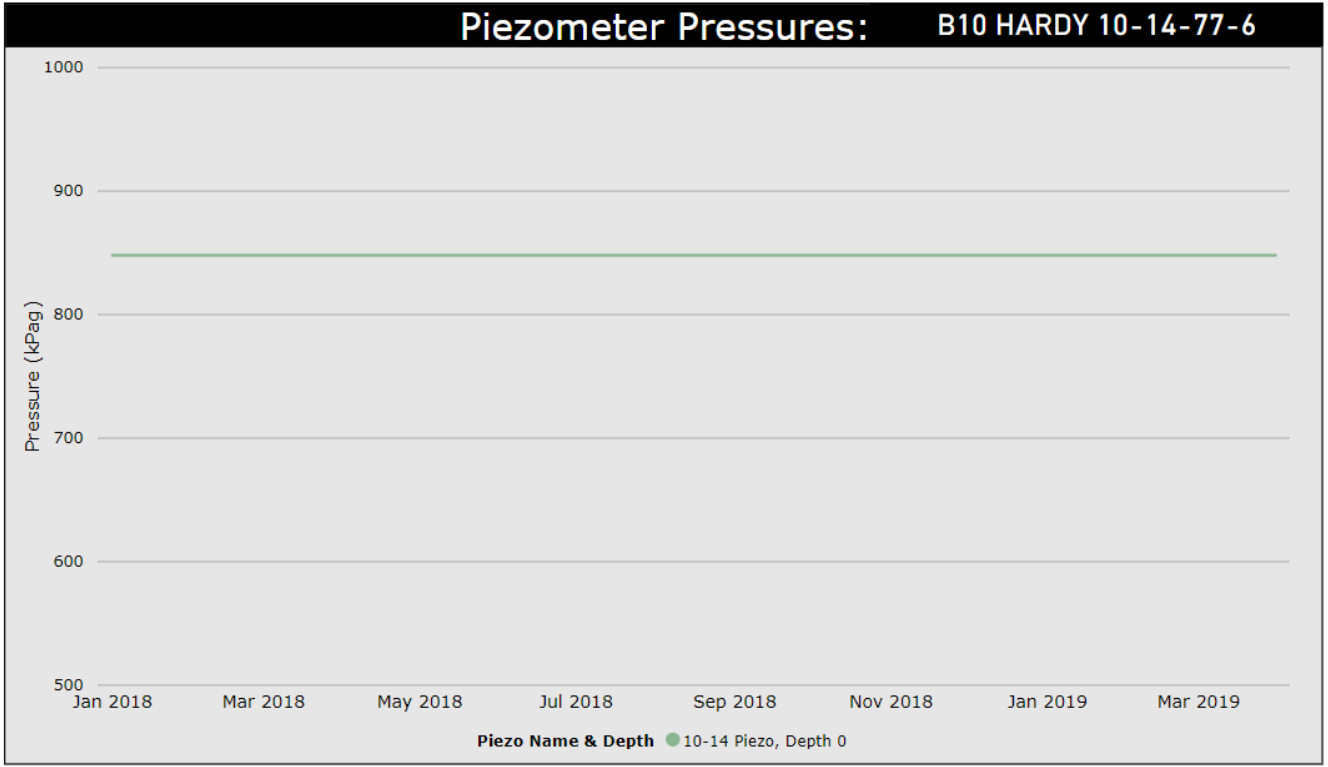

Piezometer Pressures:
A8 HARDY 8-25-76-6
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-25 Piezo, Depth 280
08-25 Piezo, Depth 329
08-25 Piezo, Depth 390

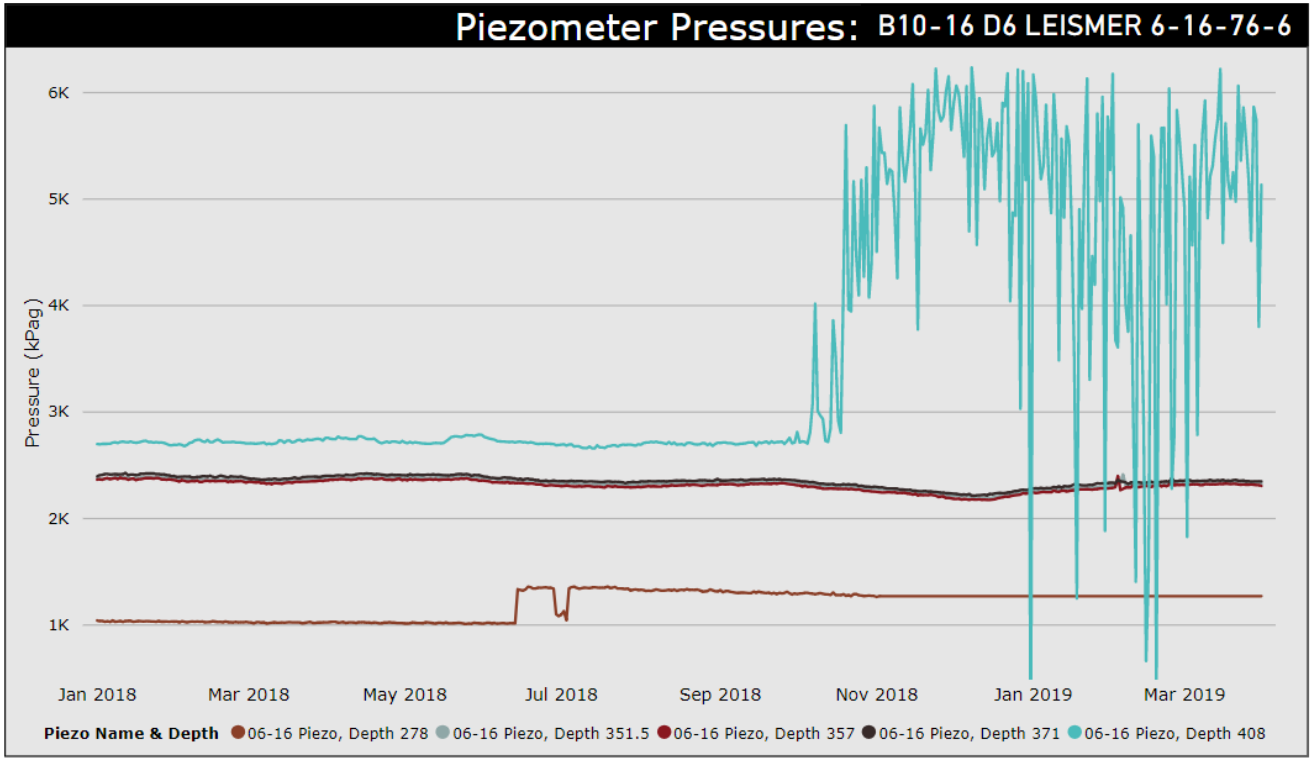

Piezometer Pressures:
A8 KIRBY 8-35-75-6
Pressure (kPag)
1400
1200
1000
800
600
400
200
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-35 Piezo, Depth 317
08-35 Piezo, Depth 356
08-35 Piezo, Depth 371

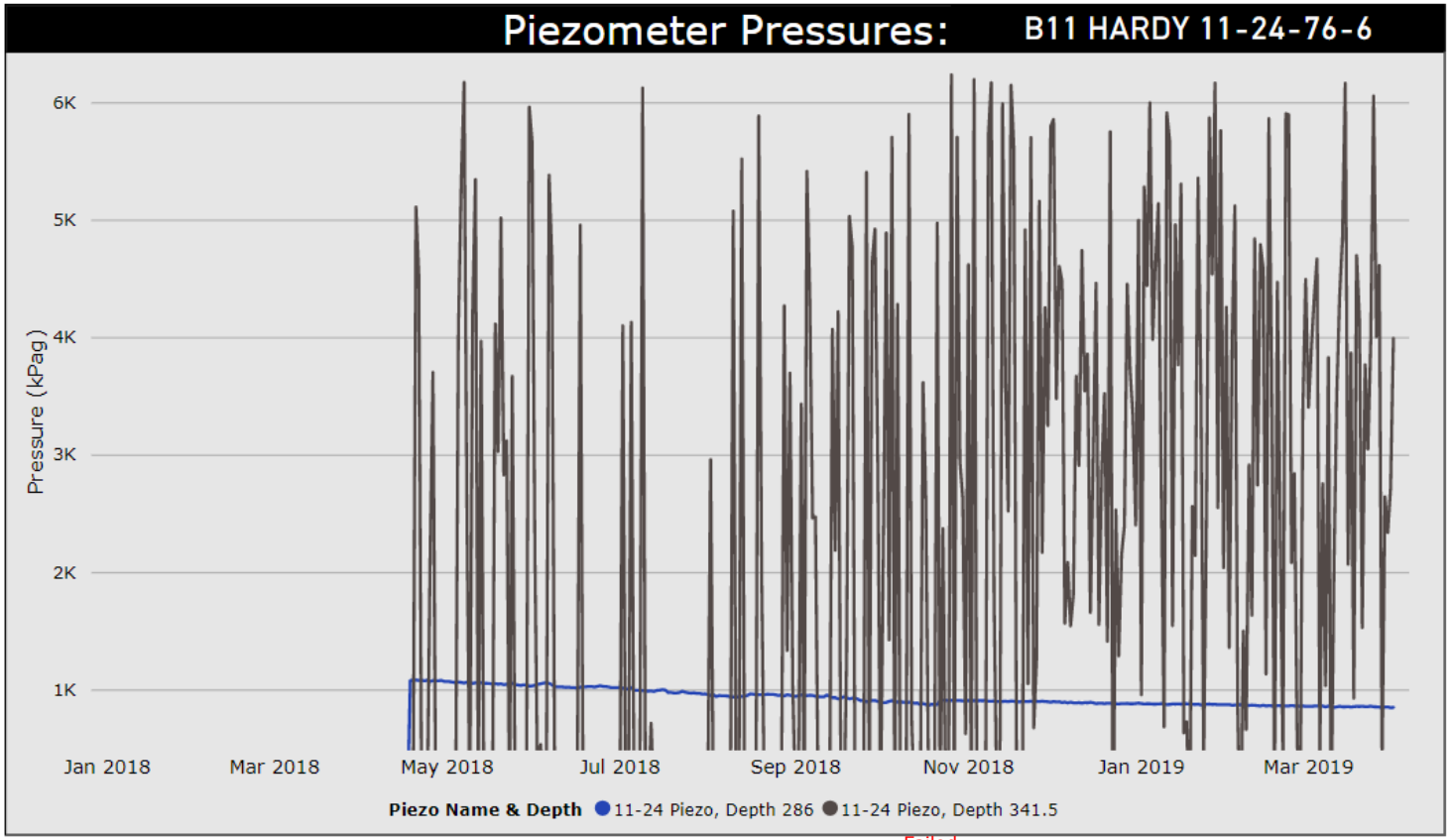

Piezometer Pressures:
A8 LEISMER 8-11-76-6
Pressure (kPag)
3000
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-11 Piezo, Depth 287
08-11 Piezo, Depth 348


Piezometer Pressures:
A8 LEISMER 8-22-76-6
3000
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-22 Piezo, Depth 410

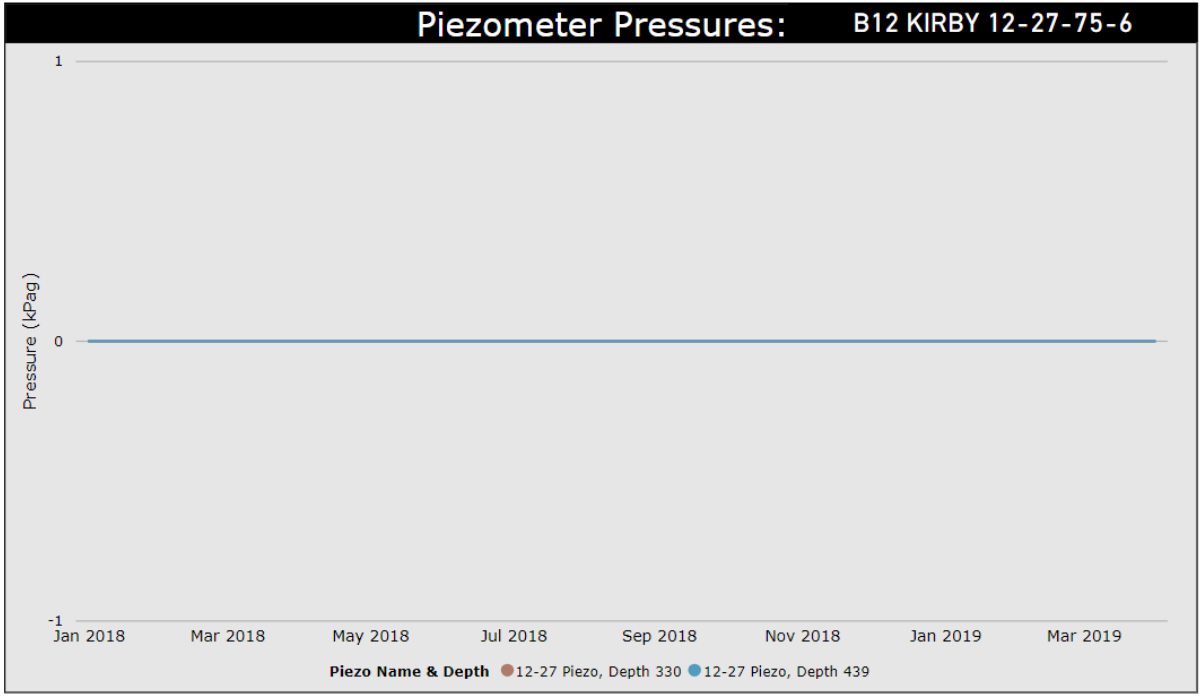

Piezometer Pressures:
B10 HARDY 10-13-76-5
3000
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
10-13 Piezo, Depth 438.75

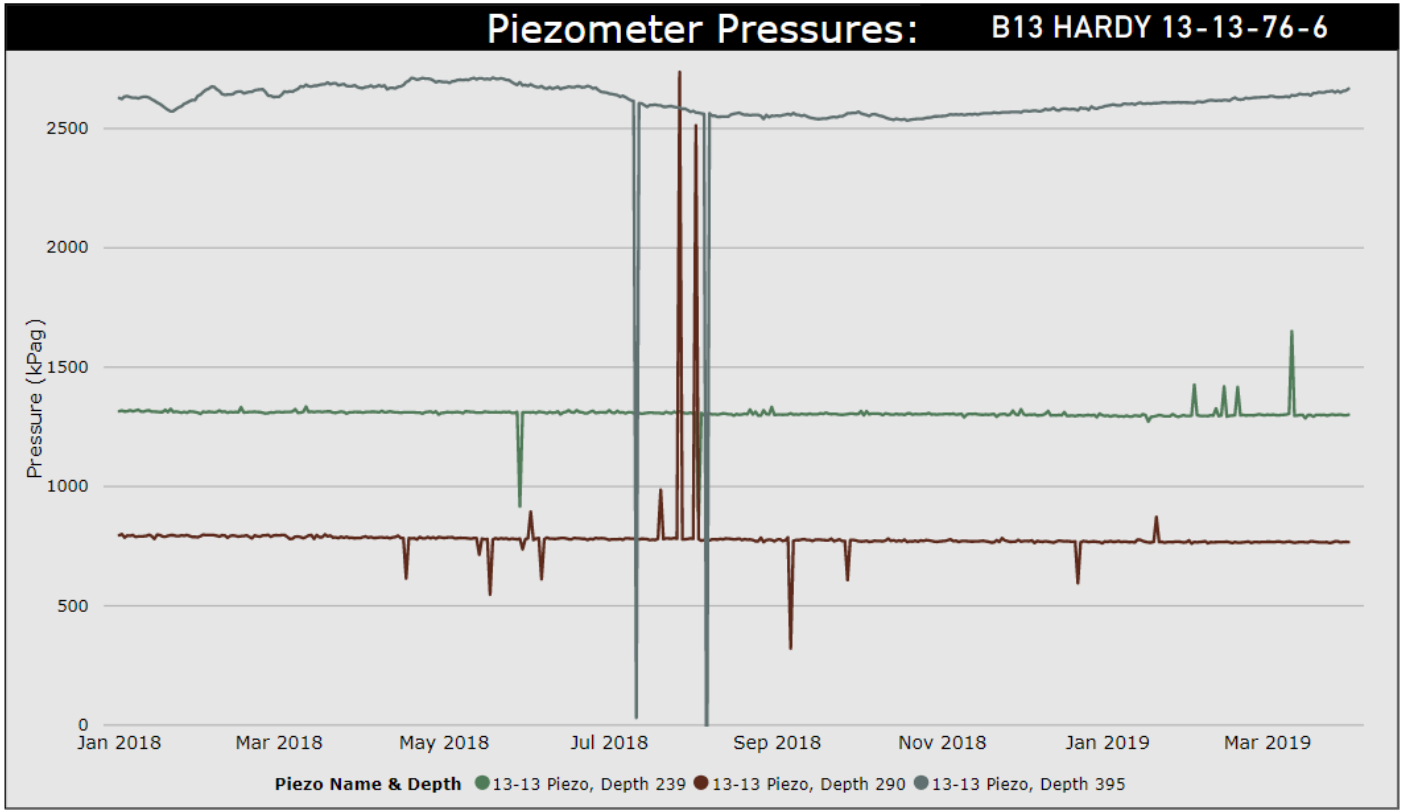

Piezometer Pressures:
B10 HARDY 10-14-77-6
1000
900
800
700
600
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
10-14 Piezo, Depth 0

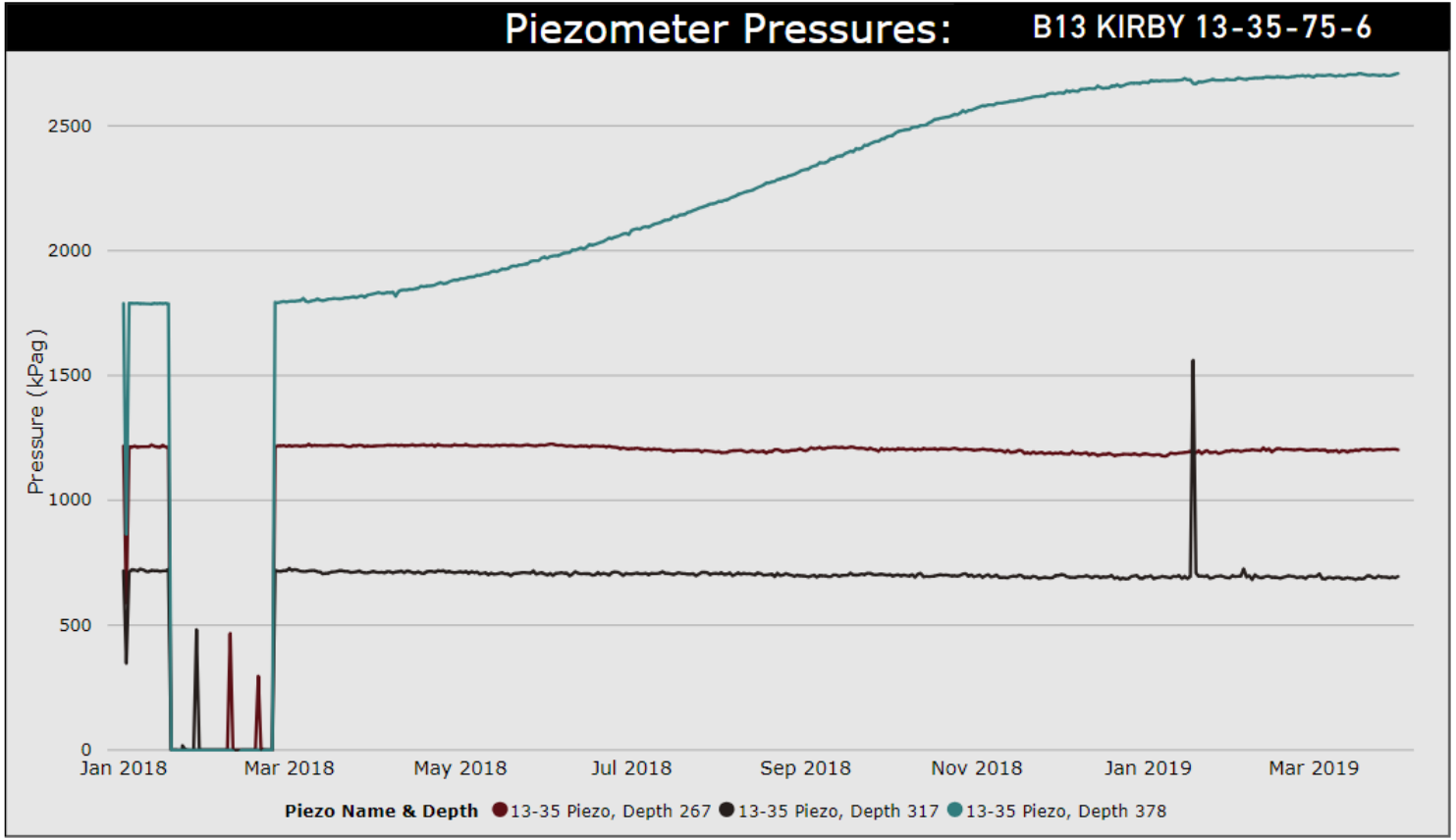

Piezometer Pressures: B10-16 D6 LEISMER 6-16-76-6
6K
5K
4K
3K
2K
1K
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
06-16 Piezo, Depth 278
06-16 Piezo, Depth 351.5
06-16 Piezo, Depth 357
06-16 Piezo, Depth 371
06-16 Piezo, Depth 408

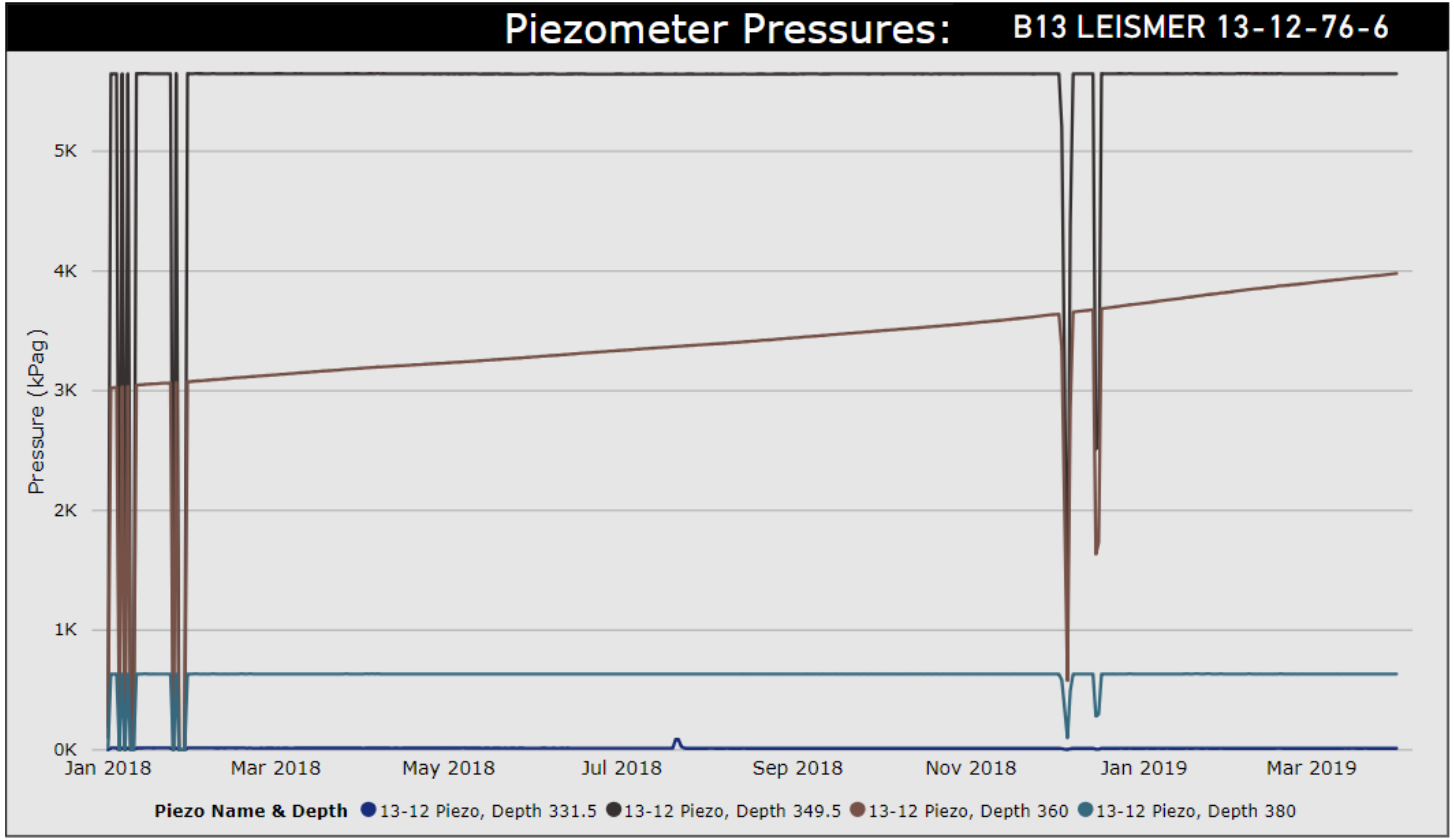

Piezometer Pressures:
B11 HARDY 11-24-76-6
Pressure (kPag)
6K
5K
4K
3K
2K
1K
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
11-24 Piezo, Depth 286
11-24 Piezo, Depth 341.5

Failed

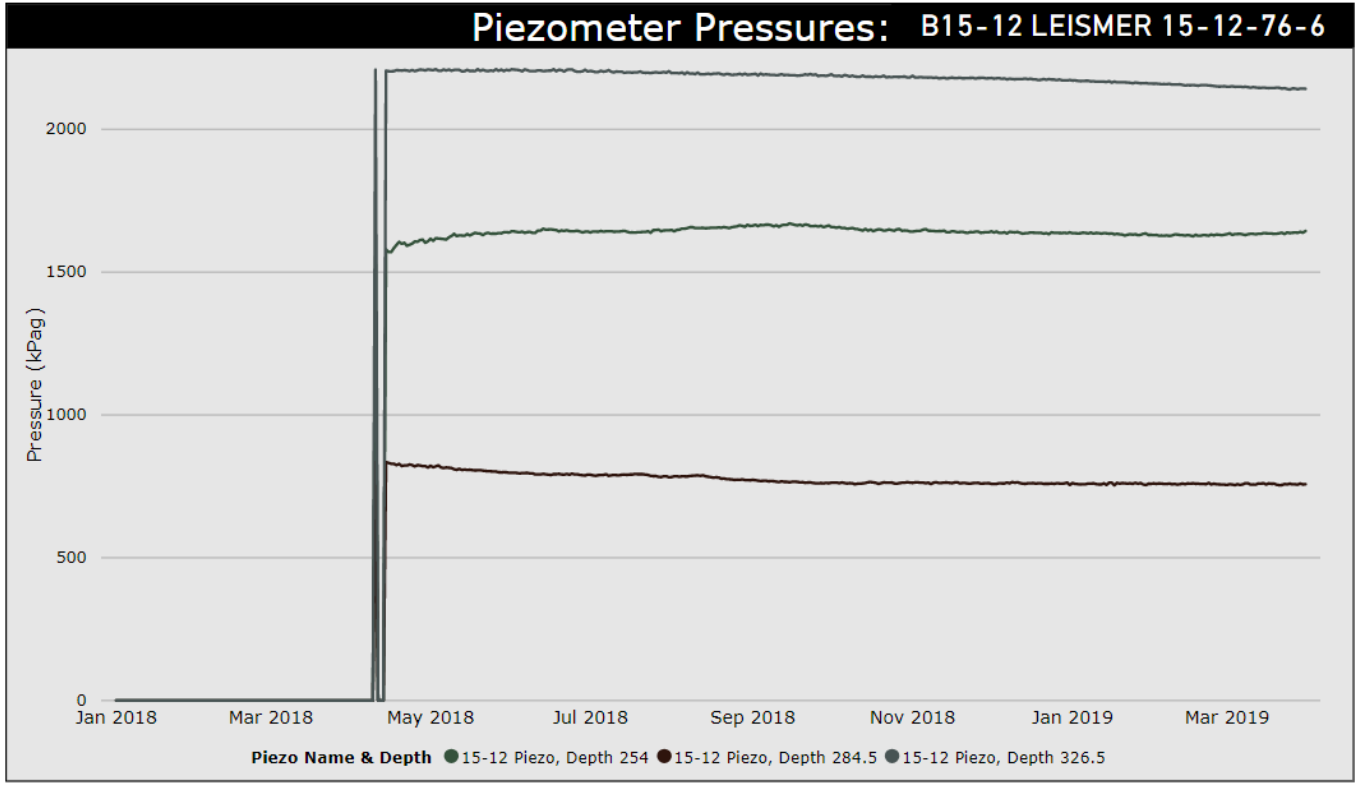

Piezometer Pressures: B12 KIRBY 12-27-75-6
1
0
-1
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
12-27 Piezo, Depth 330
12-27 Piezo, Depth 439

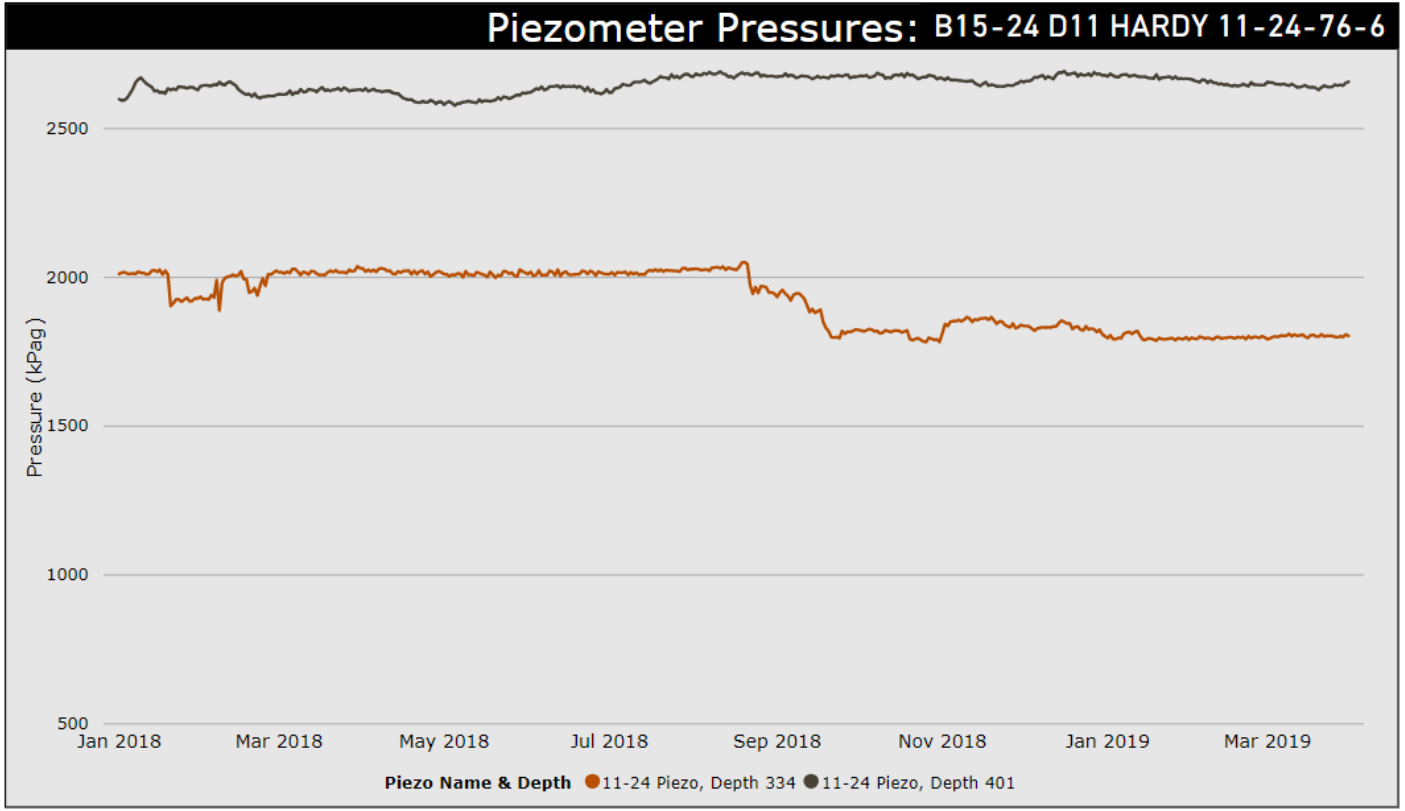

Piezometer Pressures:
B13 HARDY 13-13-76-6
Pressure (kPag)
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-13 Piezo, Depth 239
13-13 Piezo, Depth 290
13-13 Piezo, Depth 395

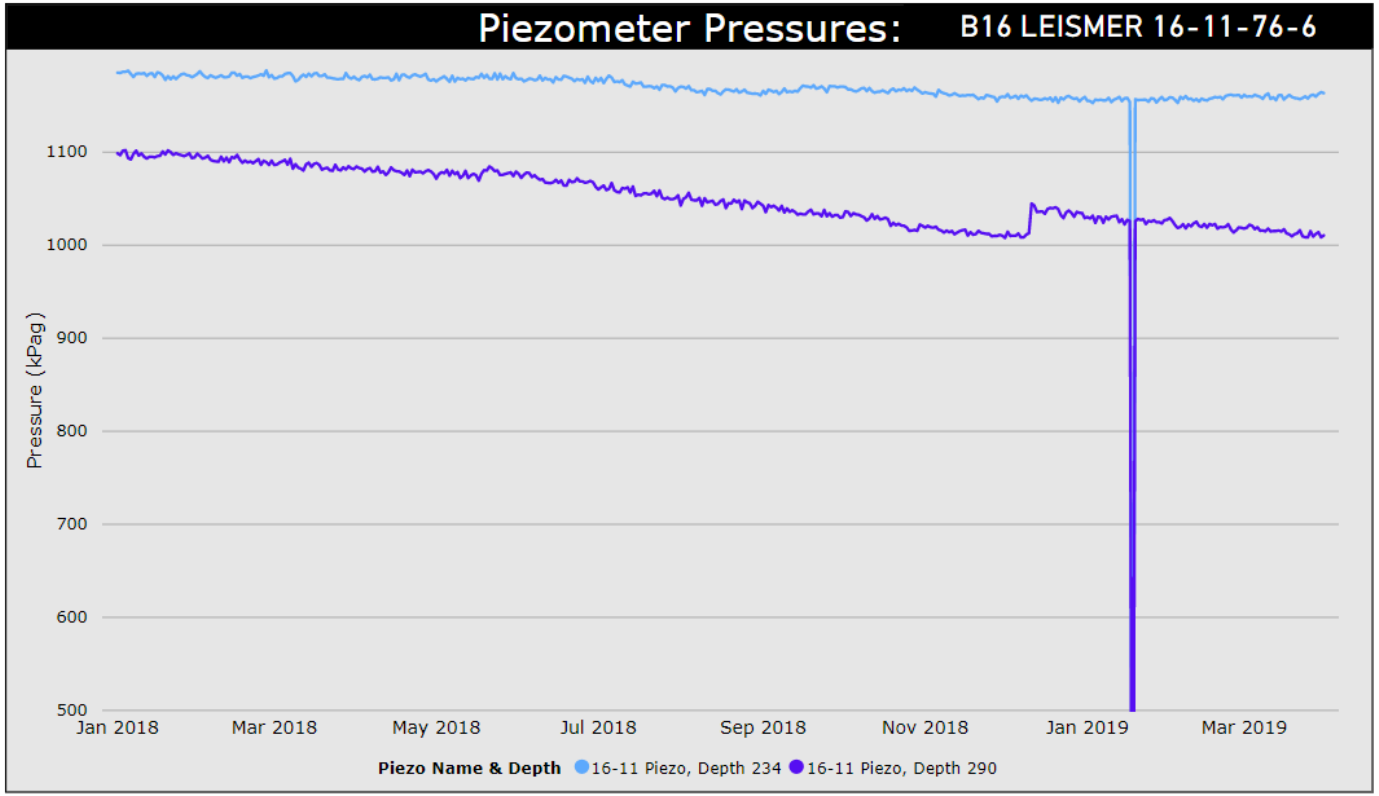

Piezometer Pressures:
B13 KIRBY 13-35-75-6
Pressure (kPag)
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-35 Piezo, Depth 267
13-35 Piezo, Depth 317
13-35 Piezo, Depth 378

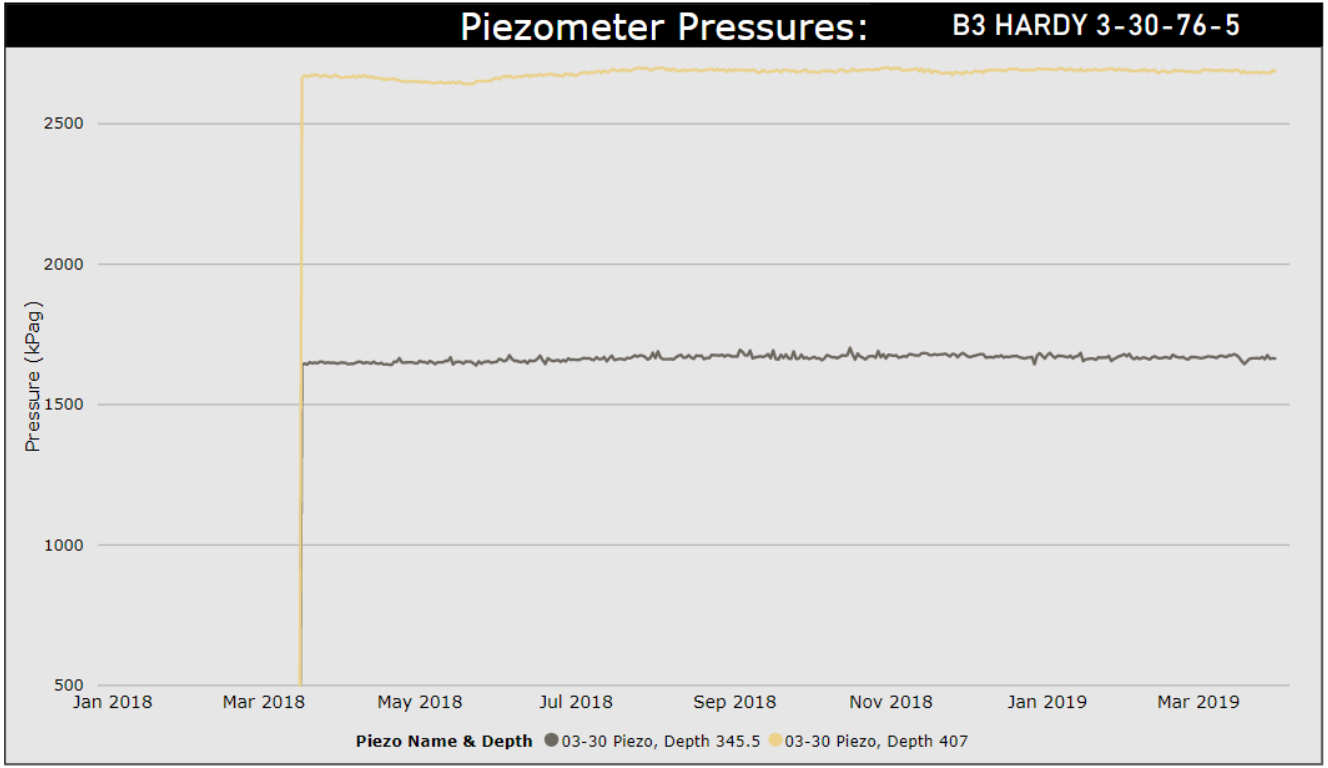

Piezometer Pressures: B13 LEISMER 13-12-76-6
Pressure (kPag)
5K
4K
3K
2K
1K
0K
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-12 Piezo, Depth 331.5
13-12 Piezo, Depth 349.5
13-12 Piezo, Depth 360
13-12 Piezo, Depth 380

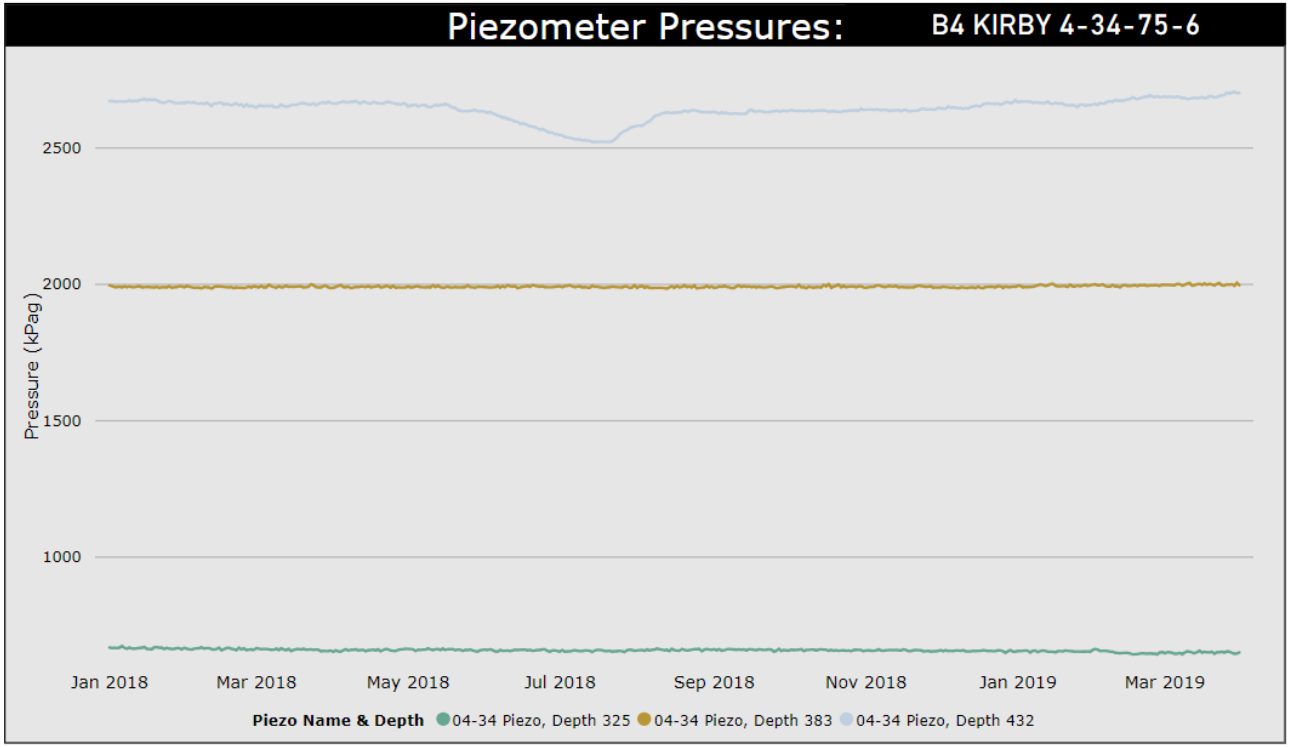
Failed

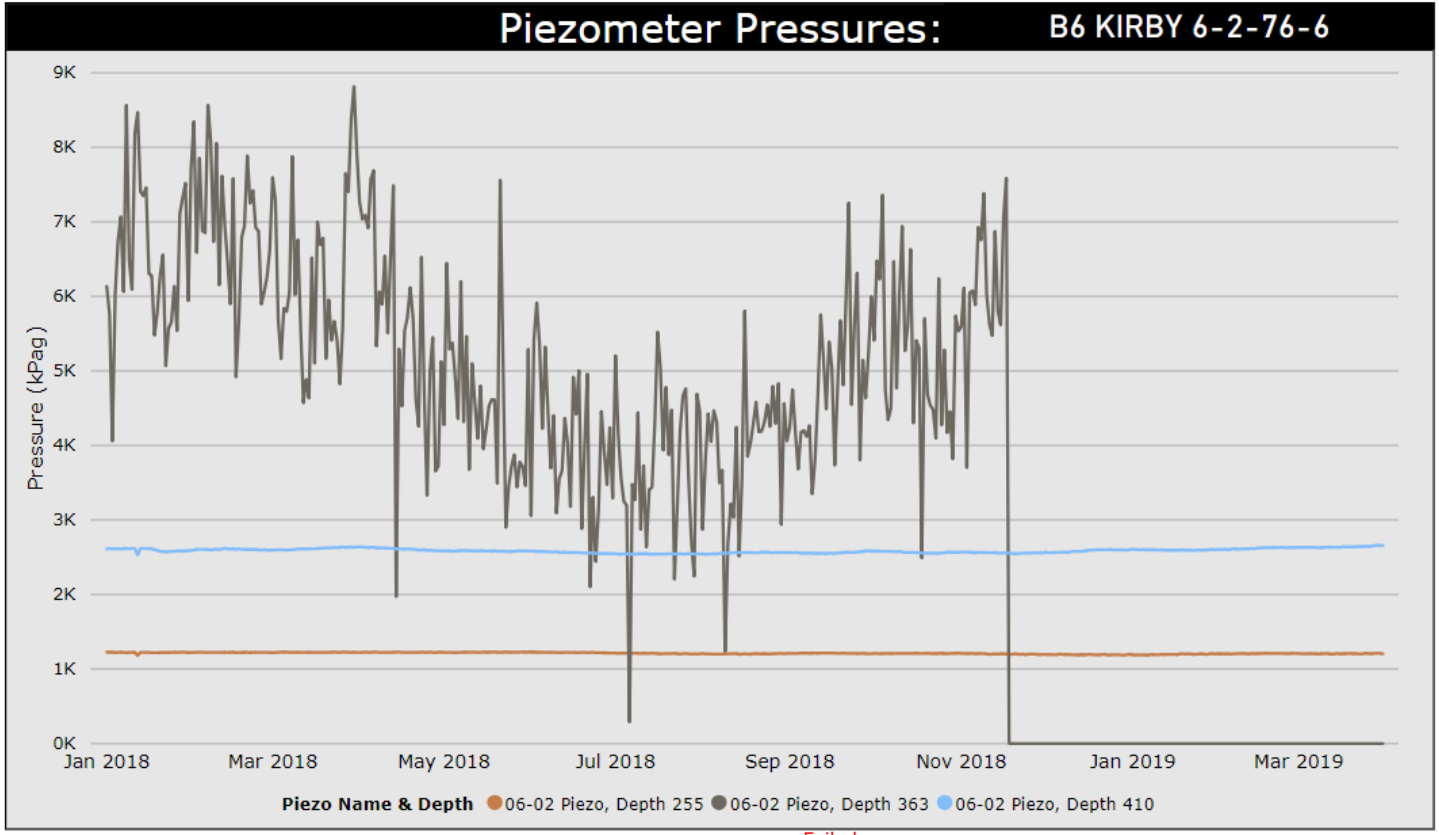

Piezometer Pressures: B15-12 LEISMER 15-12-76-6
Pressure (kPag)
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
15-12 Piezo, Depth 254
15-12 Piezo, Depth 284.5
15-12 Piezo, Depth 326.5


Piezometer Pressures: B15-24 D11 HARDY 11-24-76-6
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
11-24 Piezo, Depth 334
11-24 Piezo, Depth 401

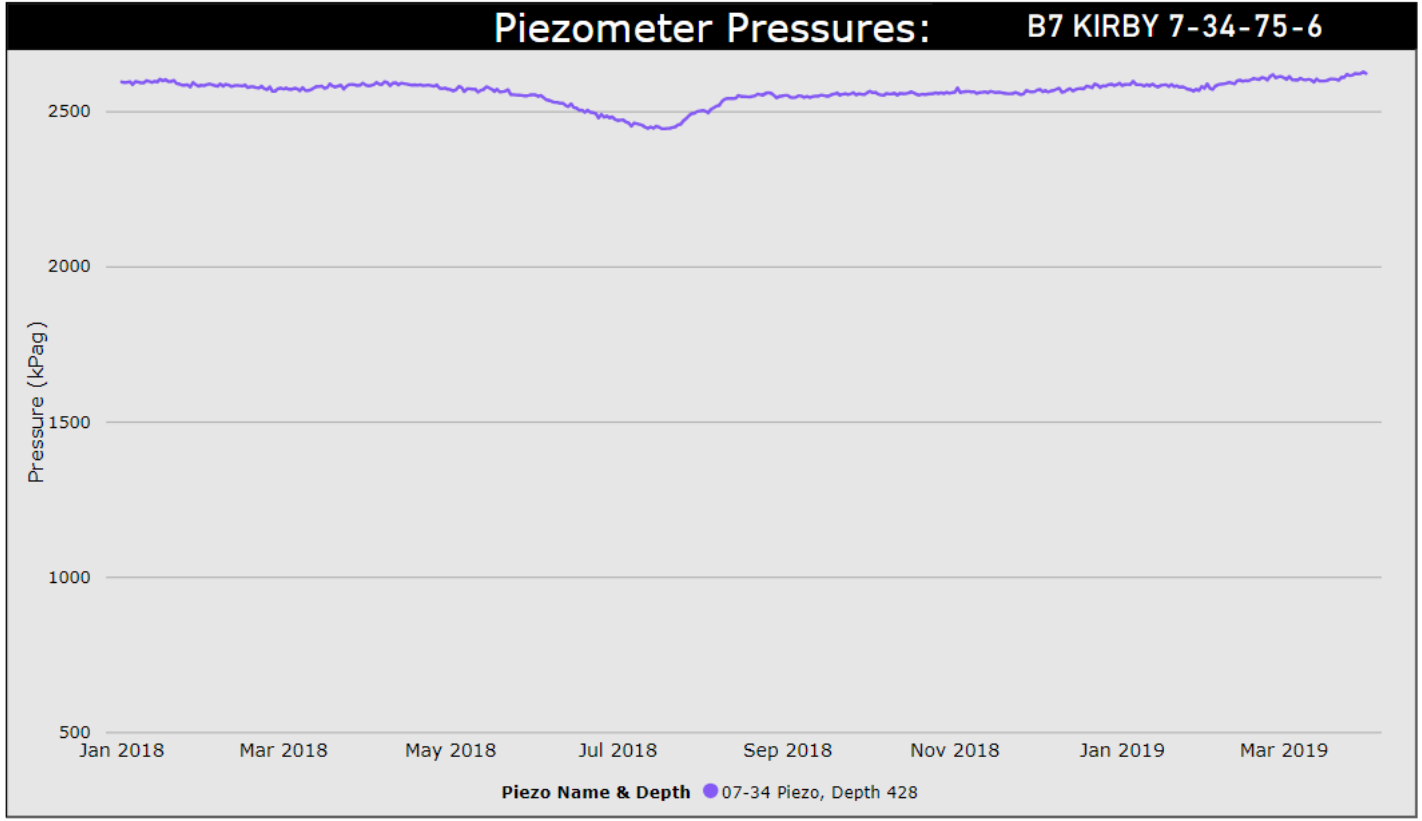

Piezometer Pressures: B16 LEISMER 16-11-76-6
Pressure (kPag)
1100
1000
900
800
700
600
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
16-11 Piezo, Depth 234
16-11 Piezo, Depth 290

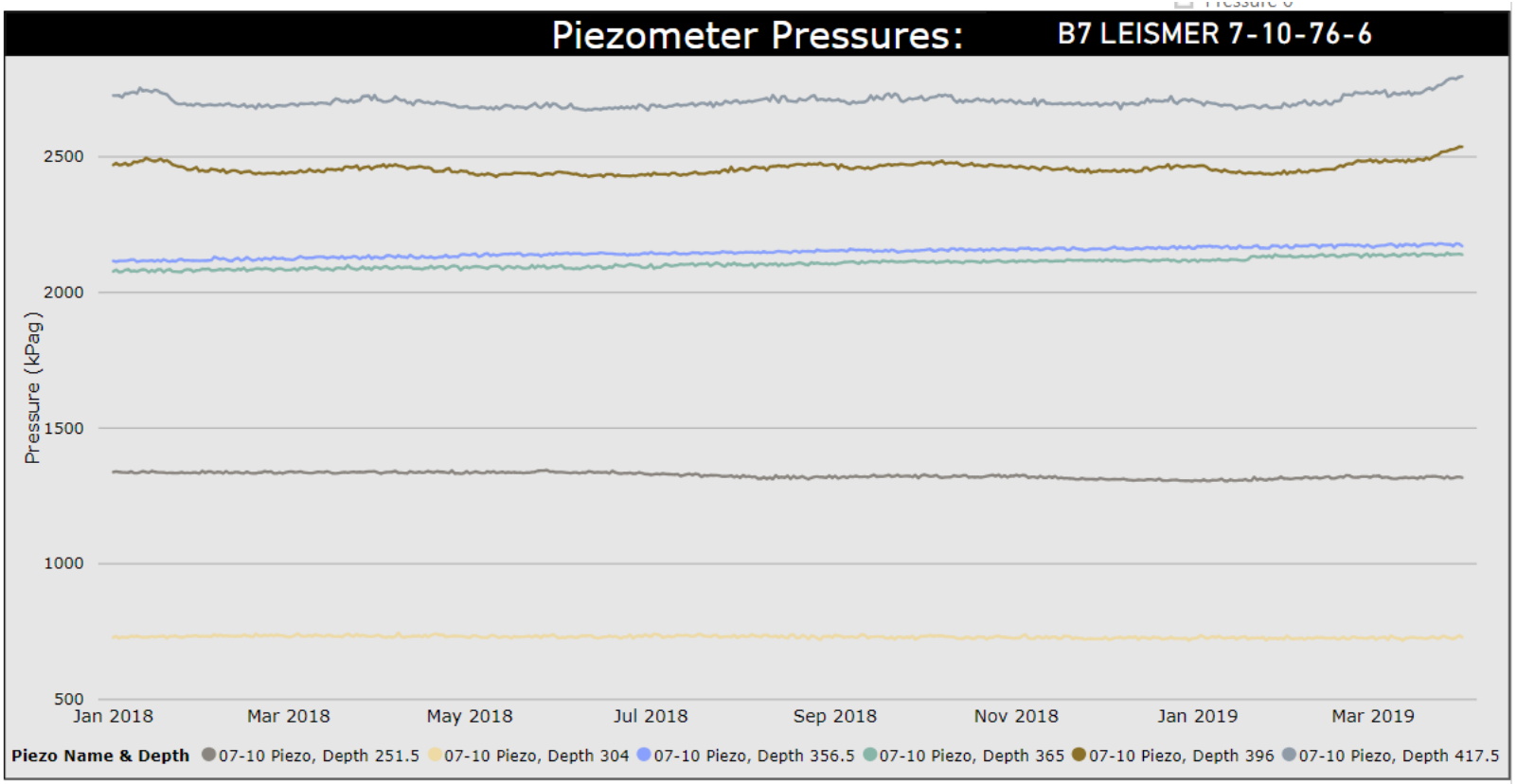

Piezometer Pressures:
B3 HARDY 3-30-76-5
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
03-30 Piezo, Depth 345.5
03-30 Piezo, Depth 407

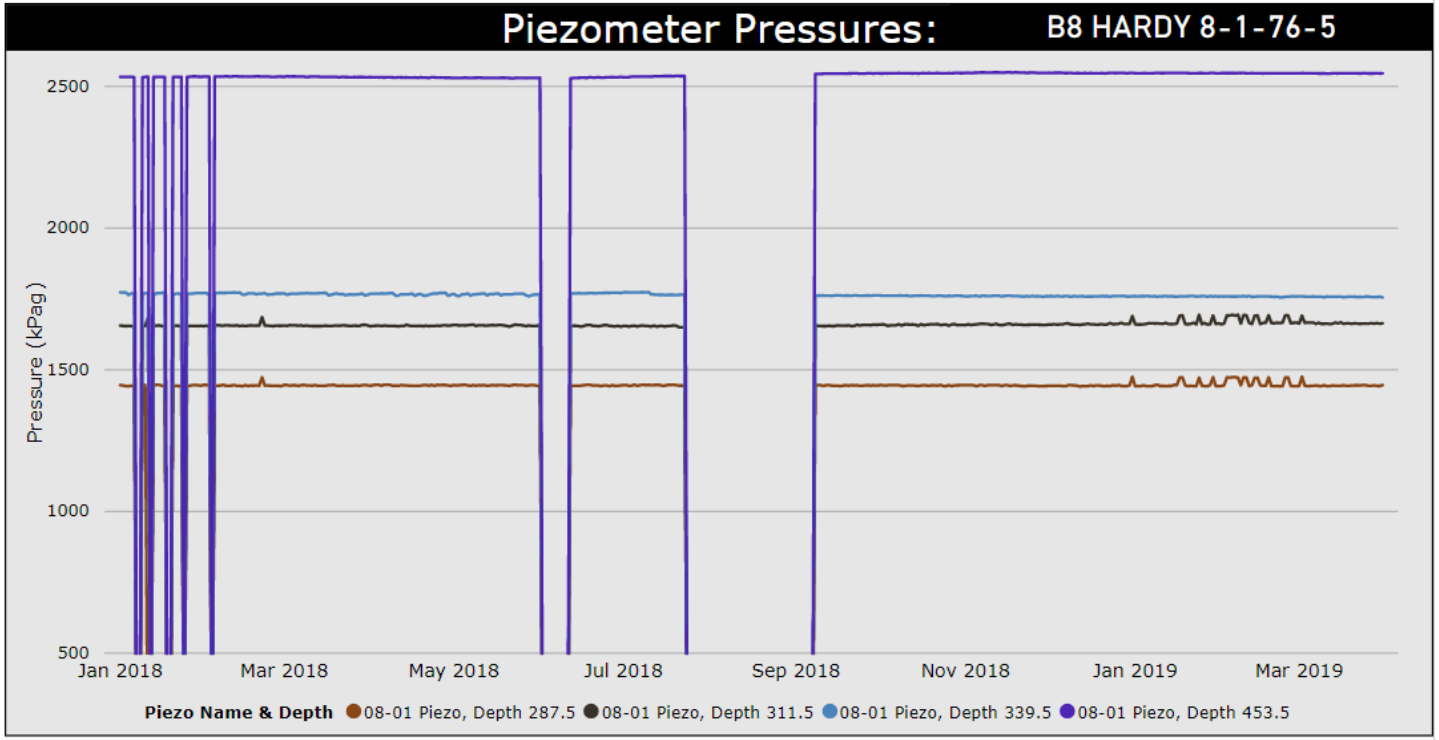

Piezometer Pressures:
B4 KIRBY 4-34-75-6
2500
2000
1500
1000
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
04-34 Piezo, Depth 325
04-34 Piezo, Depth 383
04-34 Piezo, Depth 432

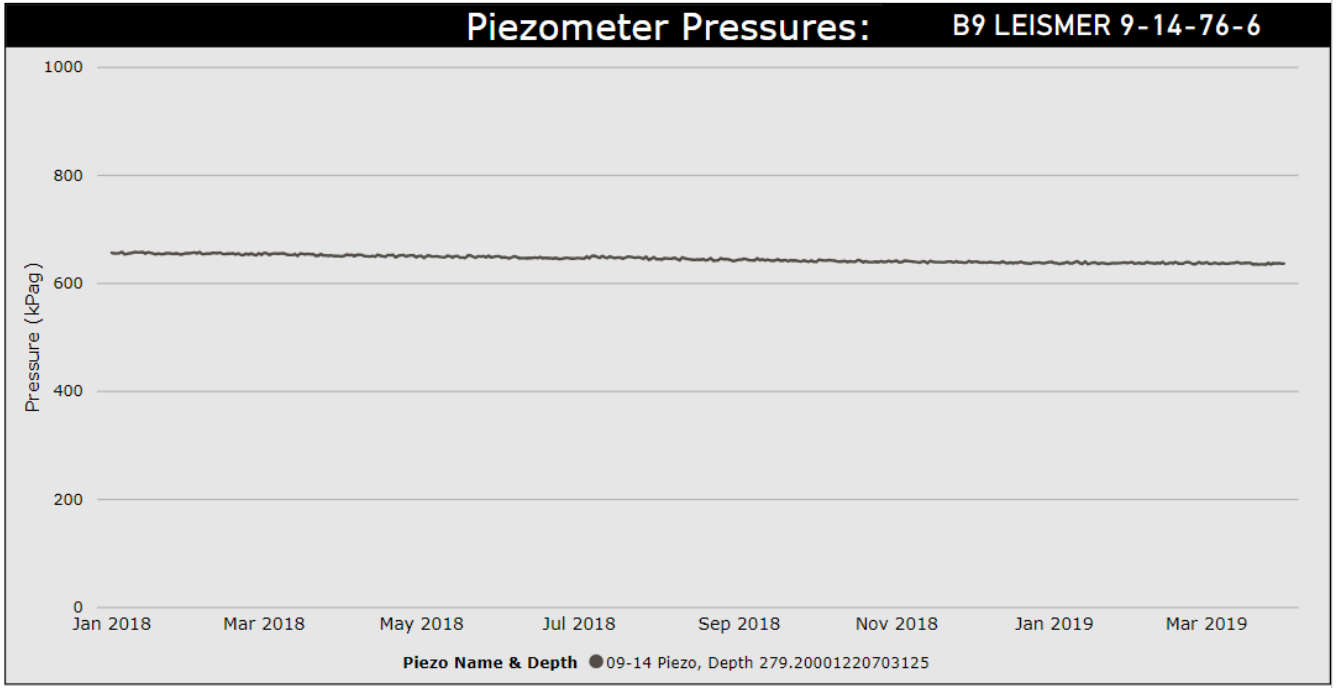

Piezometer Pressures:
B6 KIRBY 6-2-76-6
Pressure (kPag)
9K
8K
7K
6K
5K
4K
3K
2K
1K
0K
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
06-02 Piezo, Depth 255
06-02 Piezo, Depth 363
06-02 Piezo, Depth 410

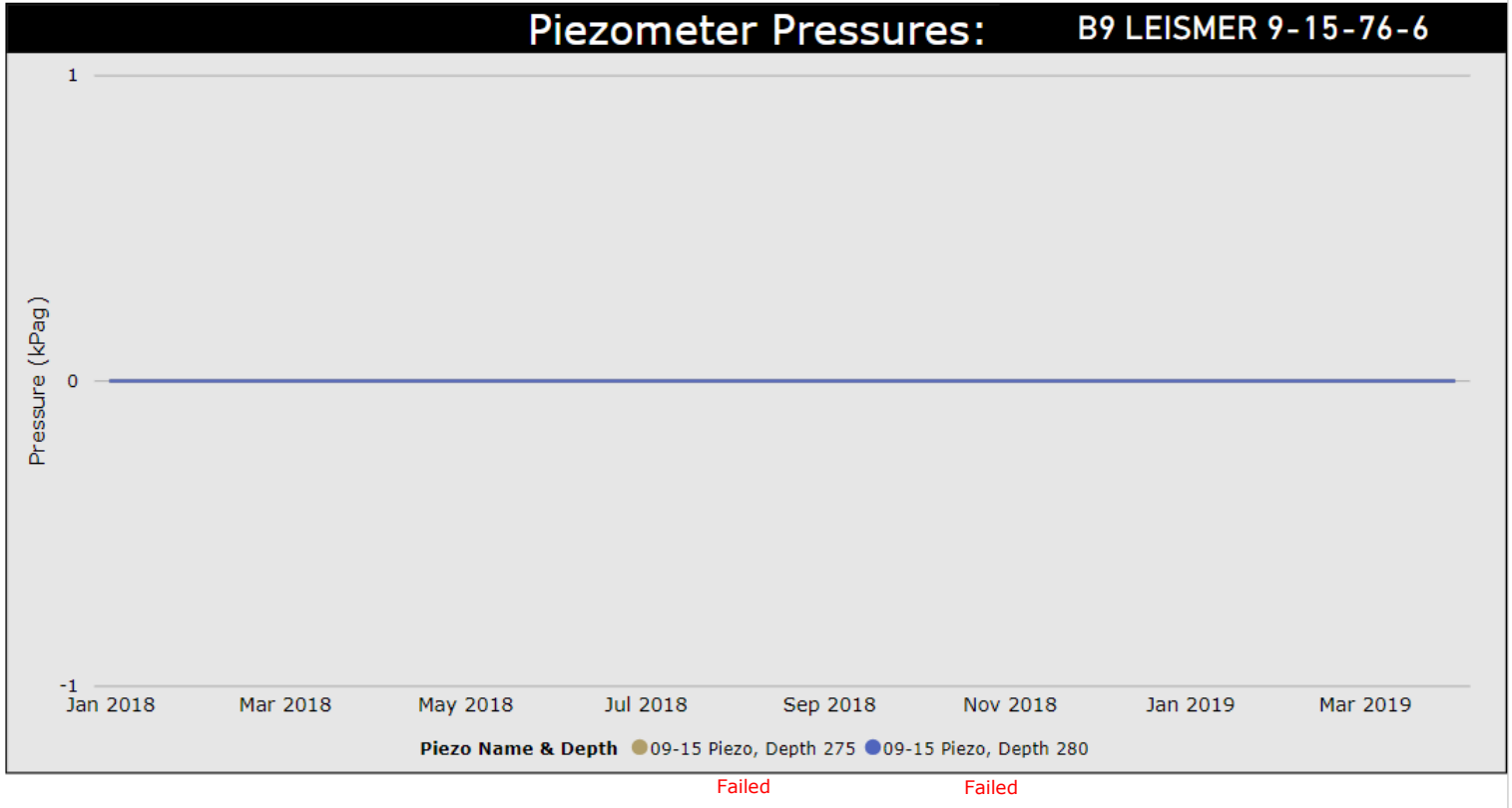
Failed

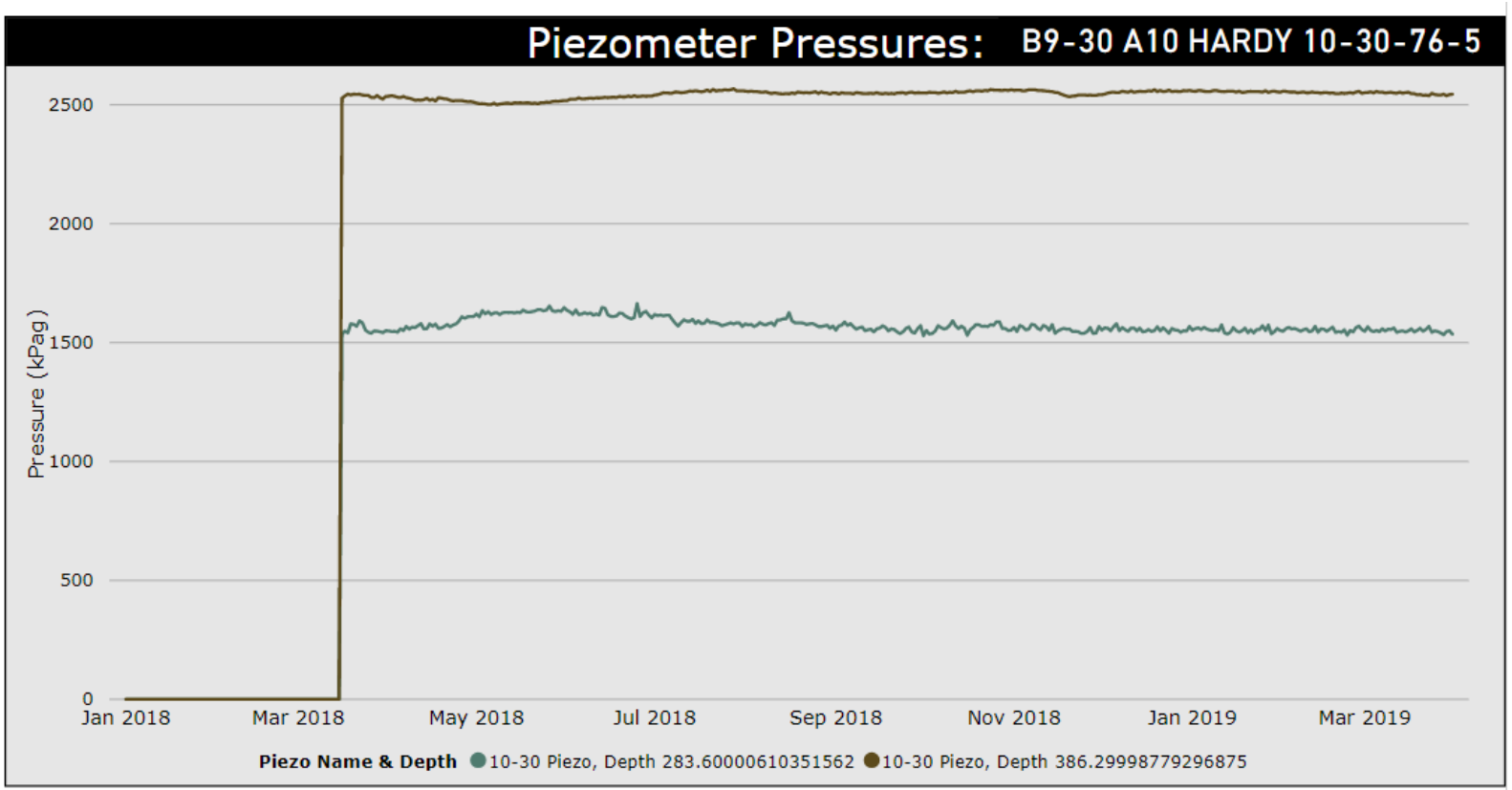

Piezometer Pressures:
B7 KIRBY 7-34-75-6
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
07-34 Piezo, Depth 428

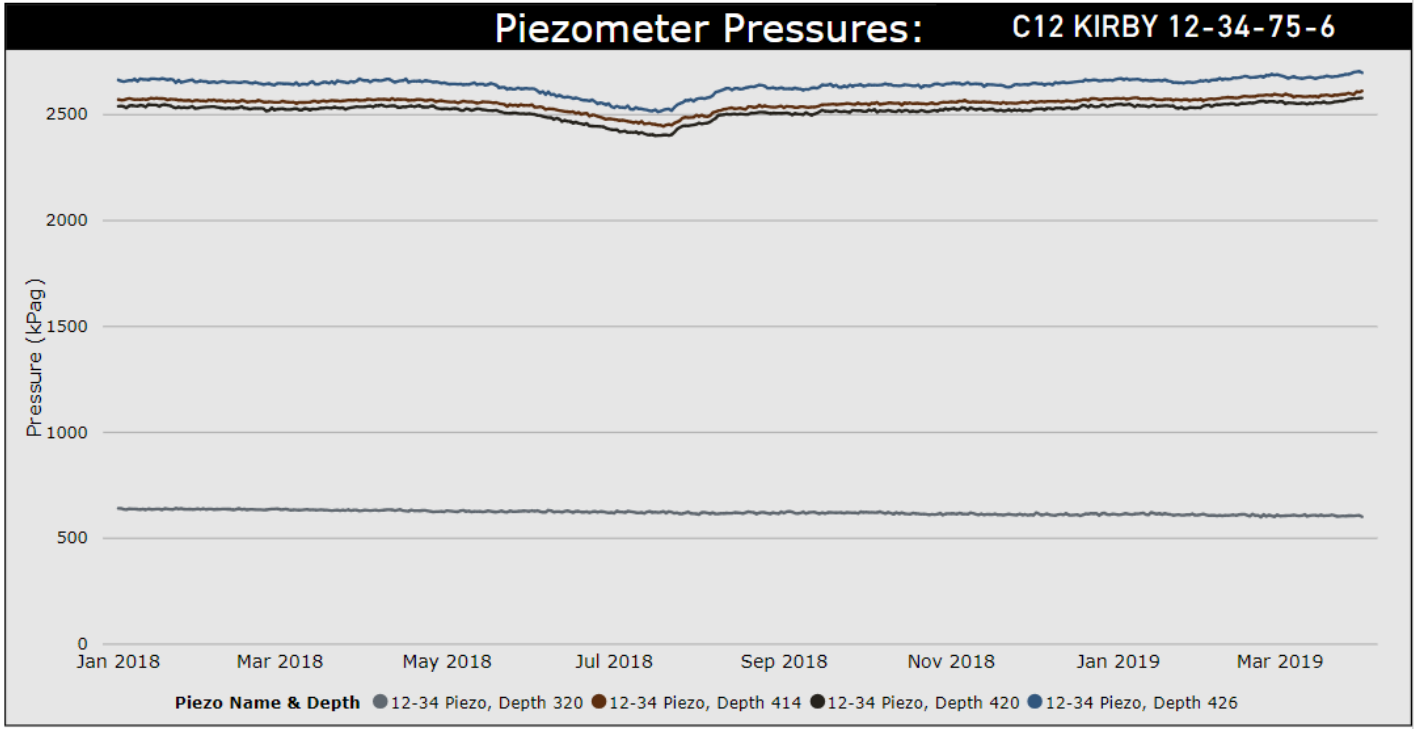

Piezometer Pressures:
B7 LEISMER 7-10-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
07-10 Piezo, Depth 251.5
07-10 Piezo, Depth 304
07-10 Piezo, Depth 356.5
07-10 Piezo, Depth 365
07-10 Piezo, Depth 396
07-10 Piezo, Depth 417.5

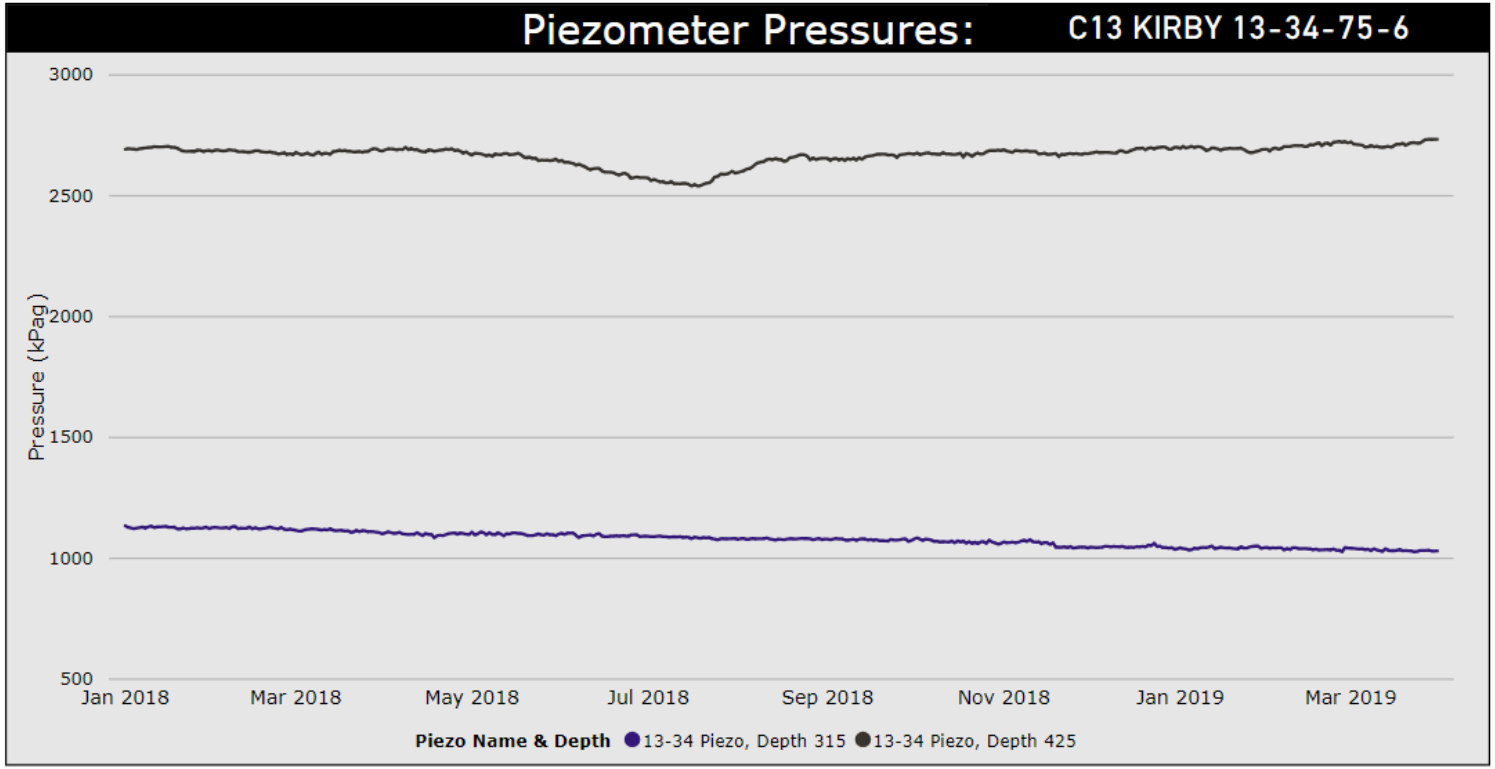

Piezometer Pressures:
B8 HARDY 8-1-76-5
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-01 Piezo, Depth 287.5
08-01 Piezo, Depth 311.5
08-01 Piezo, Depth 339.5
08-01 Piezo, Depth 453.5


Piezometer Pressures:
B9 LEISMER 9-14-76-6
1000
800
600
400
200
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
09-14 Piezo, Depth 279.20001220703125

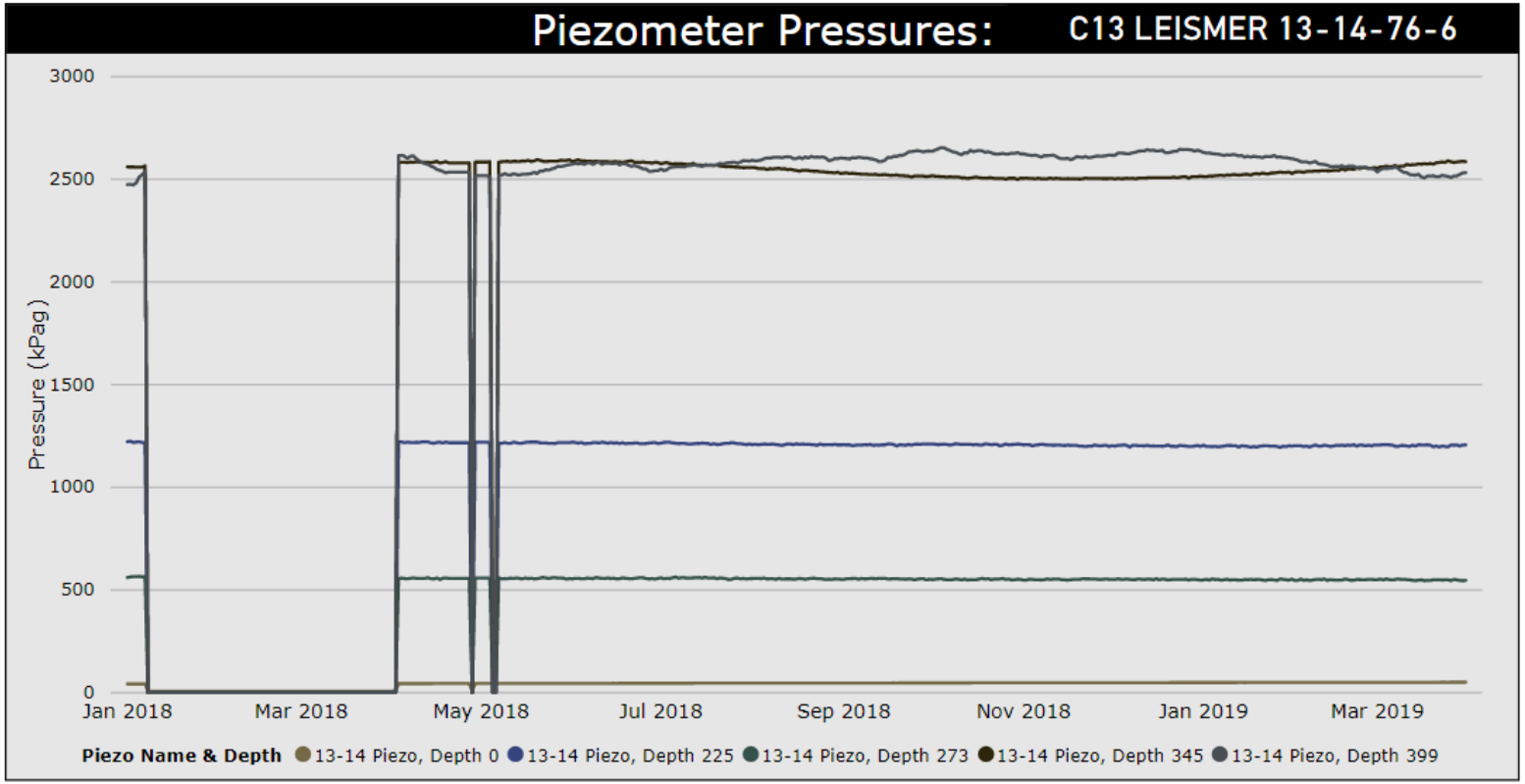

Piezometer Pressures:
B9 LEISMER 9-15-76-6
1
0
-1
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
09-15 Piezo, Depth 275
09-15 Piezo, Depth 280
Failed
Failed

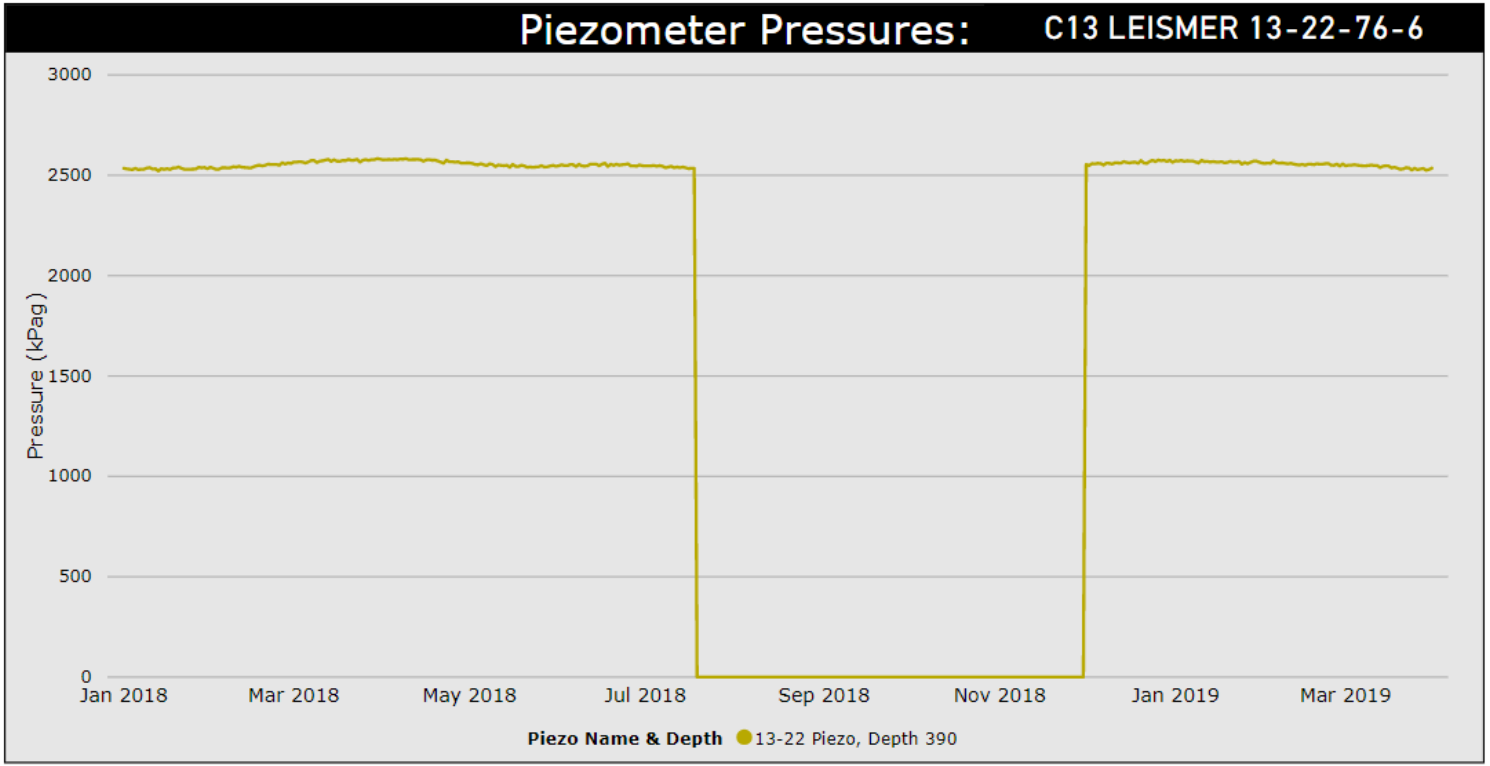

Piezometer Pressures: B9-30 A10 HARDY 10-30-76-5
Pressure (kPag)
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
10-30 Piezo, Depth 283.60000610351562
10-30 Piezo, Depth 386.29998779296875

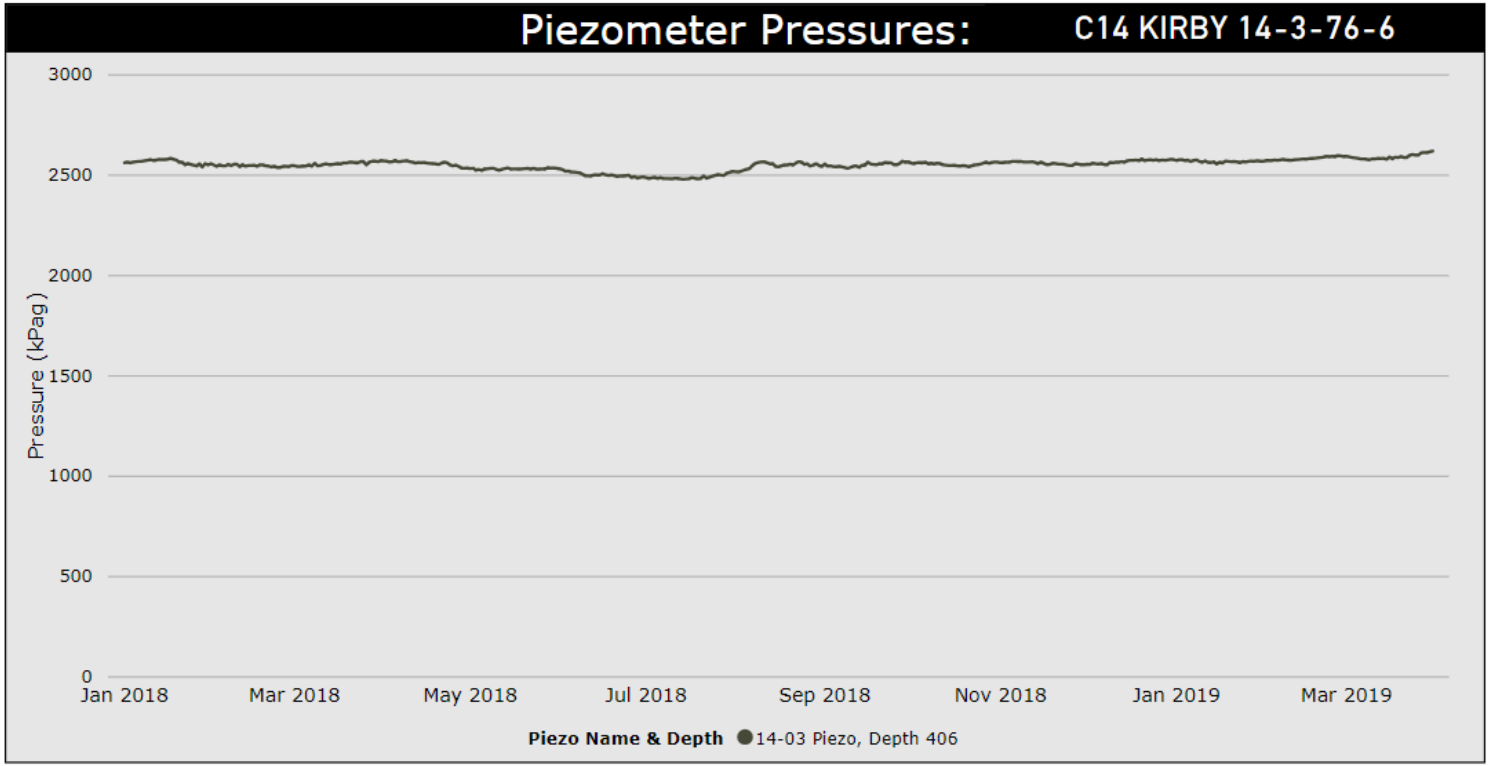

Piezometer Pressures:
C12 KIRBY 12-34-75-6
Pressure (kPag)
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
12-34 Piezo, Depth 320
12-34 Piezo, Depth 414
12-34 Piezo, Depth 420
12-34 Piezo, Depth 426

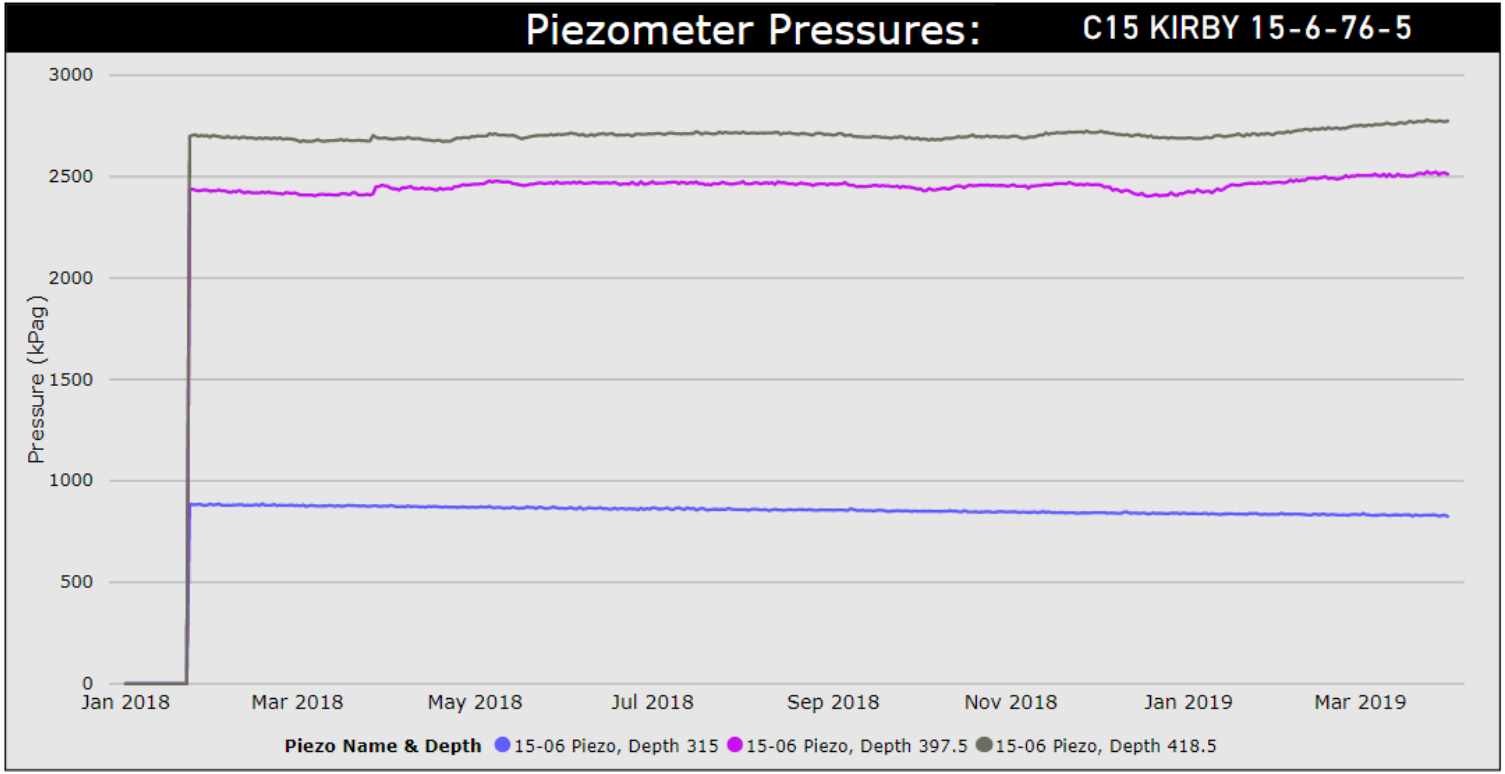


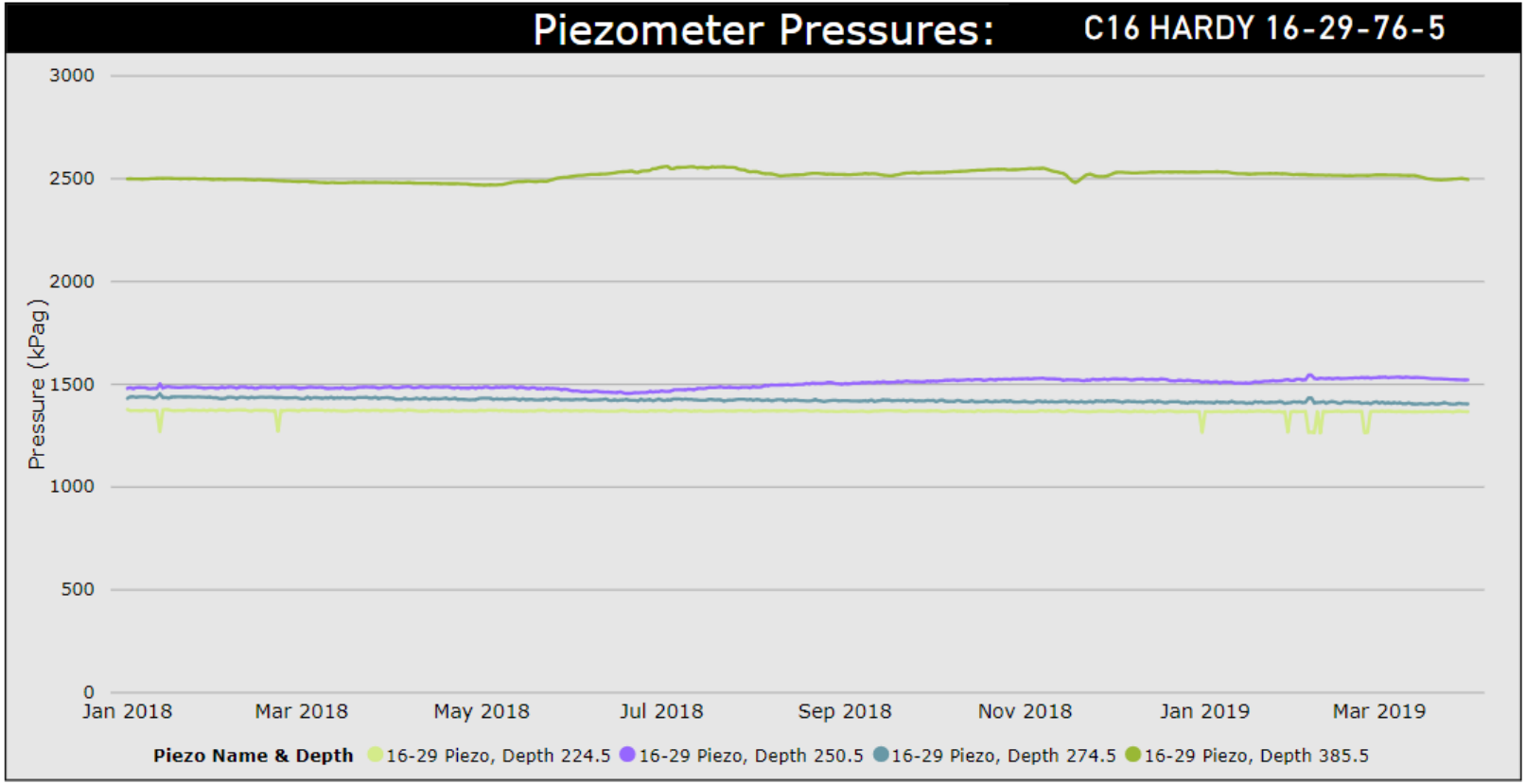
2018 Cenovus Energy Inc.

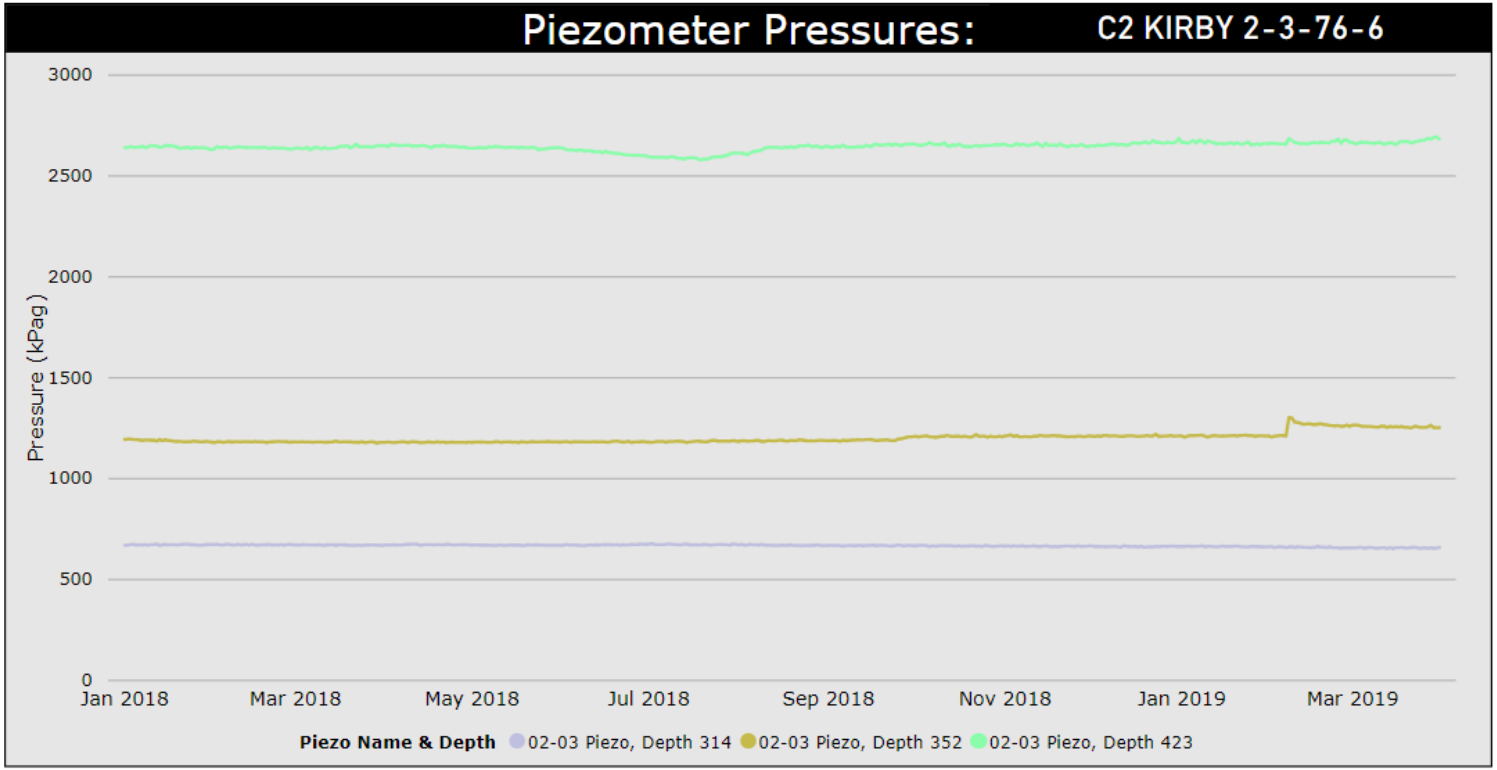

Piezometer Pressures: C13 LEISMER 13-14-76-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-14 Piezo, Depth 0
13-14 Piezo, Depth 225
13-14 Piezo, Depth 273
13-14 Piezo, Depth 345
13-14 Piezo, Depth 399

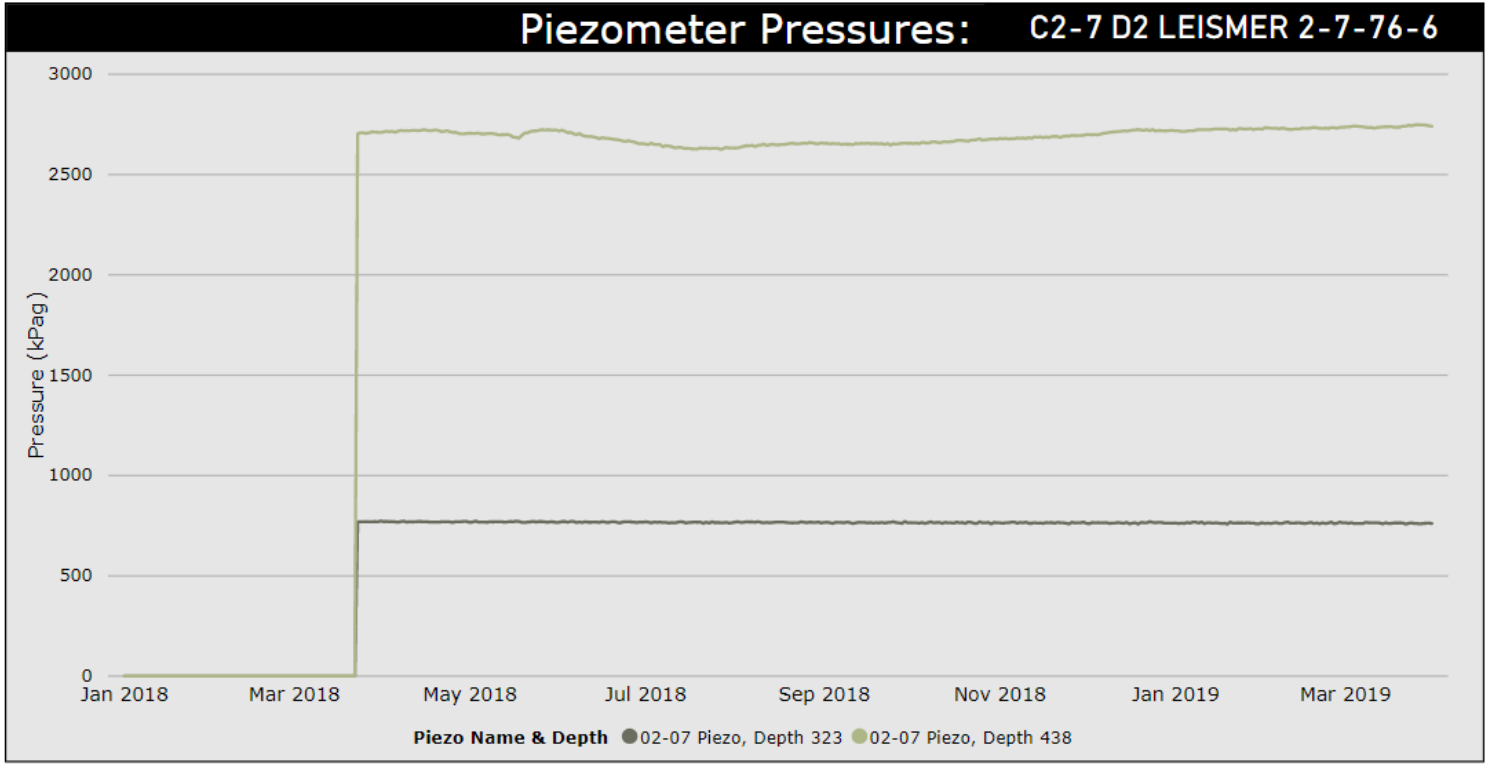

Piezometer Pressures:
C13 LEISMER 13-22-76-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-22 Piezo, Depth 390

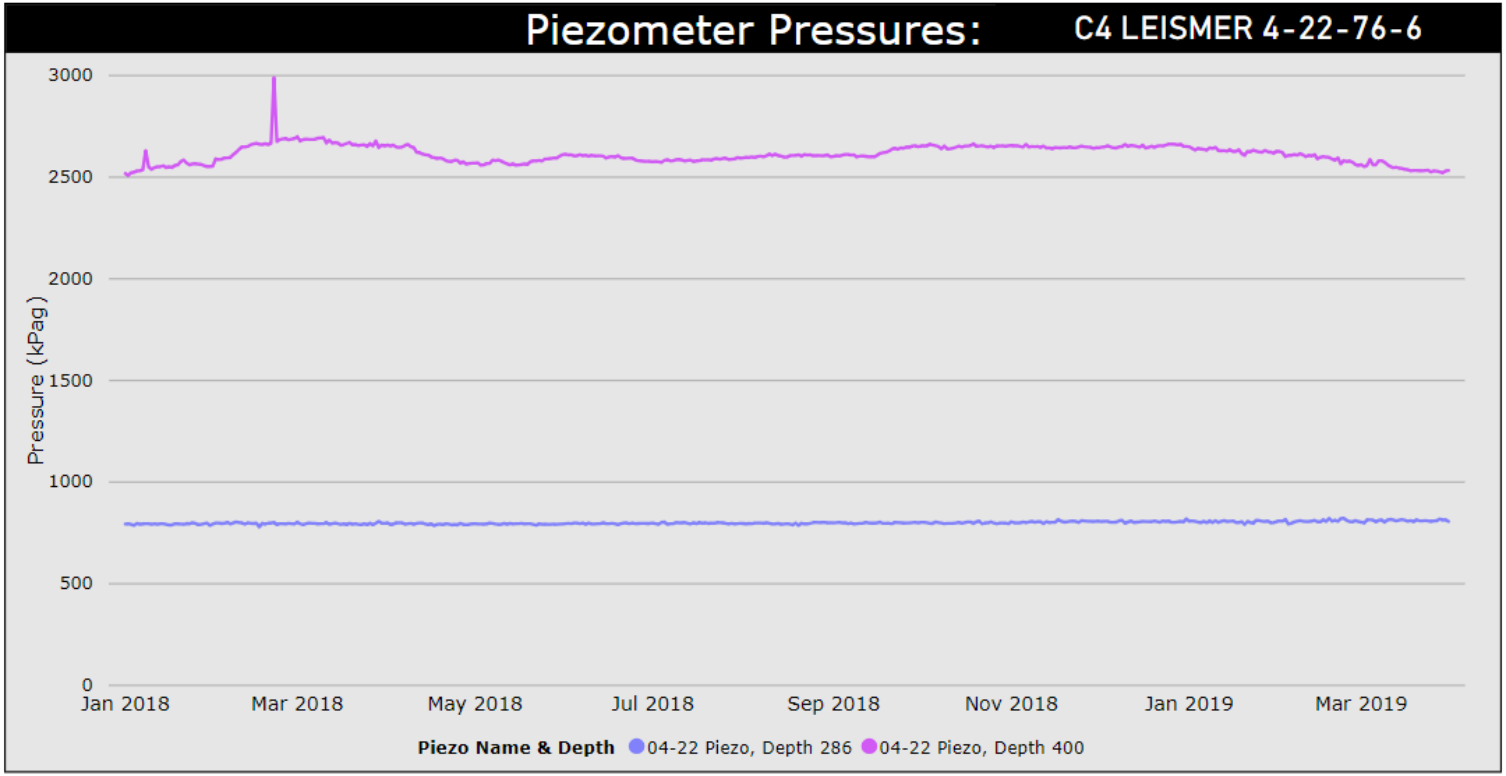

Piezometer Pressures:
C14 KIRBY 14-3-76-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
14-03 Piezo, Depth 406

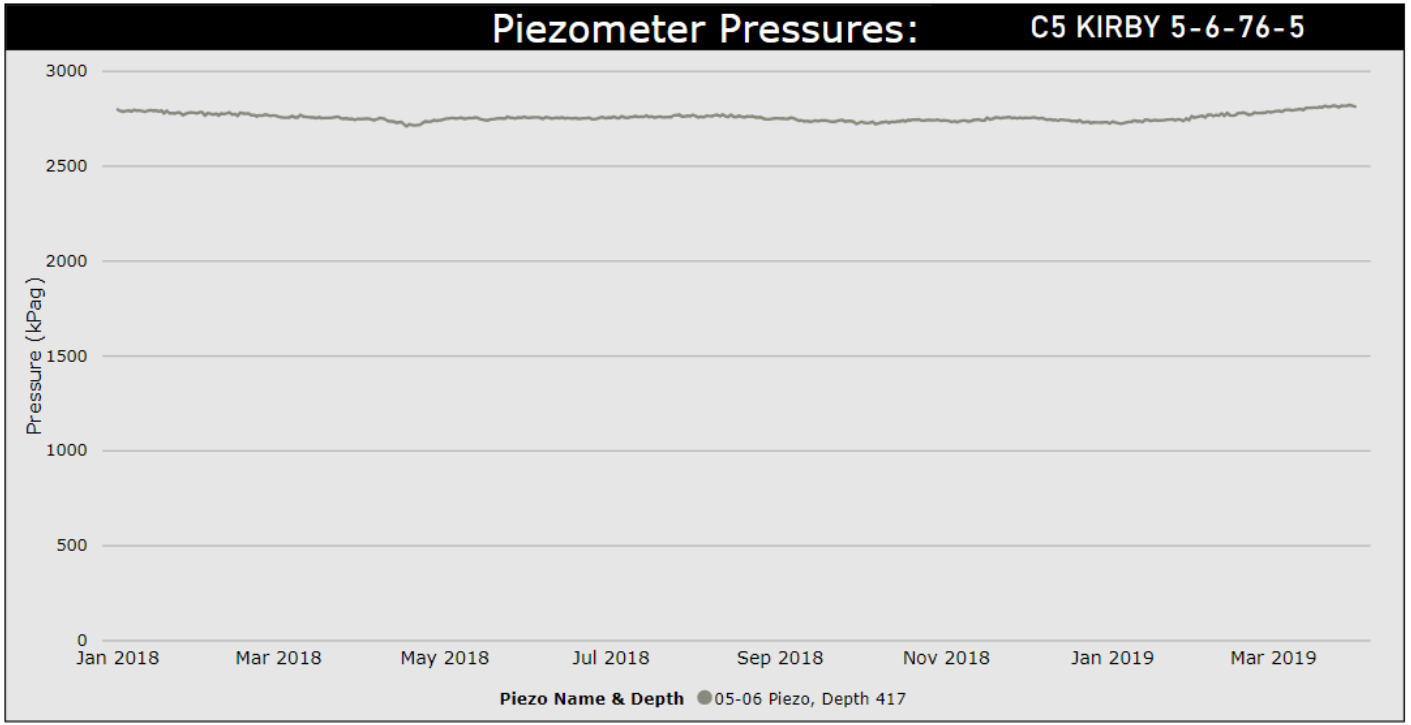

Piezometer Pressures:
C15 KIRBY 15-6-76-5
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
15-06 Piezo, Depth 315
15-06 Piezo, Depth 397.5
15-06 Piezo, Depth 418.5

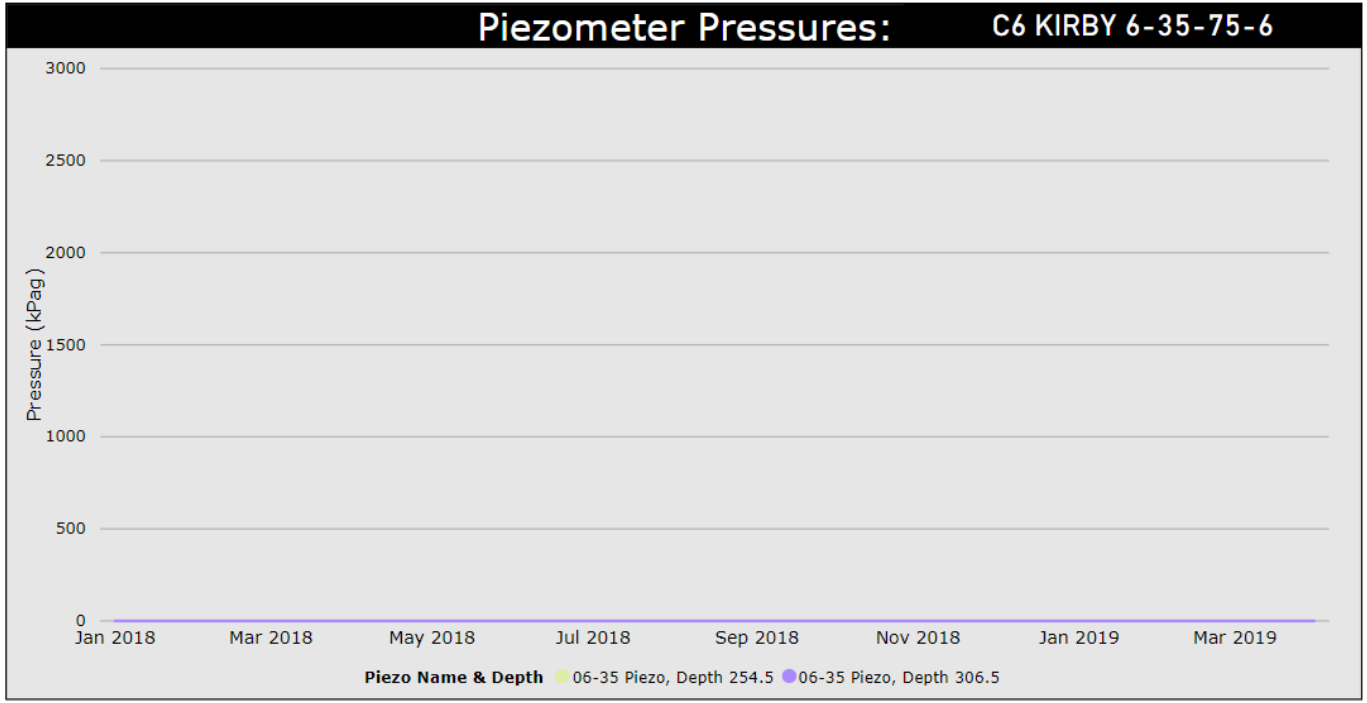

Piezometer Pressures:
C16 HARDY 16-29-76-5
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
16-29 Piezo, Depth 224.5
16-29 Piezo, Depth 250.5
16-29 Piezo, Depth 274.5
16-29 Piezo, Depth 385.5

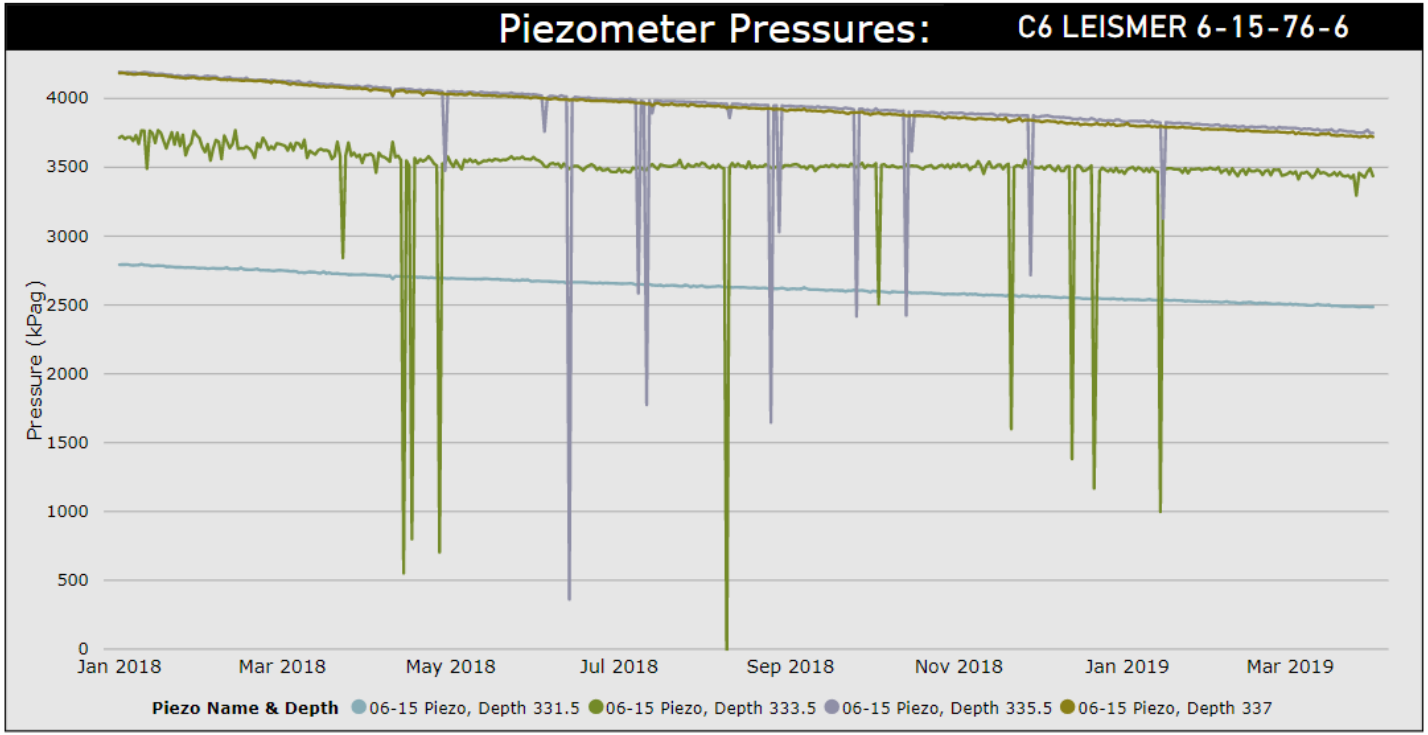

Piezometer Pressures:
C2 KIRBY 2-3-76-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
02-03 Piezo, Depth 314
02-03 Piezo, Depth 352
02-03 Piezo, Depth 423

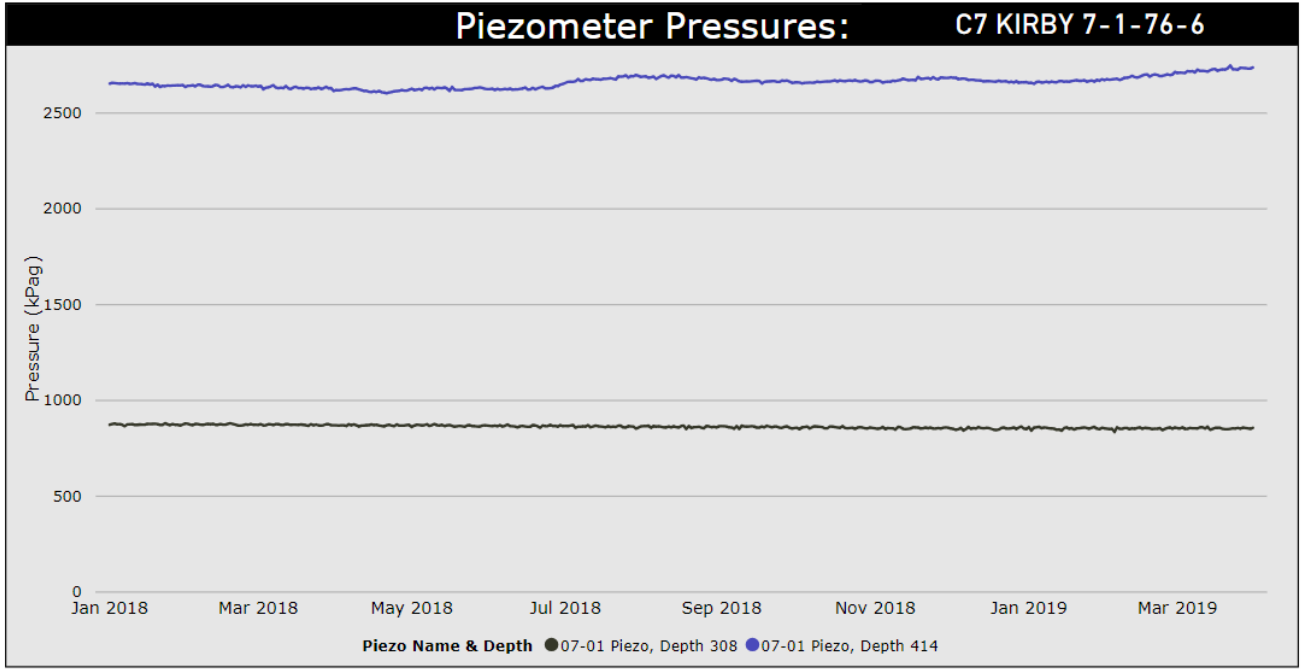

Piezometer Pressures: C2-7 D2 LEISMER 2-7-76-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
02-07 Piezo, Depth 323
02-07 Piezo, Depth 438

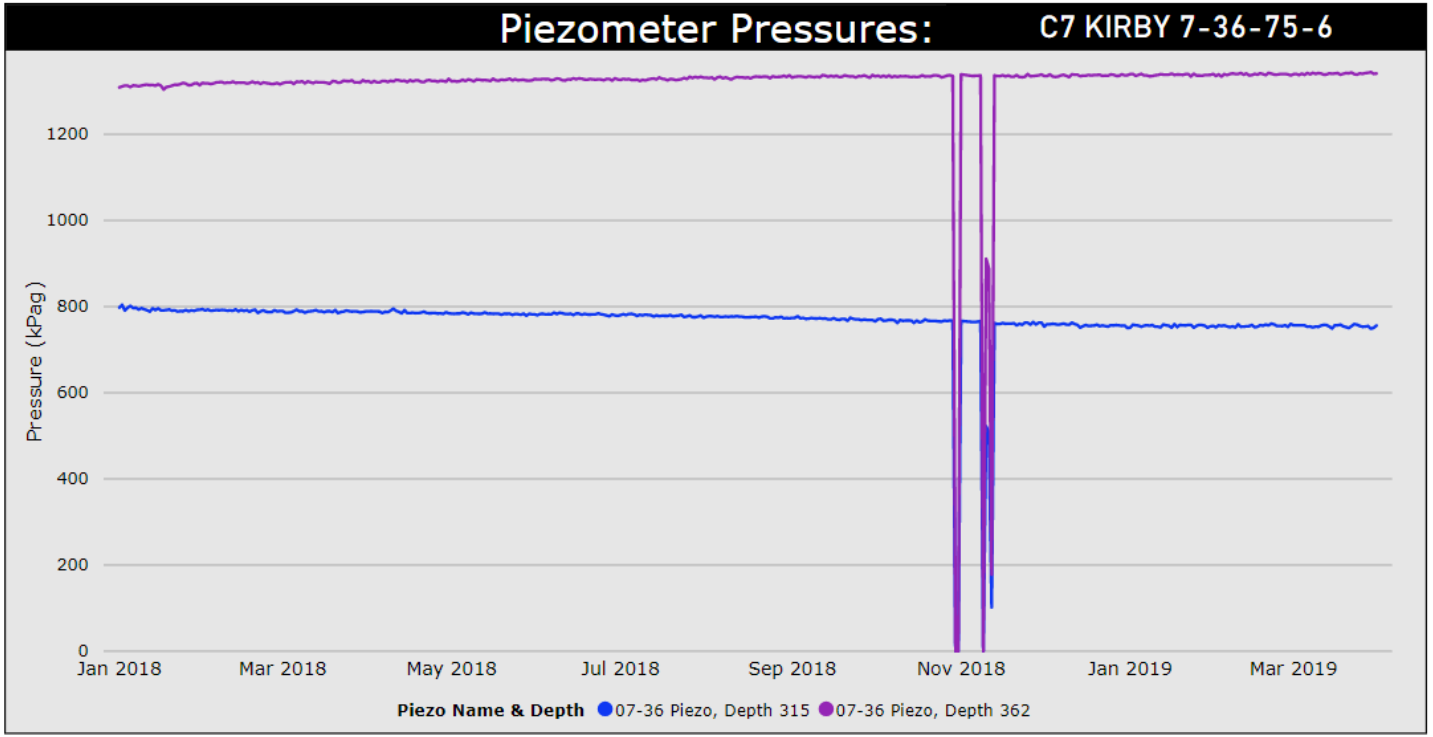

Piezometer Pressures:
C4 LEISMER 4-22-76-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
04-22 Piezo, Depth 286
04-22 Piezo, Depth 400

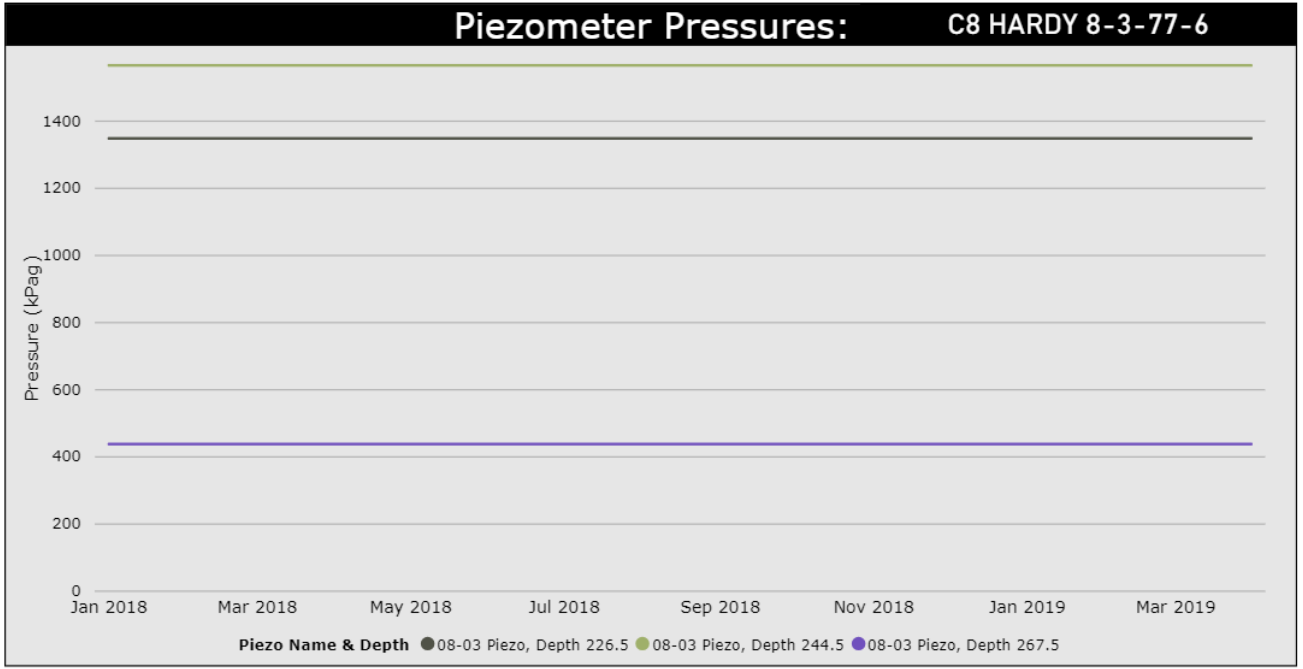

Piezometer Pressures:
C5 KIRBY 5-6-76-5
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
05-06 Piezo, Depth 417

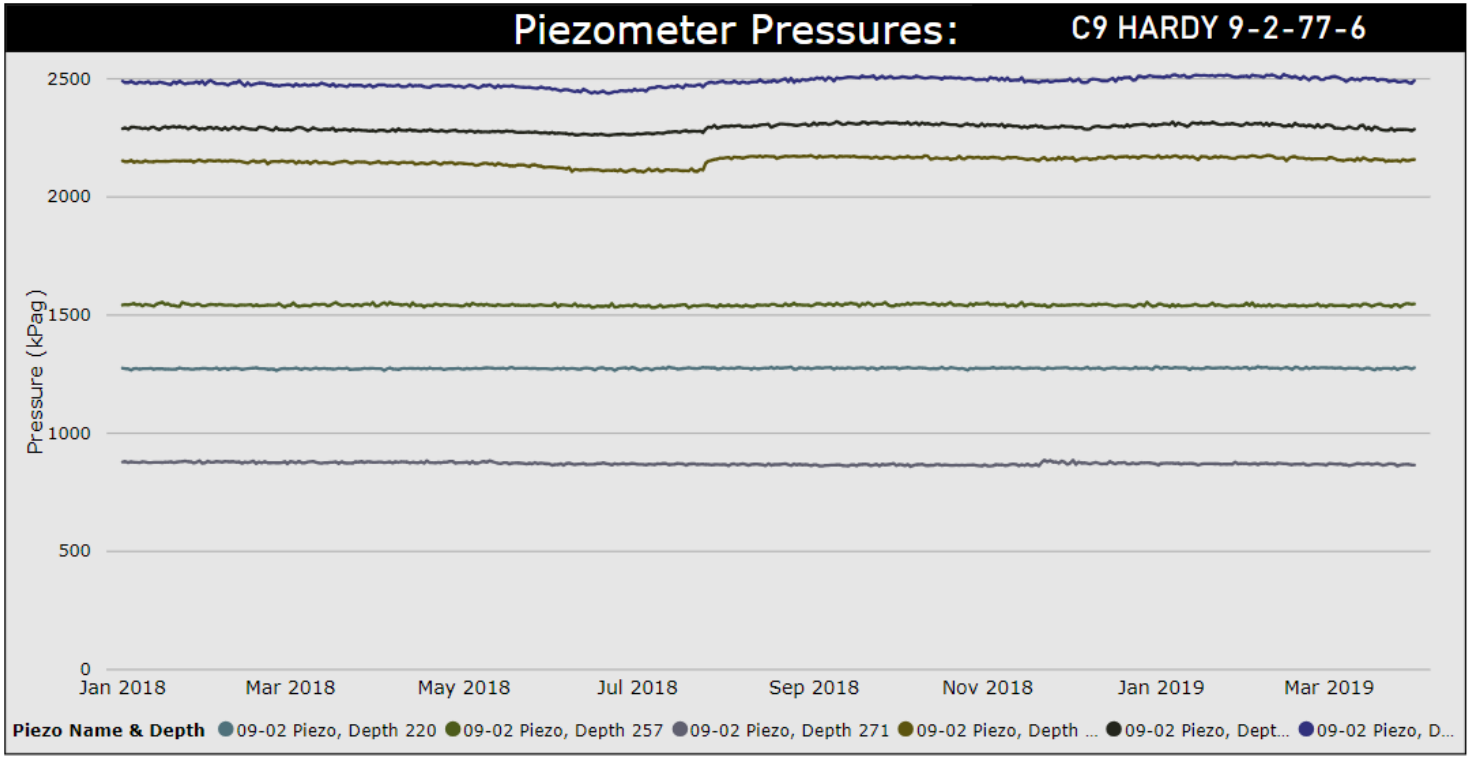

Piezometer Pressures:
C6 KIRBY 6-35-75-6
3000
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
06-35 Piezo, Depth 254.5
06-35 Piezo, Depth 306.5
Failed
Failed

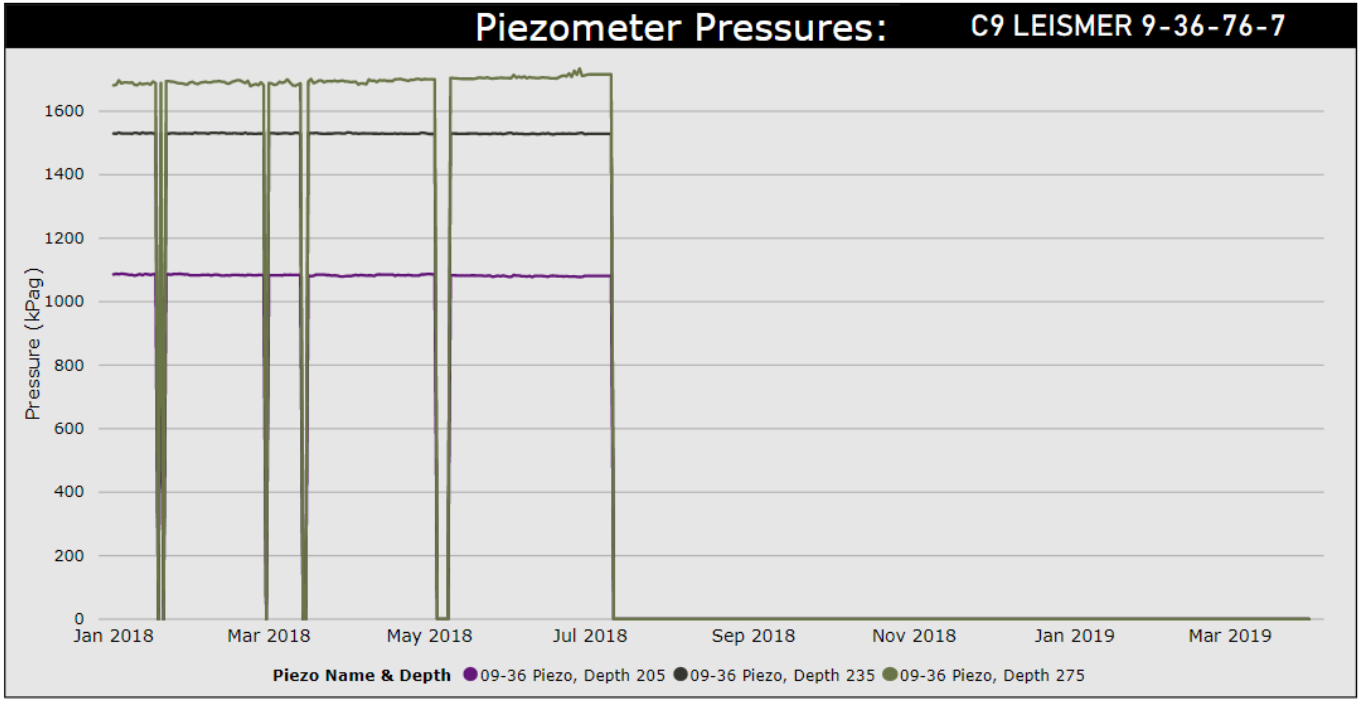

Piezometer Pressures:
C6 LEISMER 6-15-76-6
Pressure (kPag)
4000
3500
3000
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
06-15 Piezo, Depth 331.5
06-15 Piezo, Depth 333.5
06-15 Piezo, Depth 335.5
06-15 Piezo, Depth 337

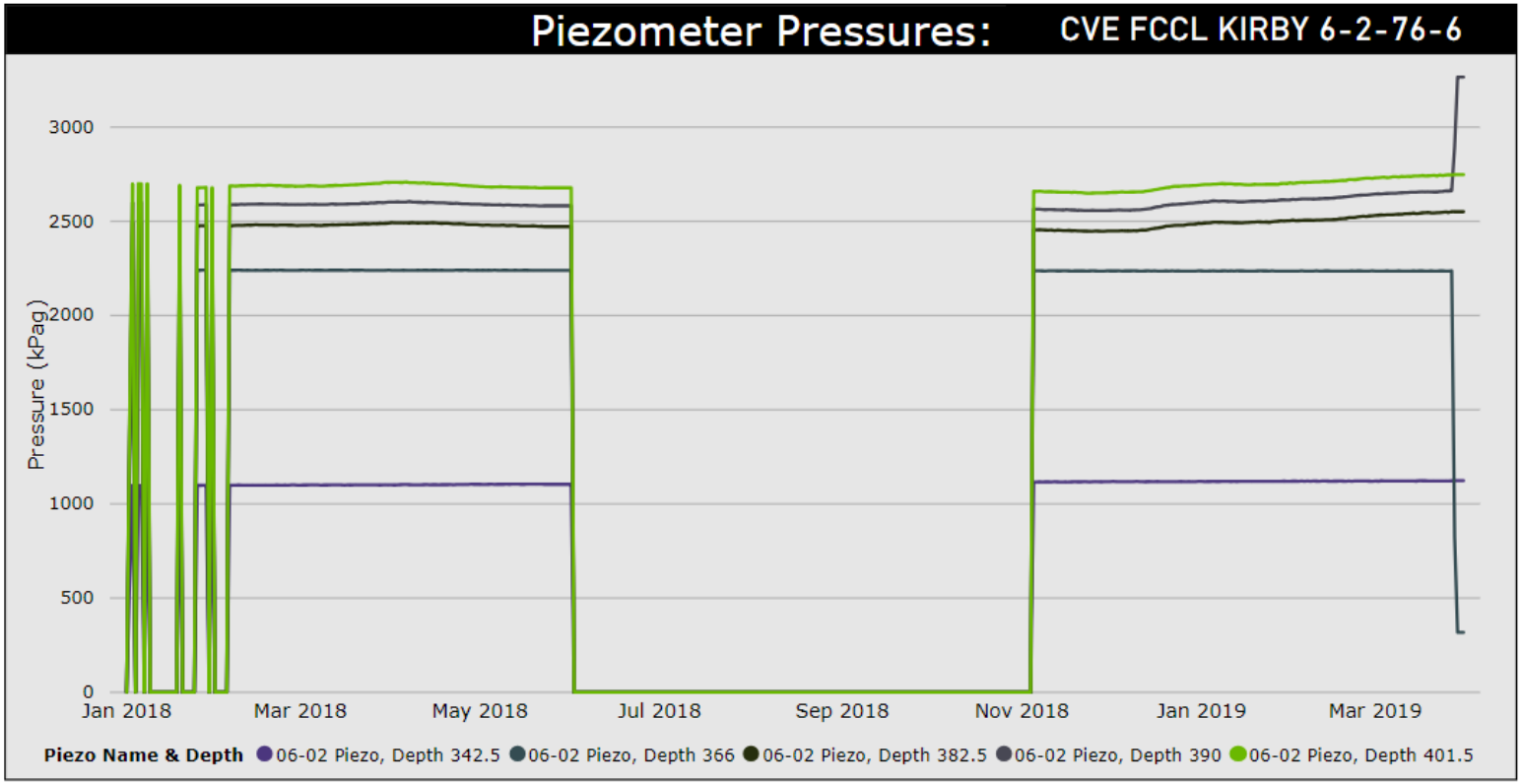

Piezometer Pressures:
C7 KIRBY 7-1-76-6
Pressure (kPag)
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
07-01 Piezo, Depth 308
07-01 Piezo, Depth 414

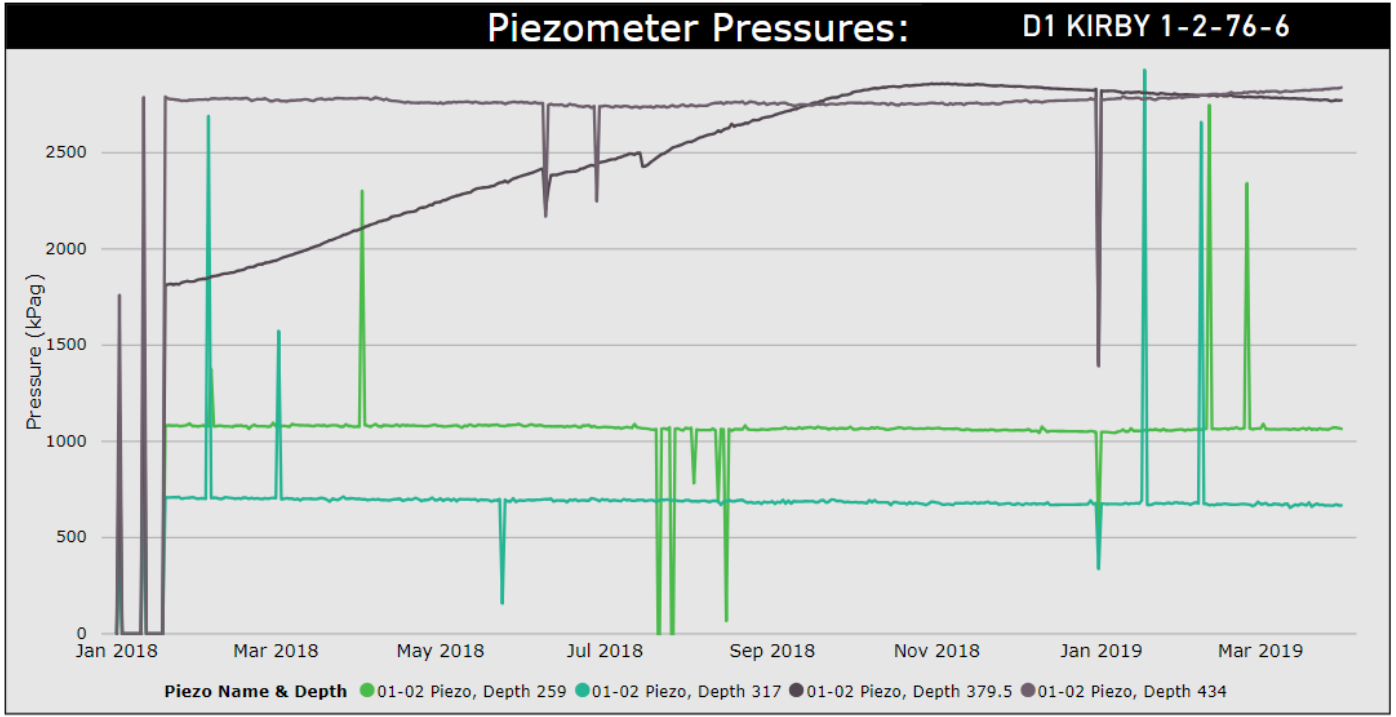

Piezometer Pressures:
C7 KIRBY 7-36-75-6
Pressure (kPag)
1200
1000
800
600
400
200
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
07-36 Piezo, Depth 315
07-36 Piezo, Depth 362

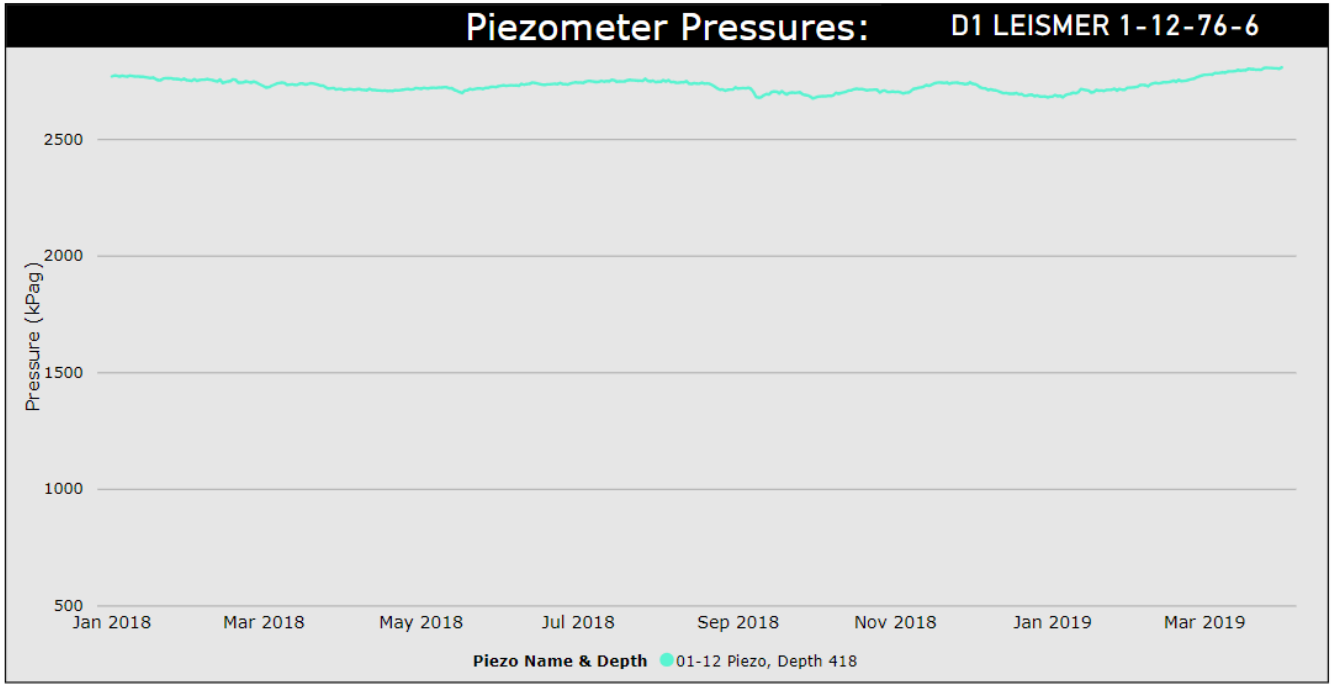

Piezometer Pressures:
C8 HARDY 8-3-77-6
Pressure (kPag)
1400
1200
1000
800
600
400
200
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-03 Piezo, Depth 226.5
08-03 Piezo, Depth 244.5
08-03 Piezo, Depth 267.5

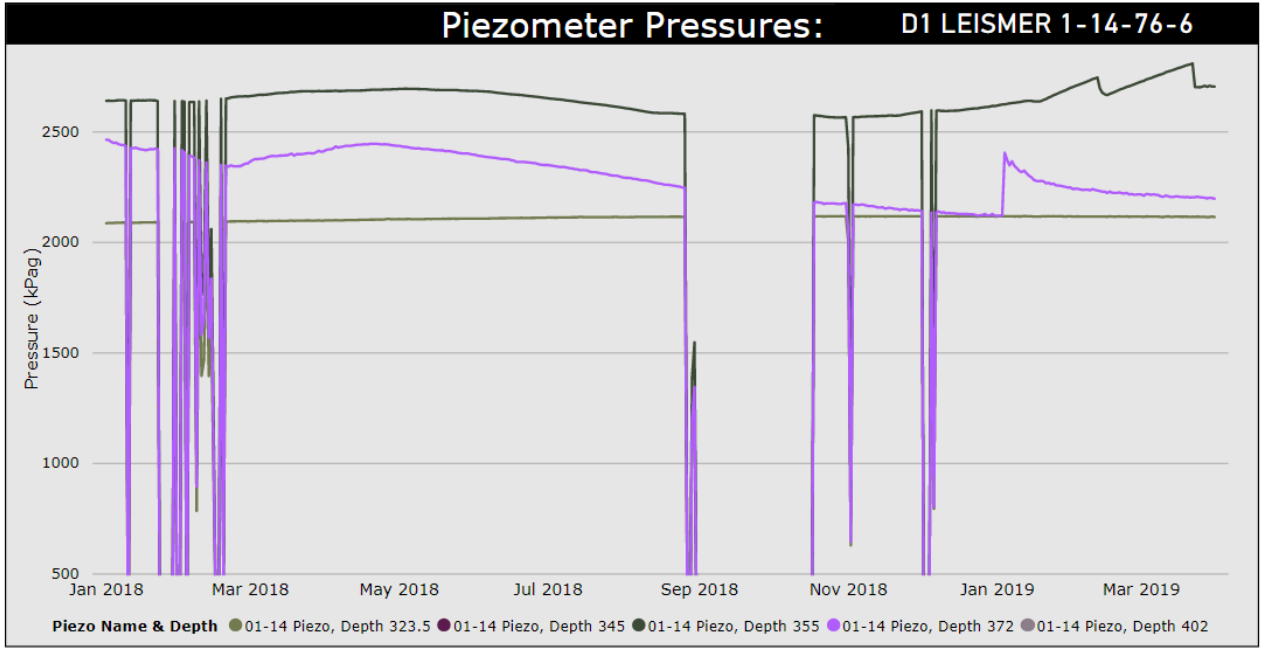

Piezometer Pressures:
C9 HARDY 9-2-77-6
2500
2000
1500
1000
500
0
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
09-02 Piezo, Depth 220
09-02 Piezo, Depth 257
09-02 Piezo, Depth 271
09-02 Piezo, Depth ...
09-02 Piezo, Dept...
09-02 Piezo, D...


Piezometer Pressures:
C9 LEISMER 9-36-76-7
Pressure (kPag)
1600
1400
1200
1000
800
600
400
200
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
09-36 Piezo, Depth 205
09-36 Piezo, Depth 235
09-36 Piezo, Depth 275


Piezometer Pressures:
CVE FCCL KIRBY 6-2-76-6
Pressure (kPag)
3000
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
06-02 Piezo, Depth 342.5
06-02 Piezo, Depth 366
06-02 Piezo, Depth 382.5
06-02 Piezo, Depth 390
06-02 Piezo, Depth 401.5

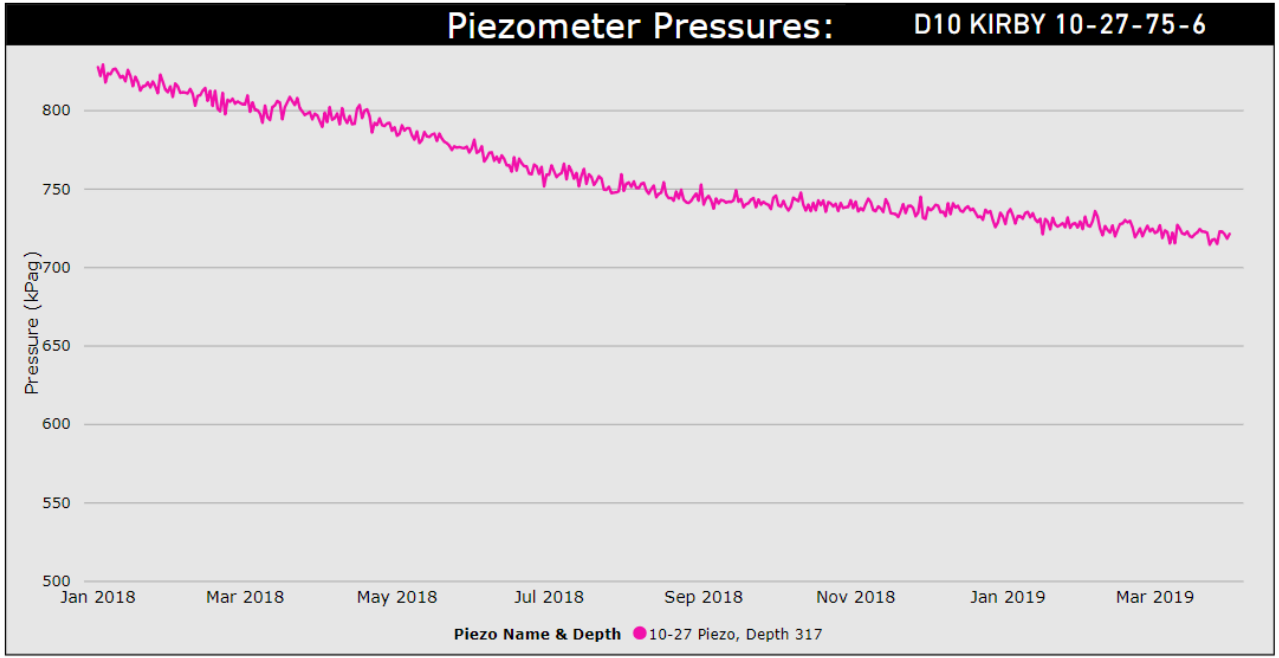

Piezometer Pressures:
D1 KIRBY 1-2-76-6
Pressure (kPag)
2500
2000
1500
1000
500
0
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
01-02 Piezo, Depth 259
01-02 Piezo, Depth 317
01-02 Piezo, Depth 379.5
01-02 Piezo, Depth 434

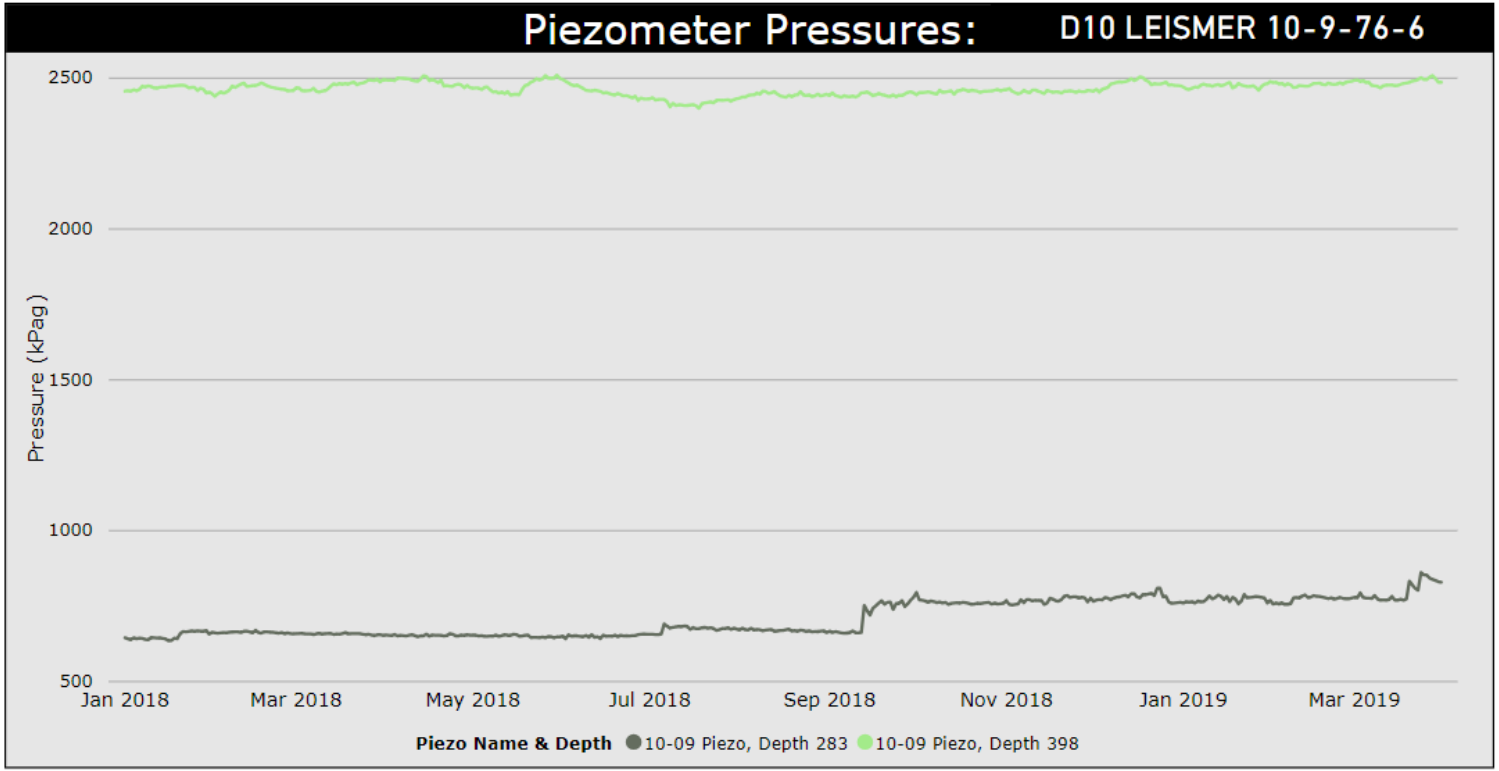

Piezometer Pressures:
D1 LEISMER 1-12-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
01-12 Piezo, Depth 418

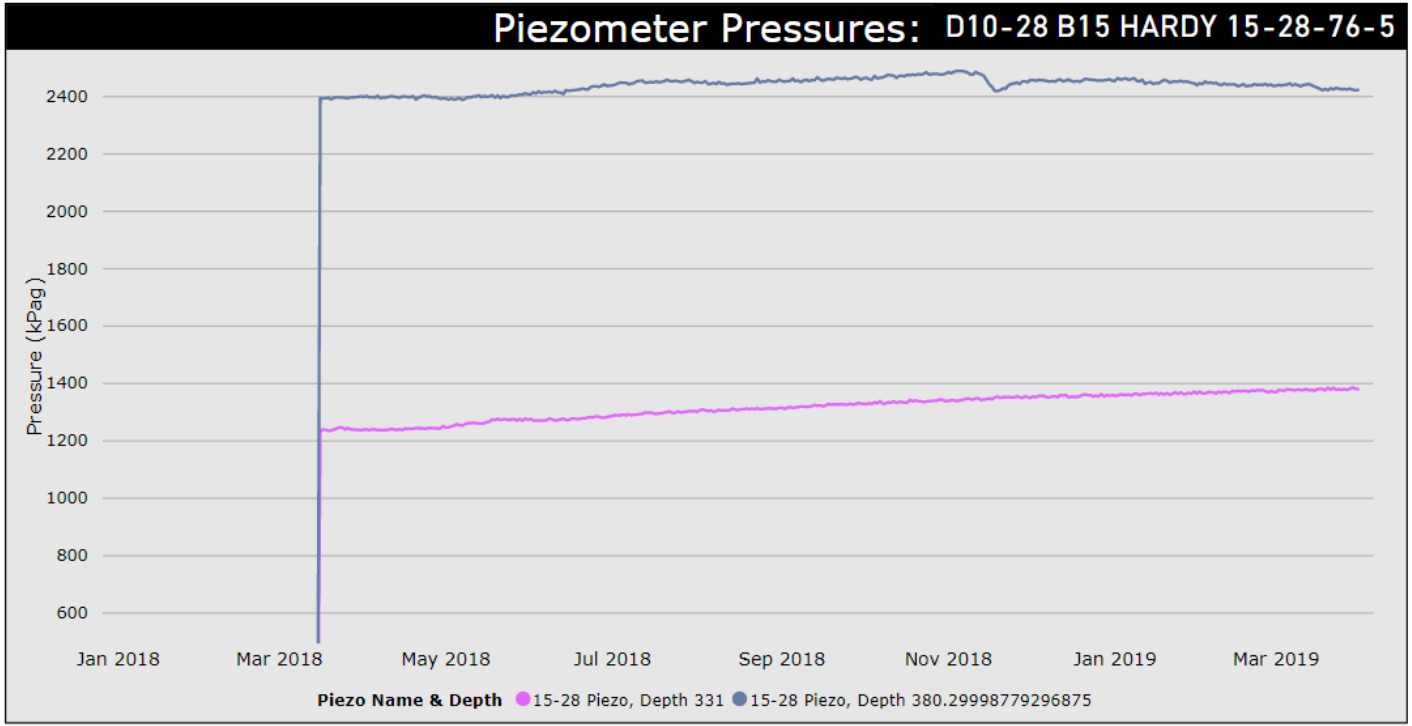


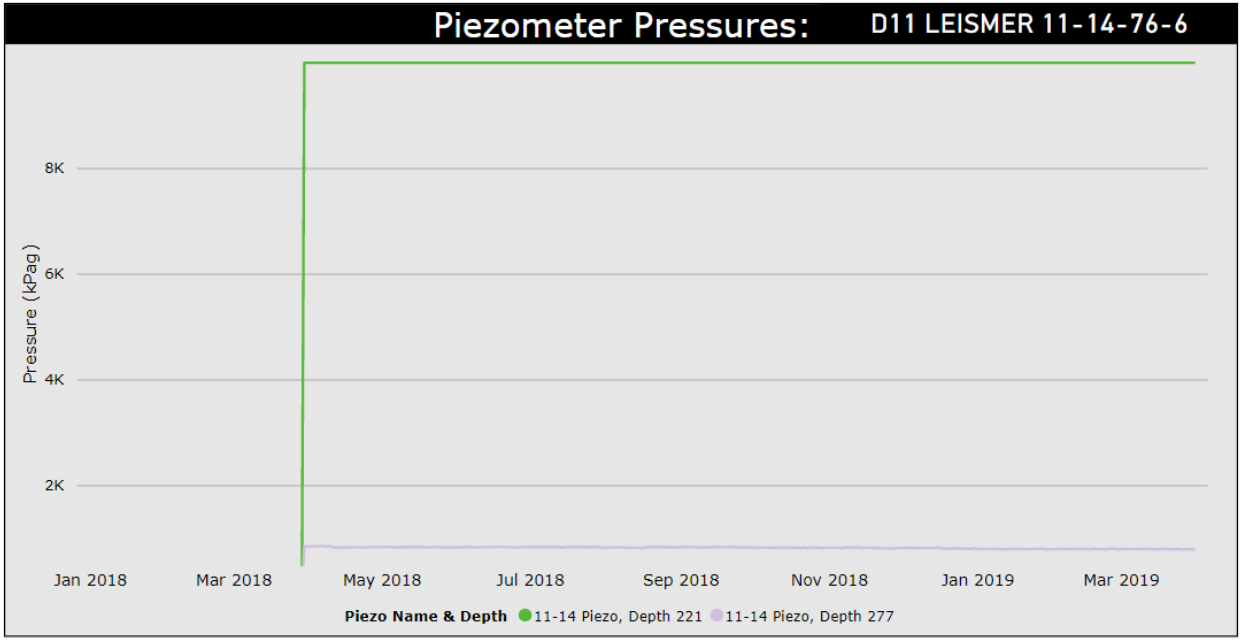
Failed

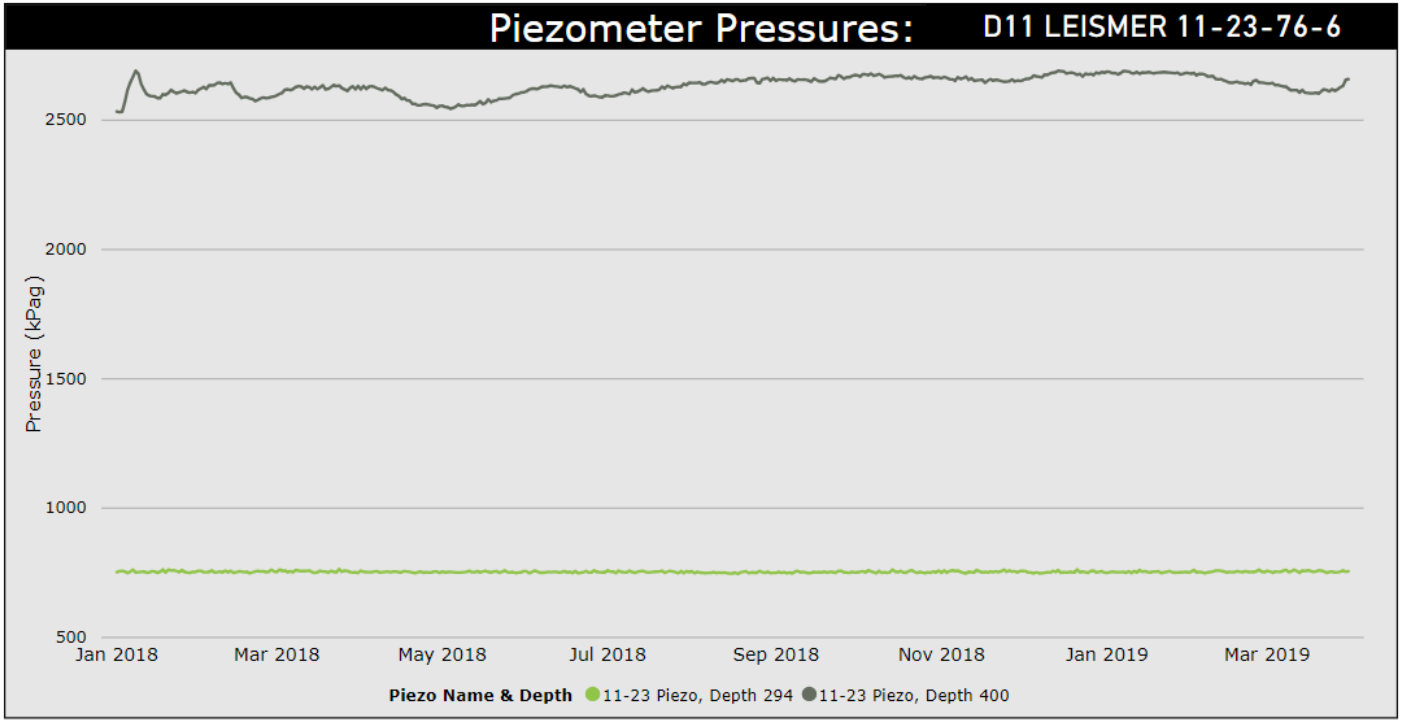
Failed

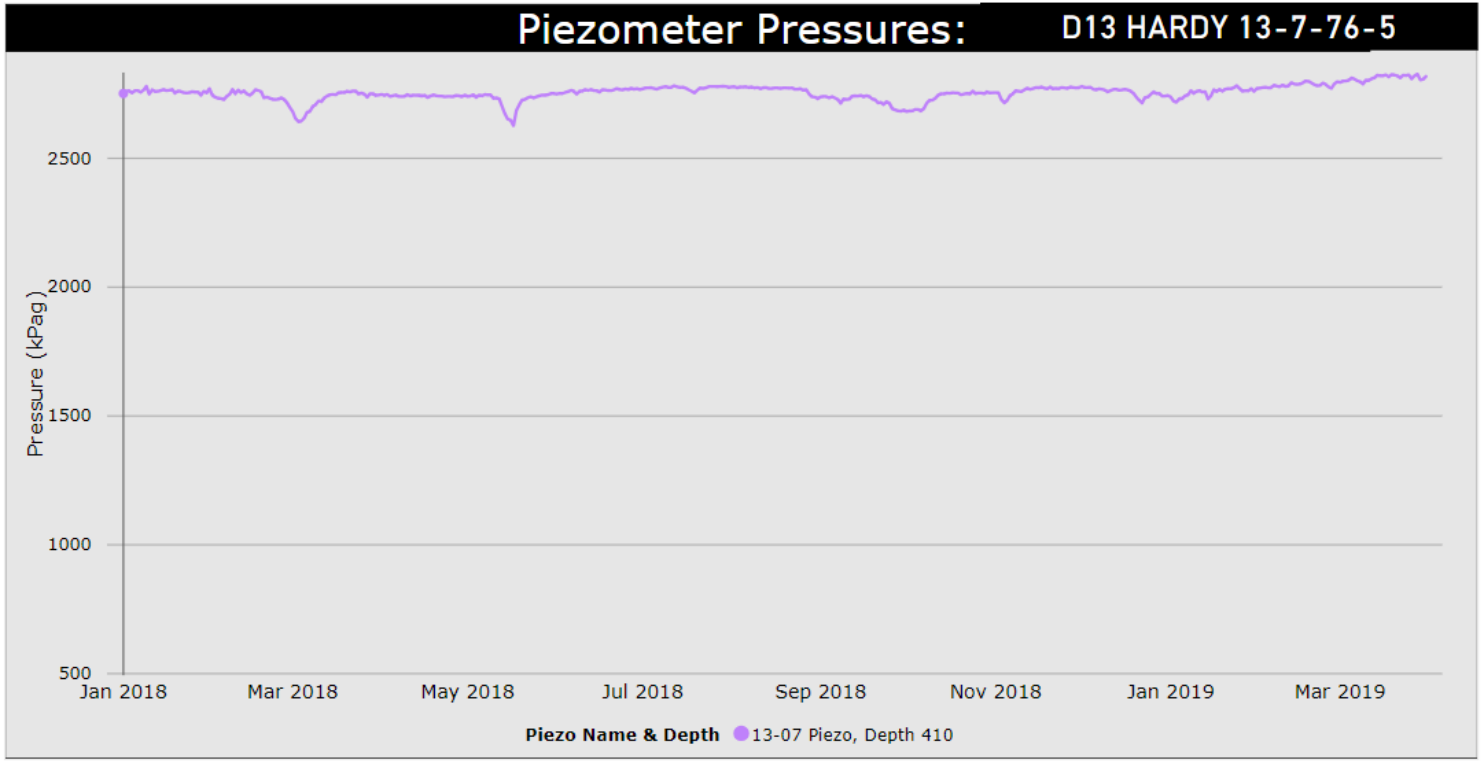

Piezometer Pressures:
D10 KIRBY 10-27-75-6
Pressure (kPag)
800
750
700
650
600
550
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
10-27 Piezo, Depth 317

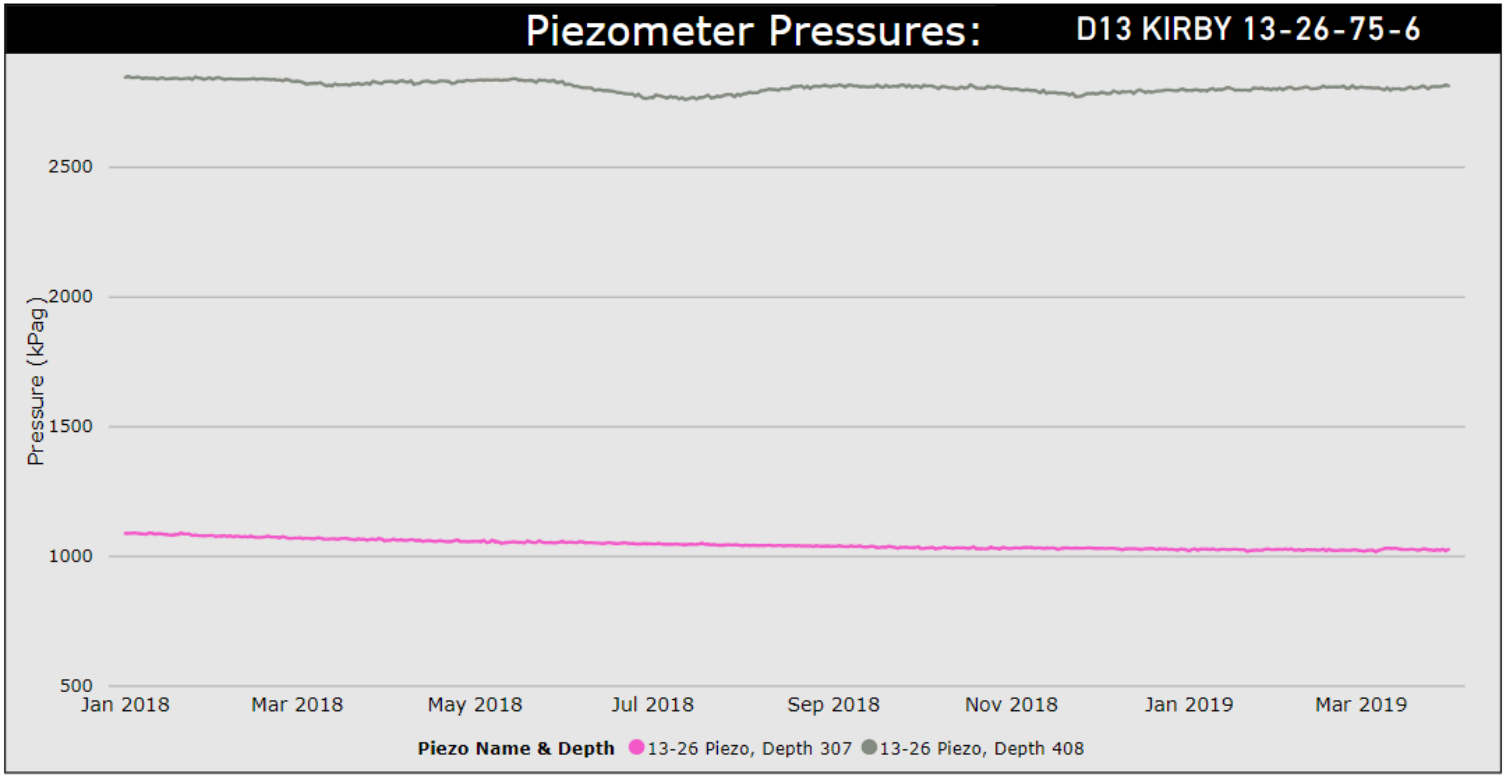

Piezometer Pressures: D10 LEISMER 10-9-76-6
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
10-09 Piezo, Depth 283
10-09 Piezo, Depth 398

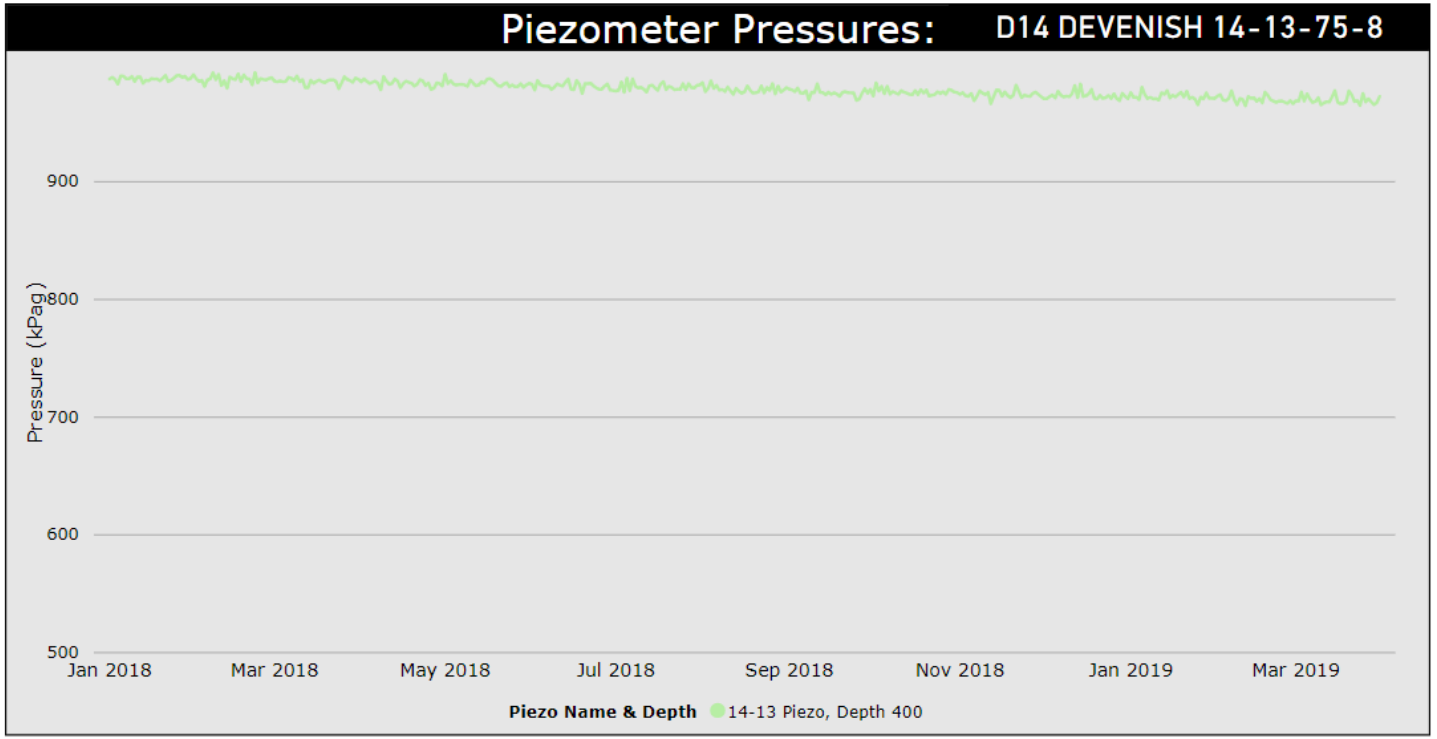

Piezometer Pressures: D10-28 B15 HARDY 15-28-76-5
Pressure (kPag)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
15-28 Piezo, Depth 331
15-28 Piezo, Depth 380.29998779296875

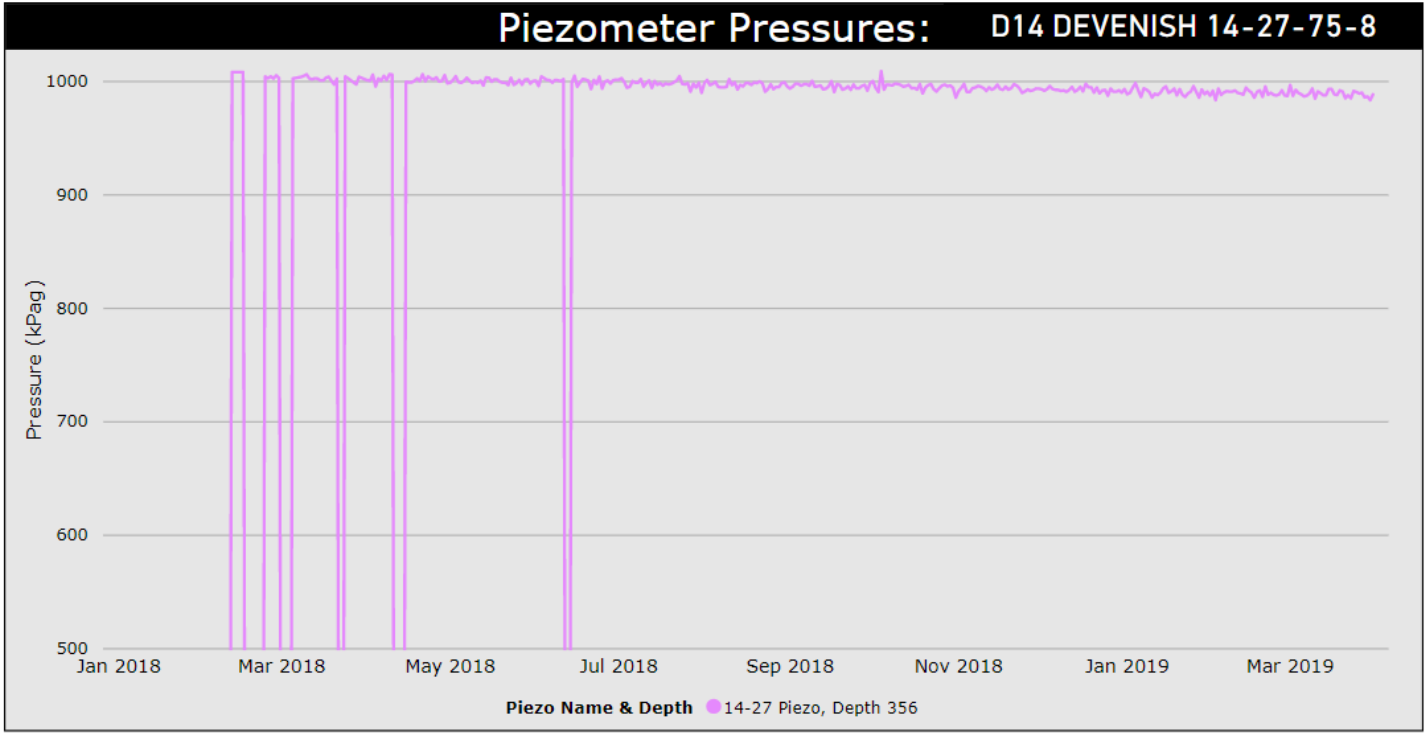

Piezometer Pressures: D11 LEISMER 11-14-76-6
Pressure (kPag)
8K
6K
4K
2K
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
11-14 Piezo, Depth 221
11-14 Piezo, Depth 277

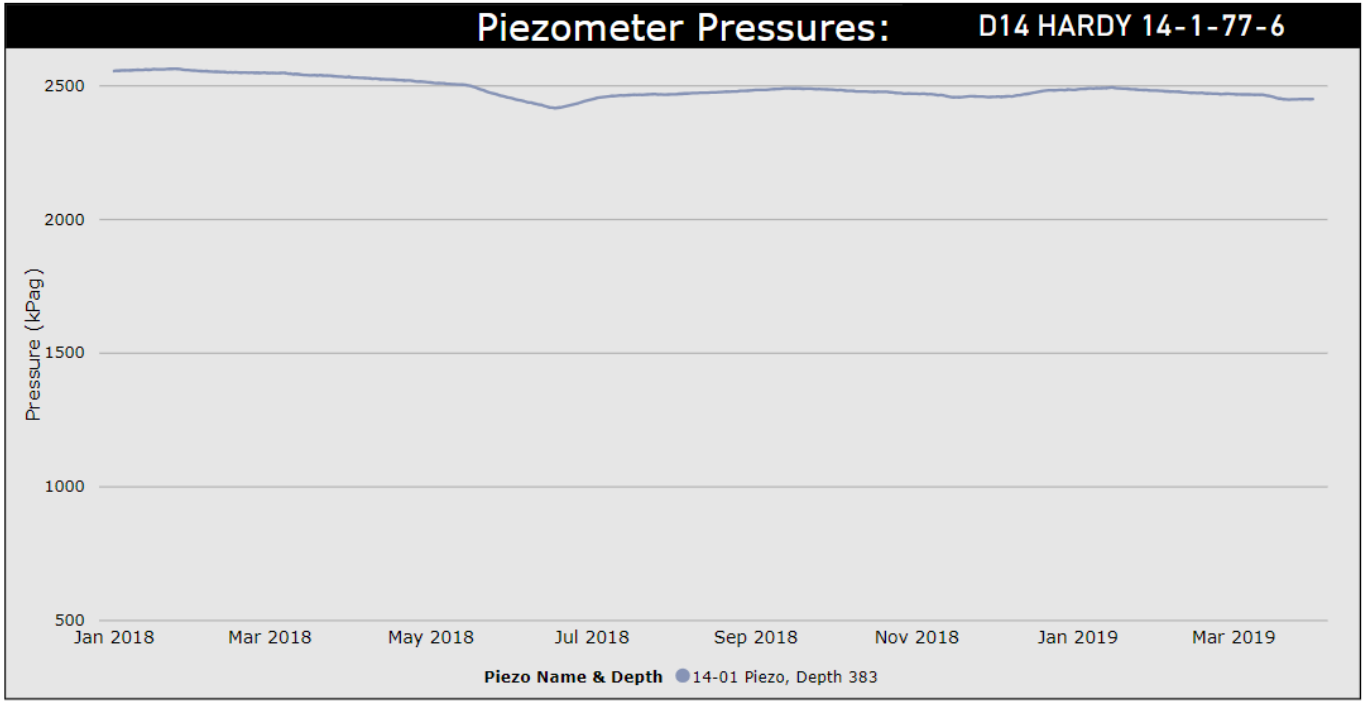

Piezometer Pressures:
D11 LEISMER 11-23-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
11-23 Piezo, Depth 294
11-23 Piezo, Depth 400

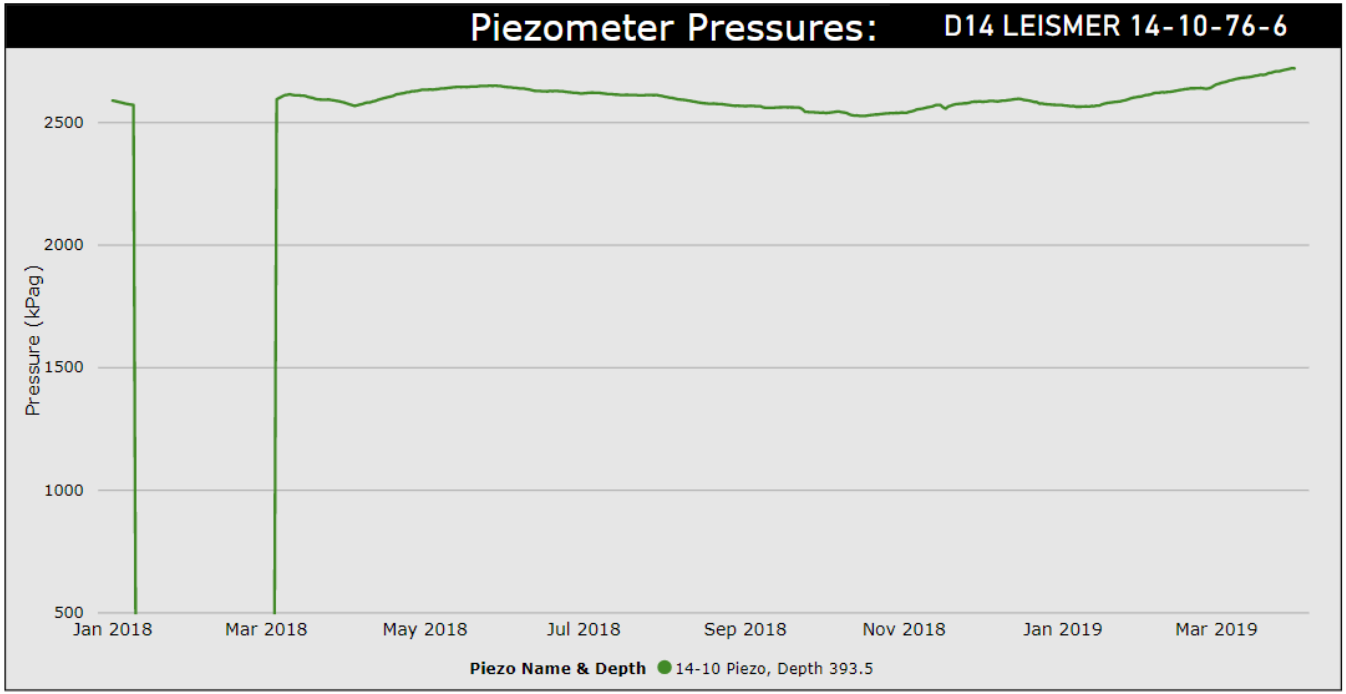

Piezometer Pressures:
D13 HARDY 13-7-76-5
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-07 Piezo, Depth 410

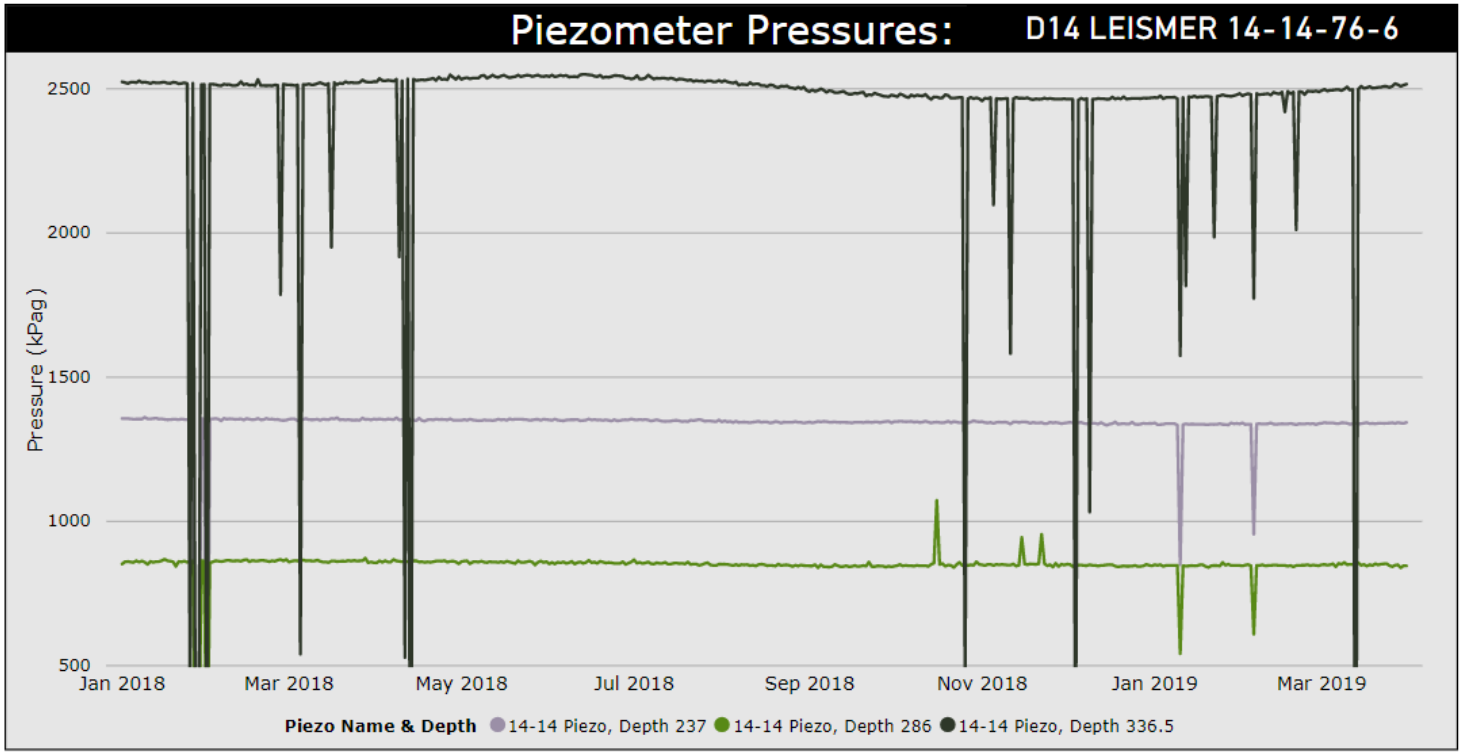

Piezometer Pressures:
D13 KIRBY 13-26-75-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-26 Piezo, Depth 307
13-26 Piezo, Depth 408

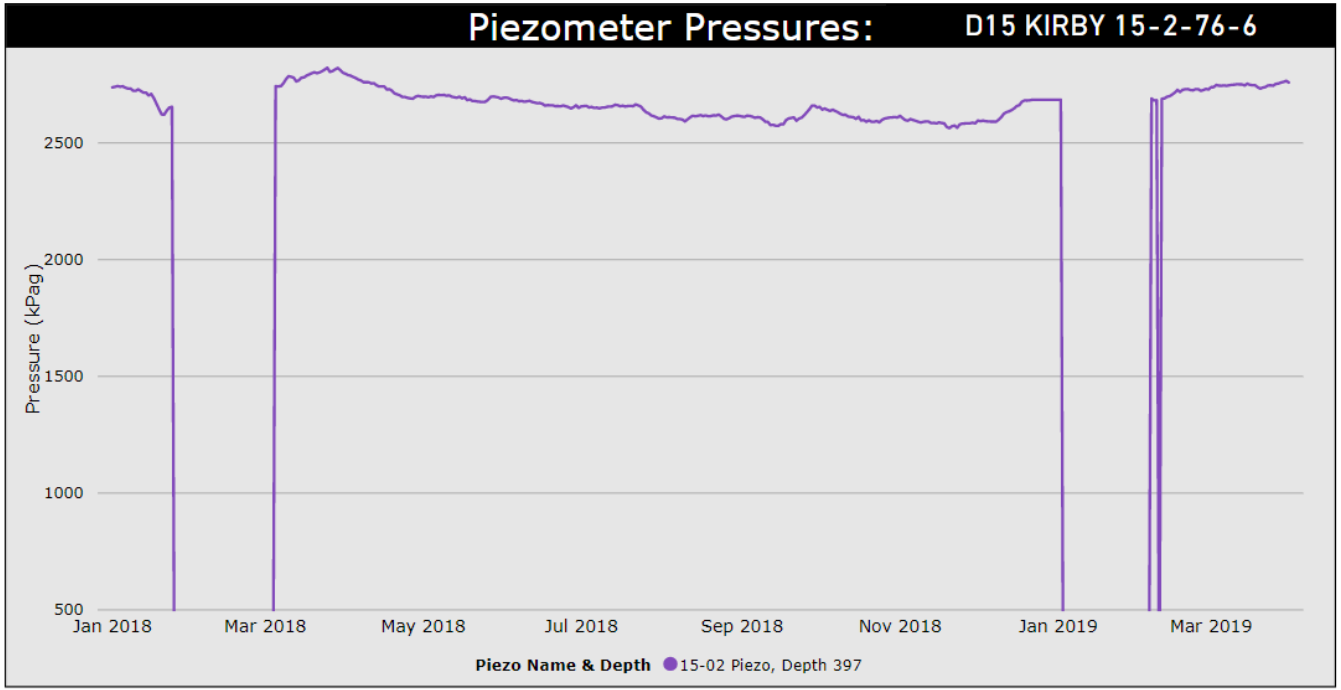

Piezometer Pressures: D14 DEVENISH 14-13-75-8
900
800
700
600
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
14-13 Piezo, Depth 400

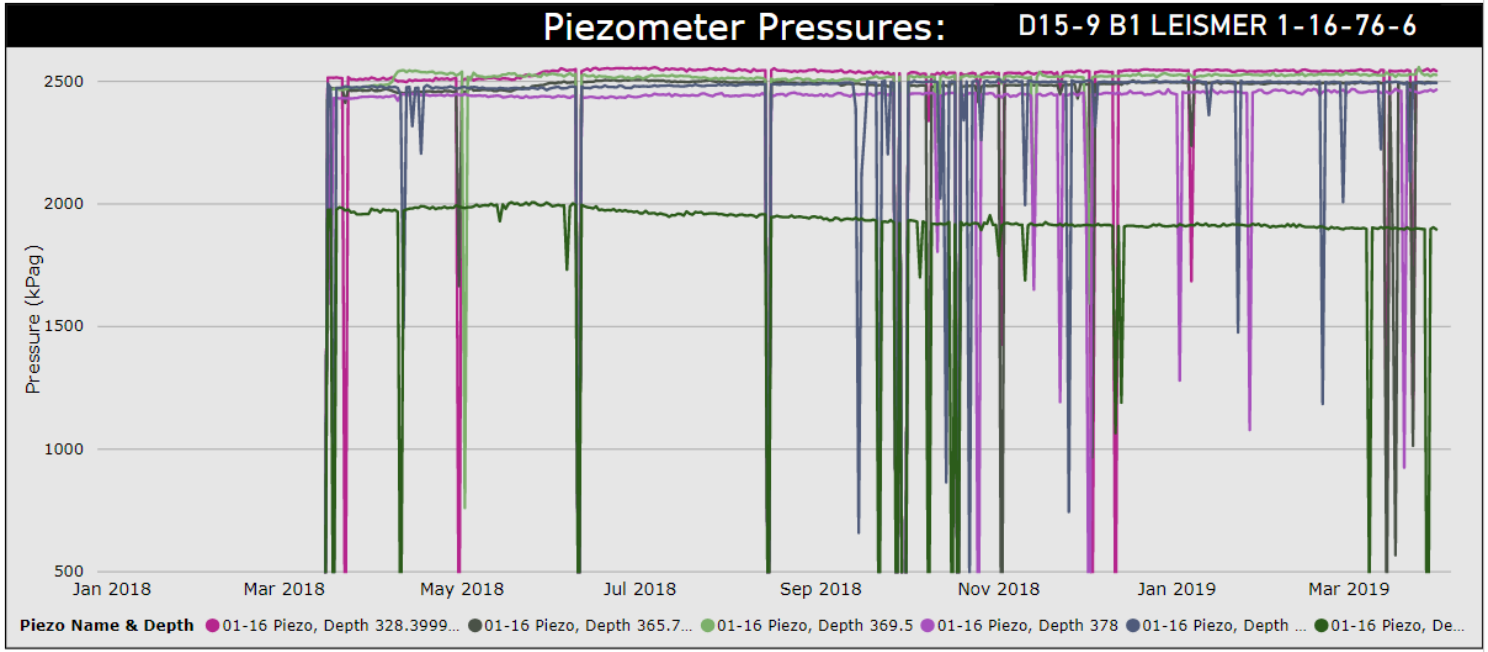

Piezometer Pressures:
D14 DEVENISH 14-27-75-8
1000
900
800
700
600
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
14-27 Piezo, Depth 356

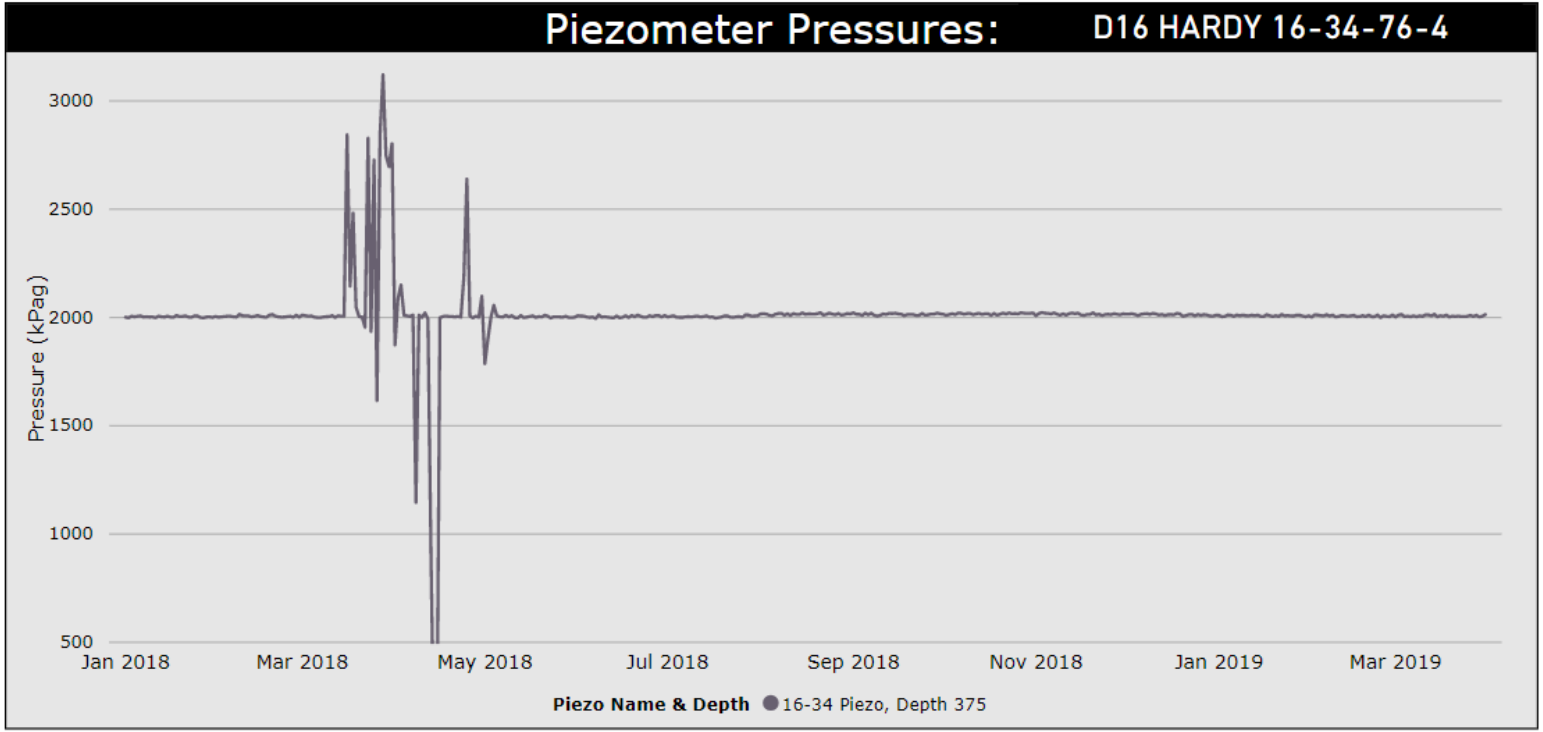

Piezometer Pressures:
D14 HARDY 14-1-77-6
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
14-01 Piezo, Depth 383

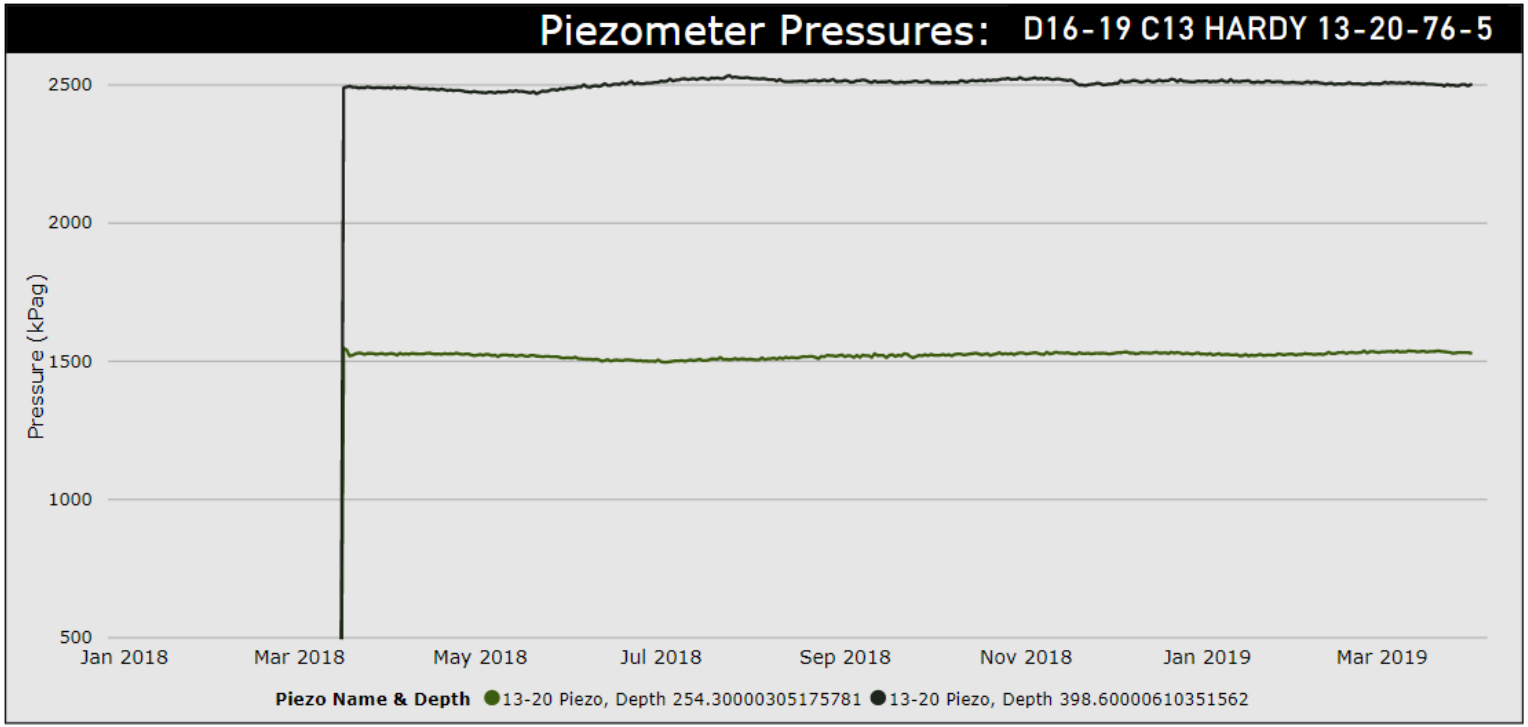

Piezometer Pressures: D14 LEISMER 14-10-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
14-10 Piezo, Depth 393.5


Piezometer Pressures:
D14 LEISMER 14-14-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
14-14 Piezo, Depth 237
14-14 Piezo, Depth 286
14-14 Piezo, Depth 336.5

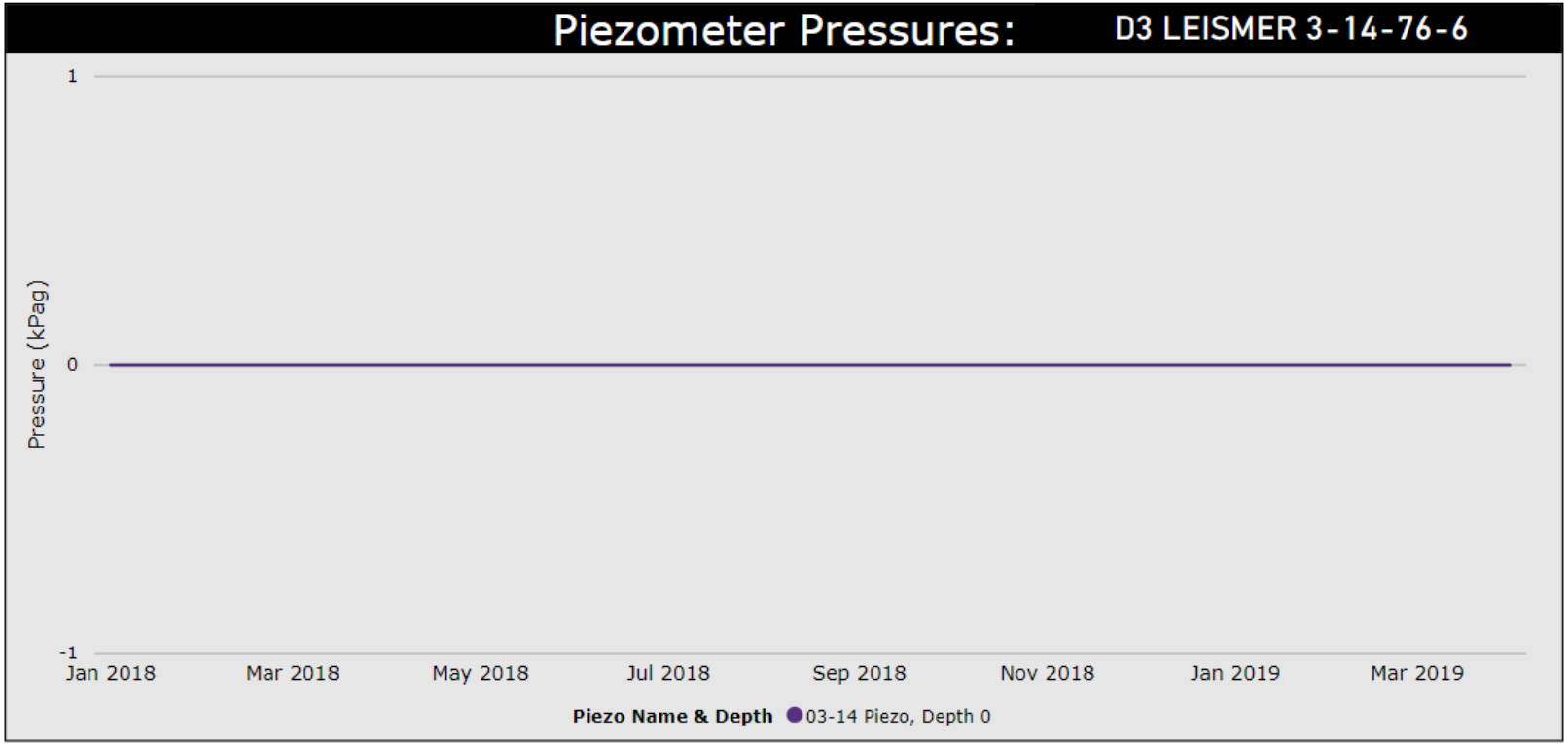

Piezometer Pressures:
D15 KIRBY 15-2-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
15-02 Piezo, Depth 397


Piezometer Pressures:
D15-9 B1 LEISMER 1-16-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
01-16 Piezo, Depth 328.3999...
01-16 Piezo, Depth 365.7...
01-16 Piezo, Depth 369.5
01-16 Piezo, Depth 378
01-16 Piezo, Depth ...
01-16 Piezo, De...


Piezometer Pressures:
D16 HARDY 16-34-76-4
Pressure (kPag)
3000
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
16-34 Piezo, Depth 375



2018 Cenovus Energy Inc.


Piezometer Pressures:
D3 LEISMER 3-14-76-6
1
0
-1
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
03-14 Piezo, Depth 0

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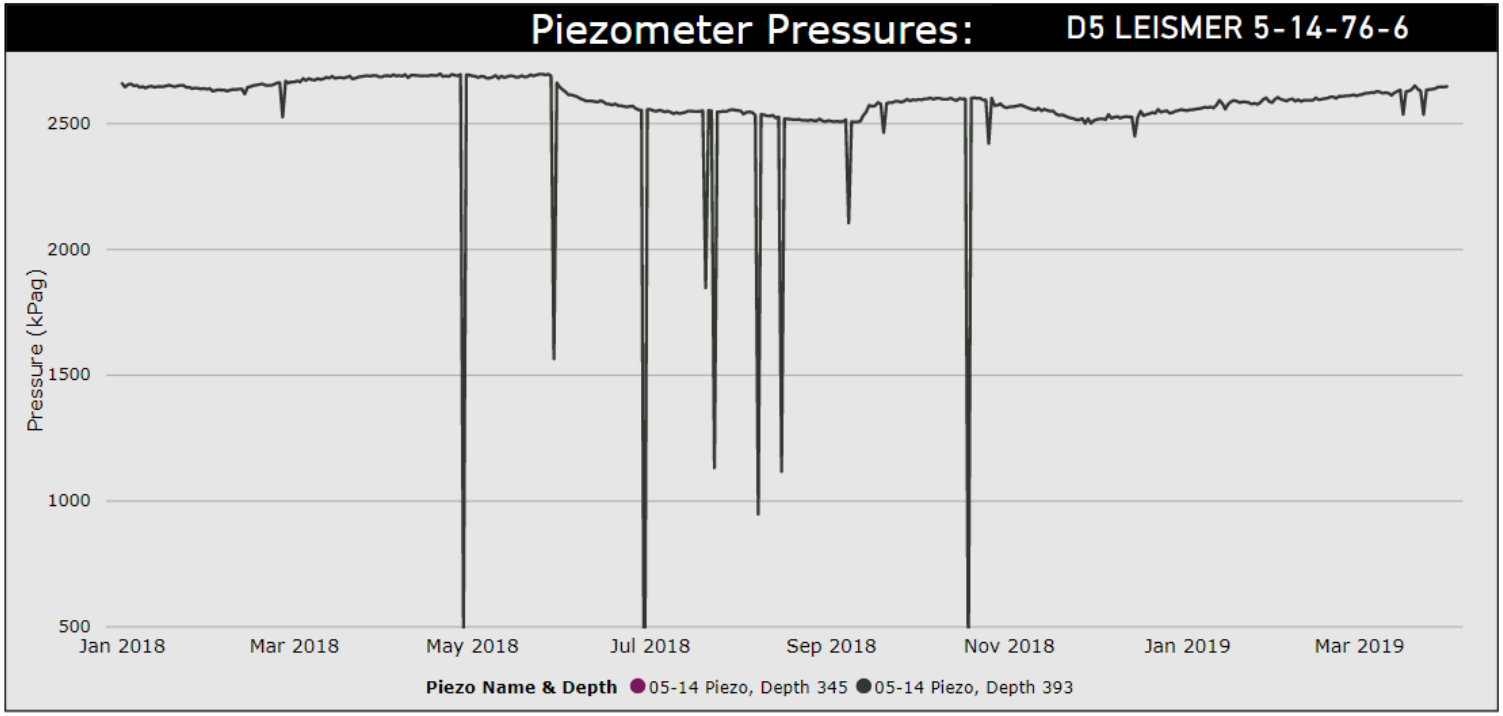
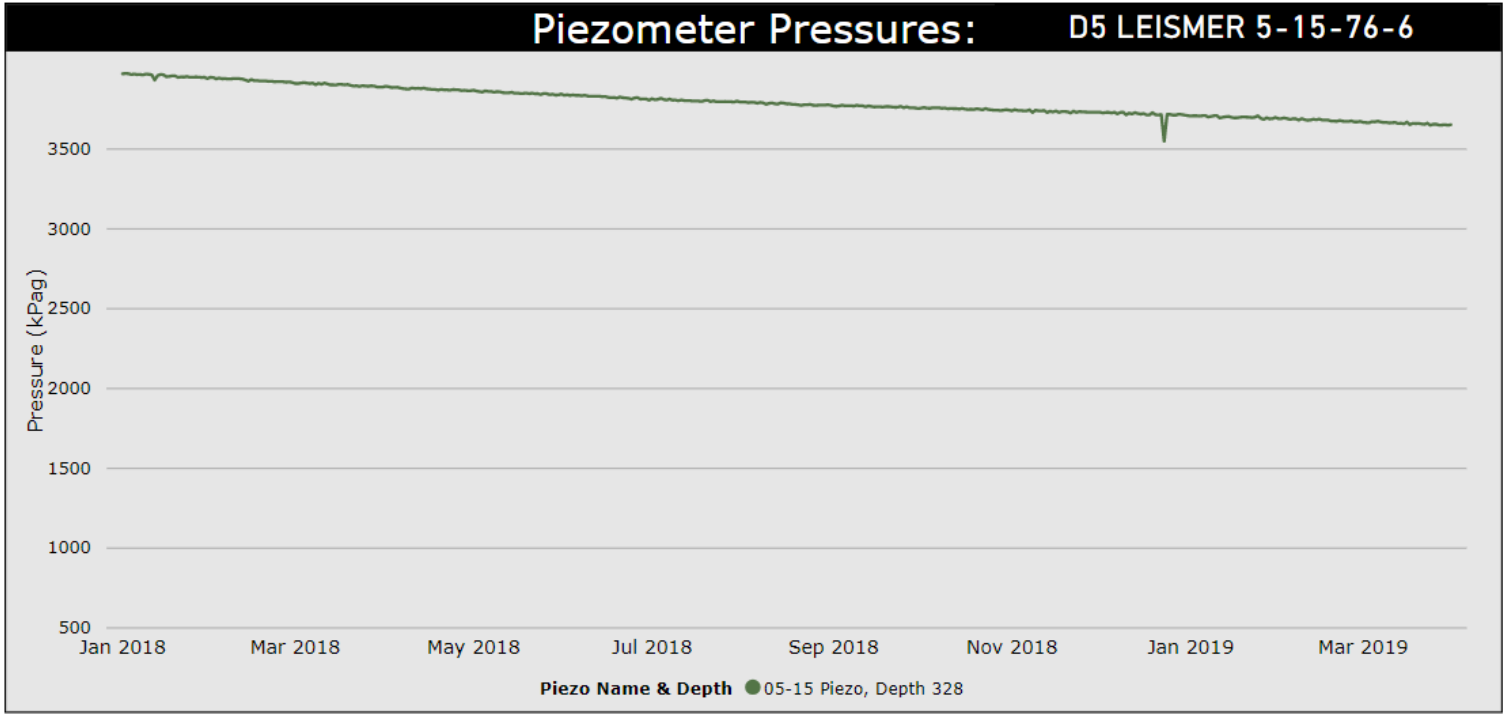
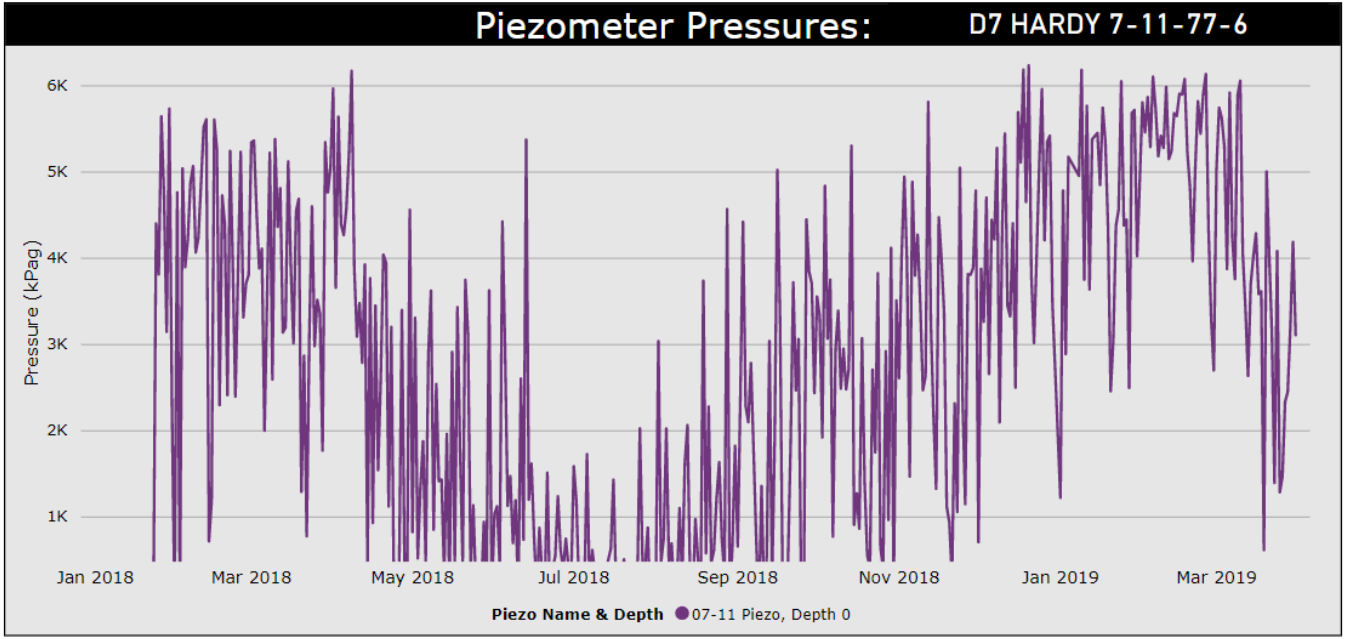

Piezometer Pressures:
D5 LEISMER 5-14-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
05-14 Piezo, Depth 345
05-14 Piezo, Depth 393

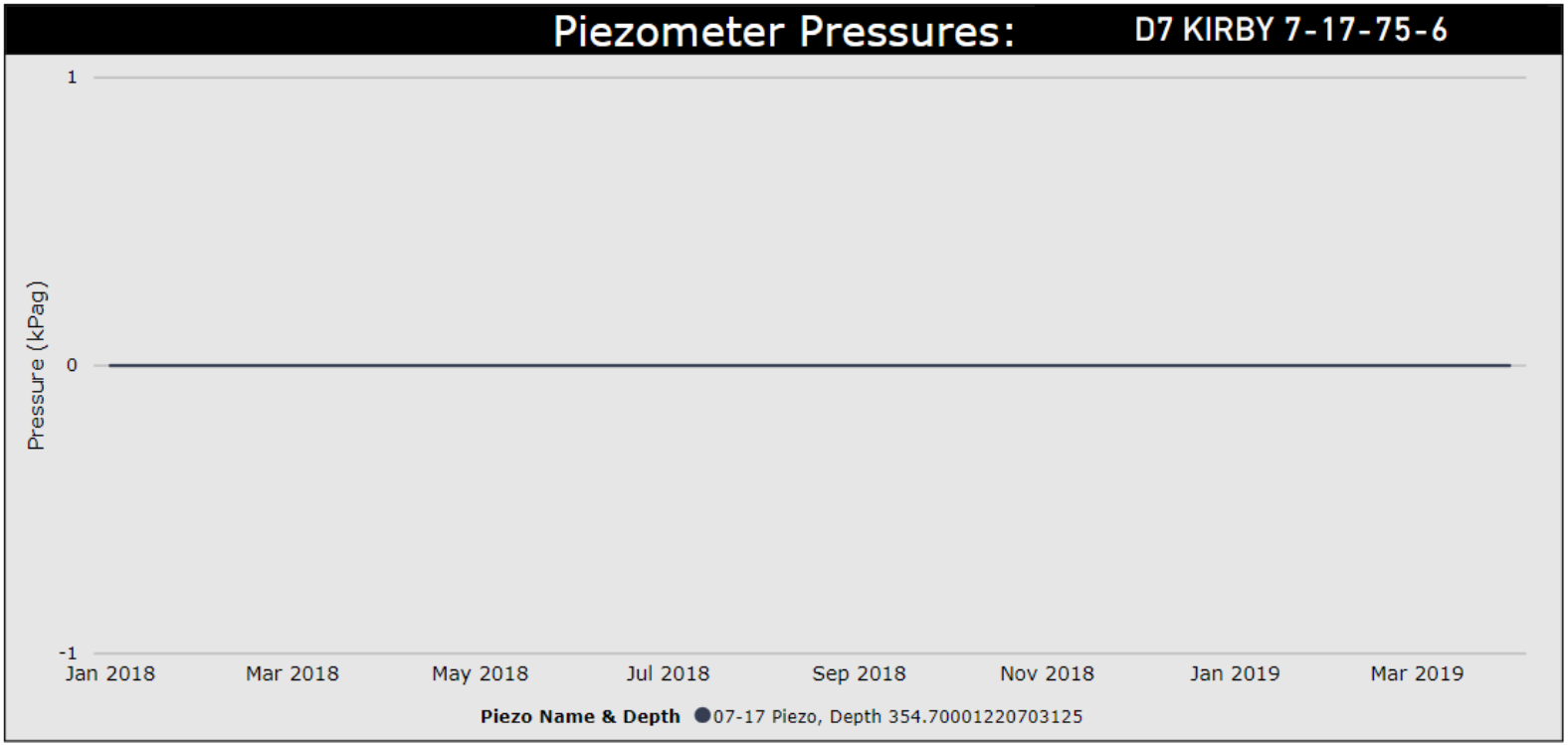
Failed



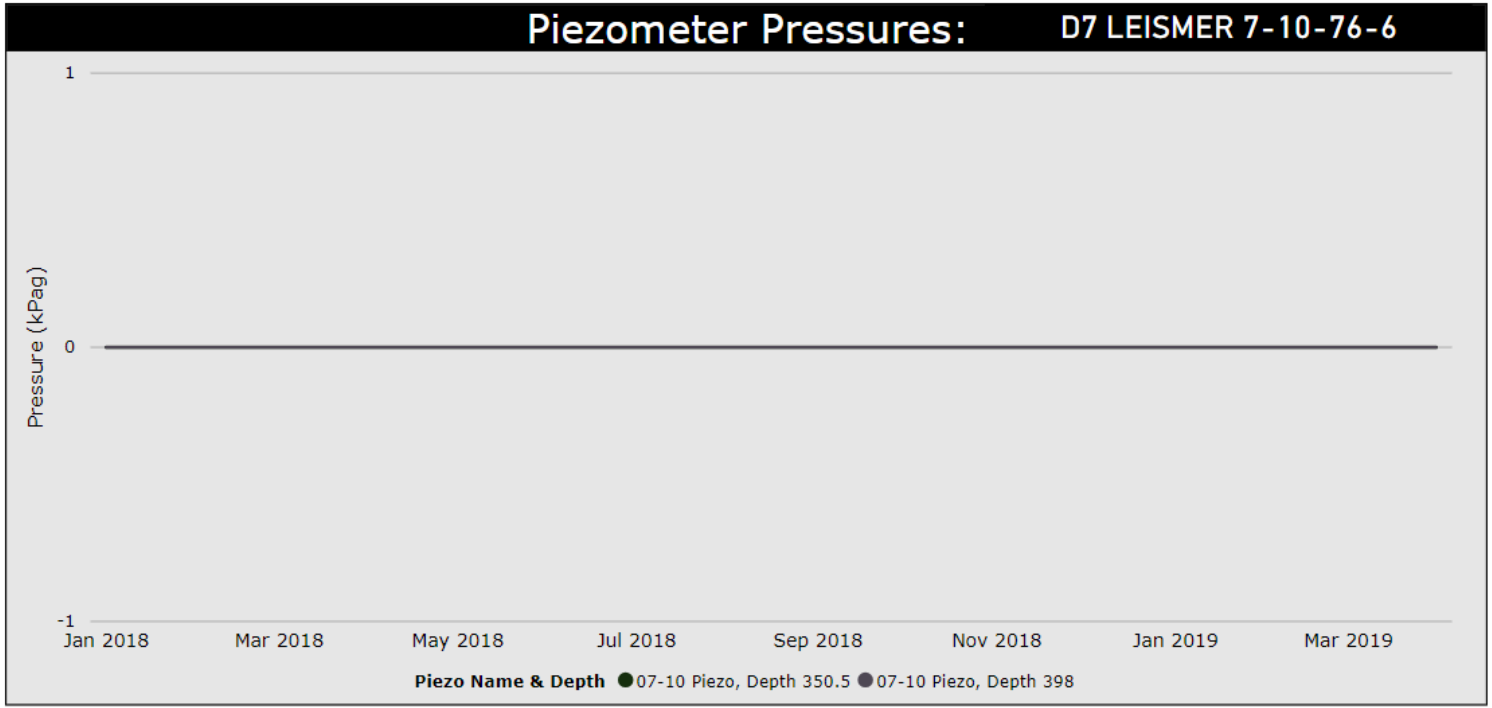
2018 Cenovus Energy Inc.


Piezometer Pressures:
D7 HARDY 7-11-77-6
Pressure (kPag)
6K
5K
4K
3K
2K
1K
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
07-11 Piezo, Depth 0

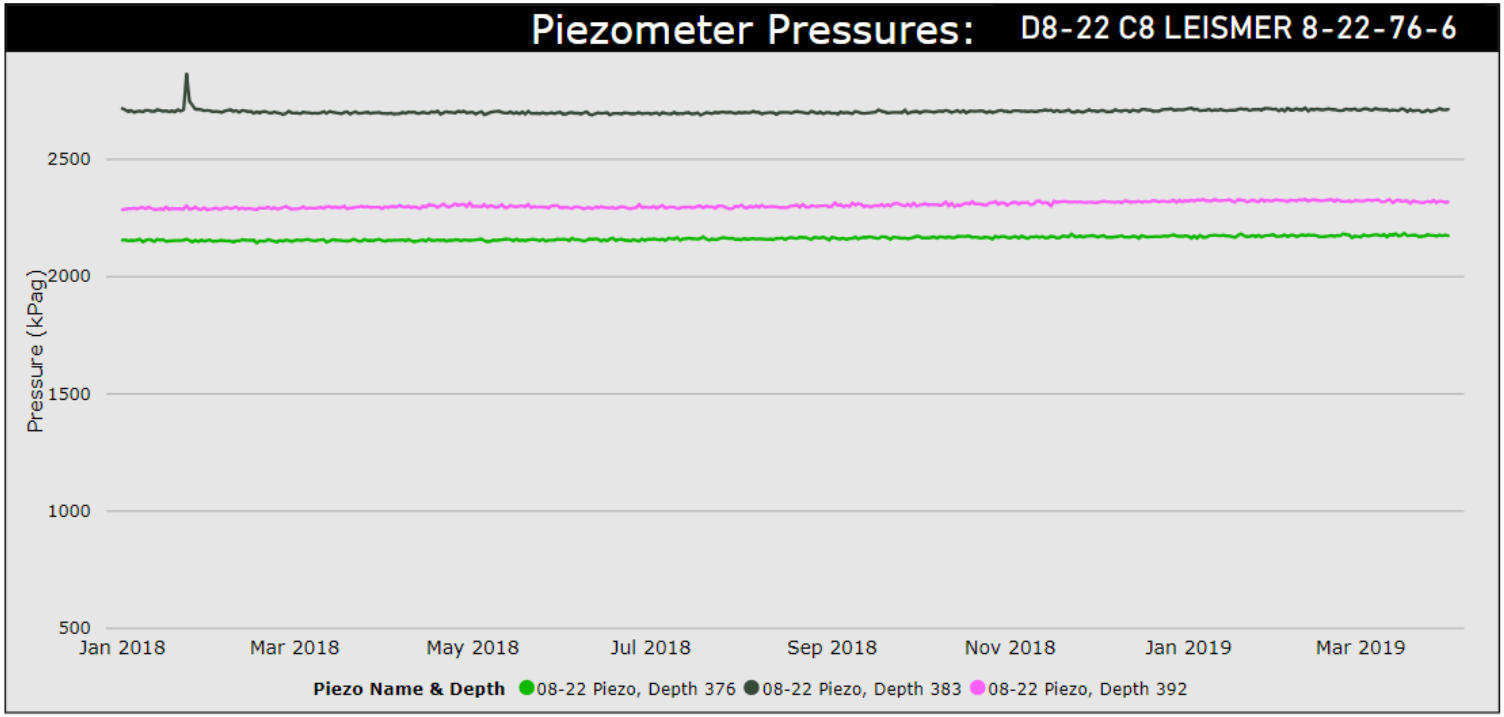
Failed

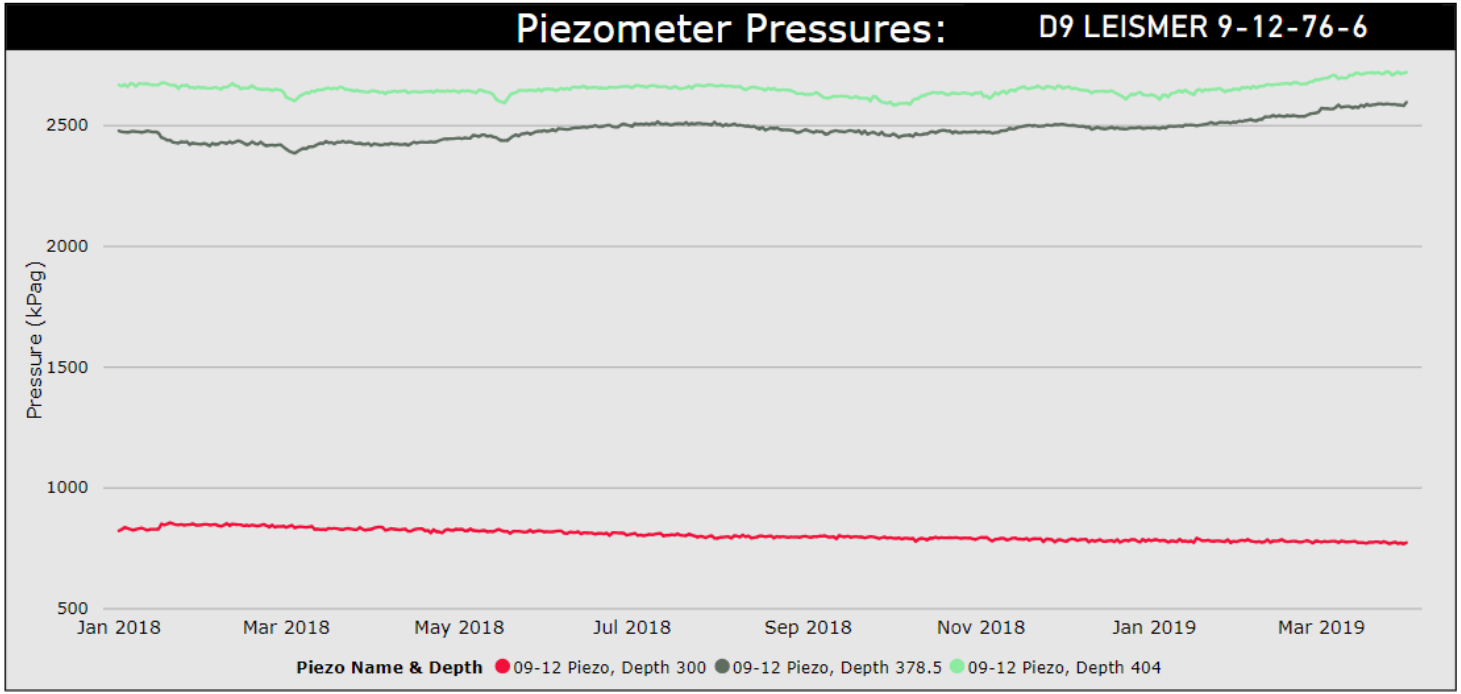

Piezometer Pressures:
D7 KIRBY 7-17-75-6
1
0
-1
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
07-17 Piezo, Depth 354.70001220703125

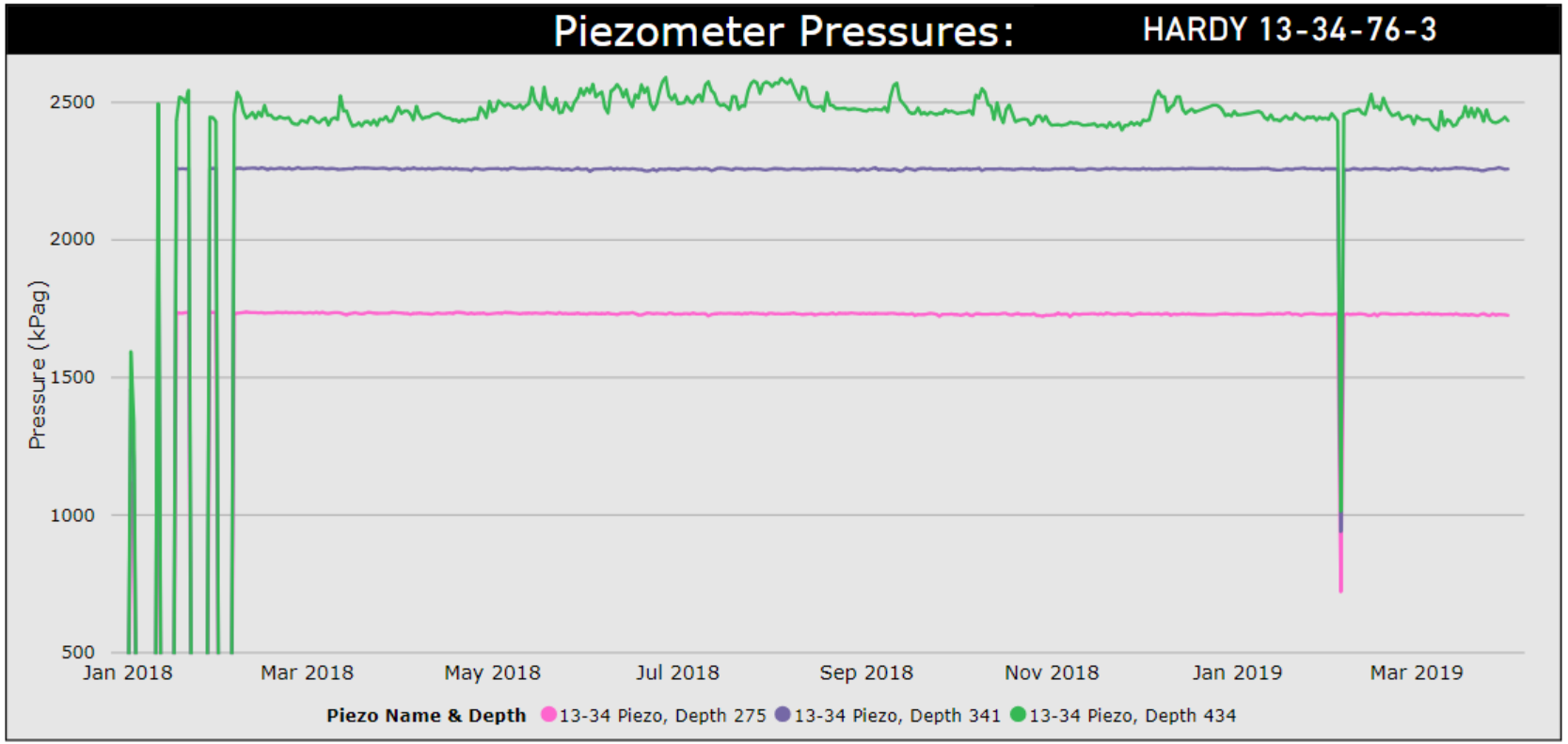
Failed

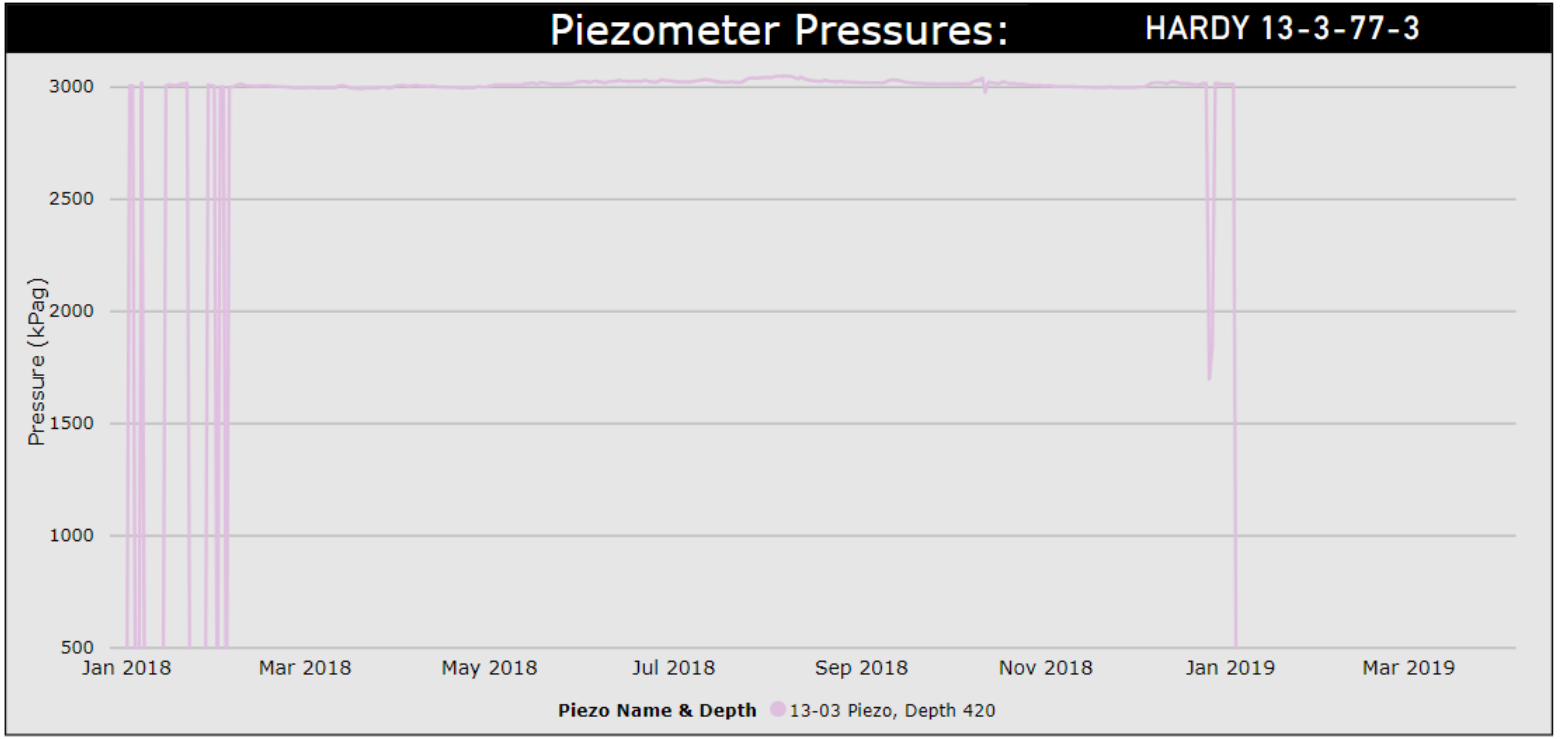


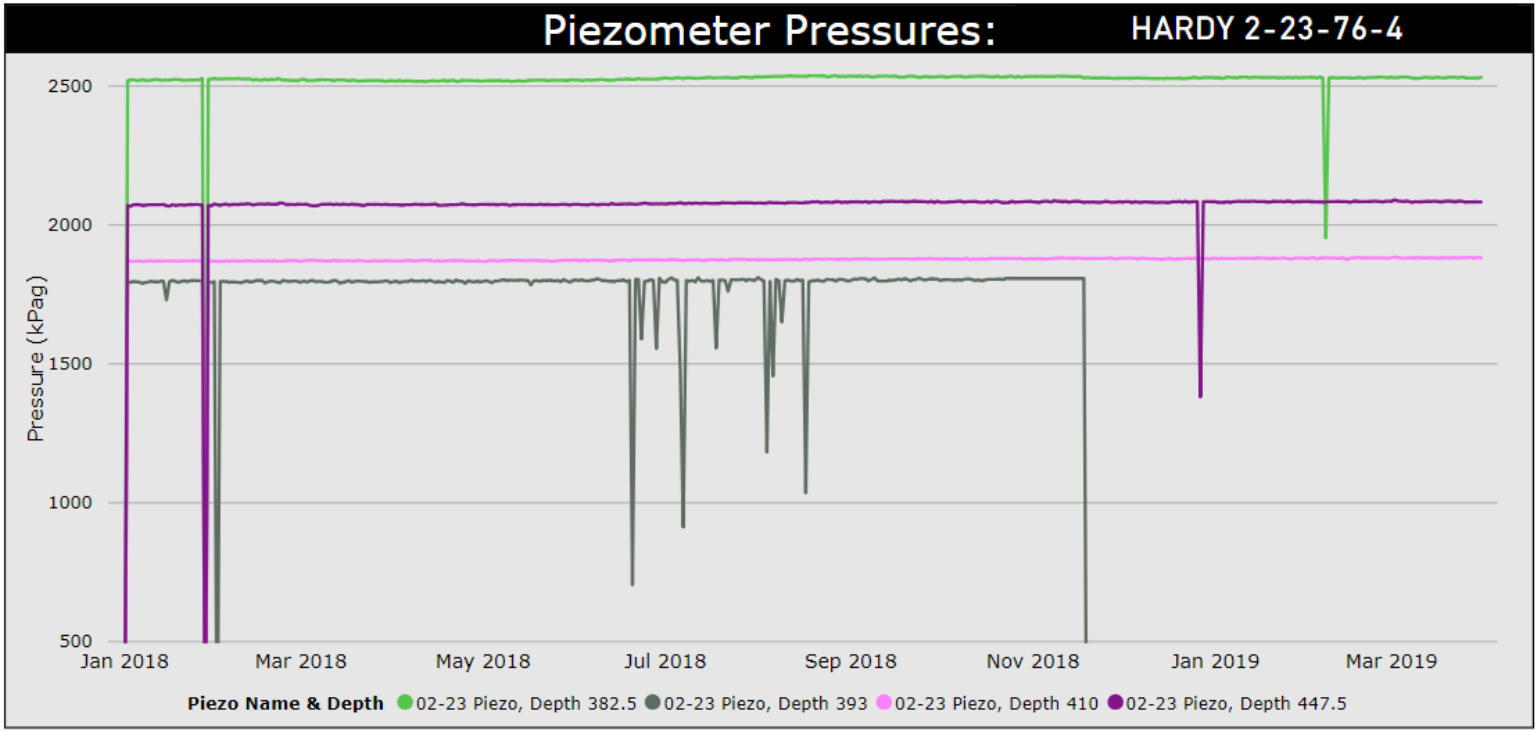
Failed Failed

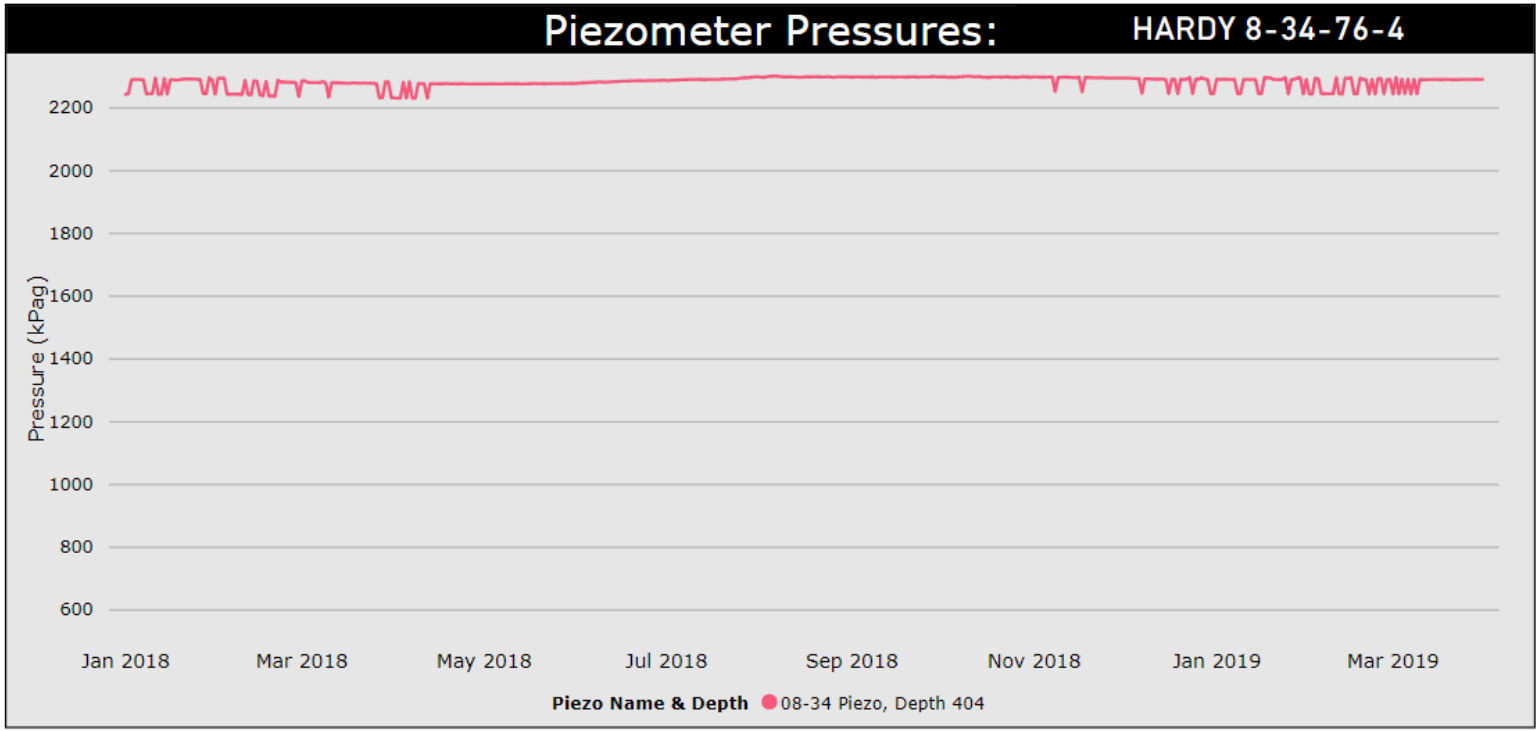

Piezometer Pressures: D8-22 C8 LEISMER 8-22-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-22 Piezo, Depth 376
08-22 Piezo, Depth 383
08-22 Piezo, Depth 392

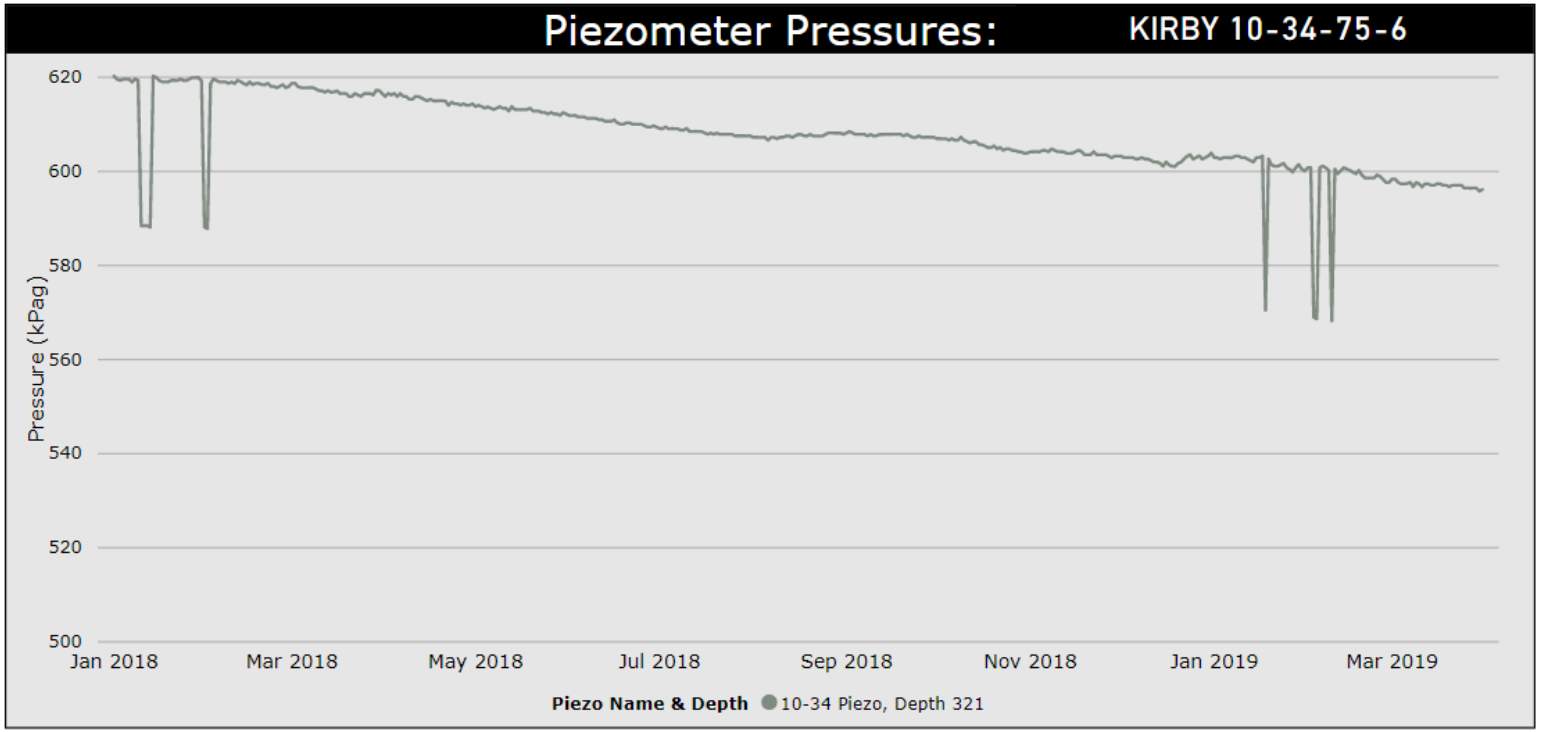

Piezometer Pressures:
D9 LEISMER 9-12-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
09-12 Piezo, Depth 300
09-12 Piezo, Depth 378.5
09-12 Piezo, Depth 404

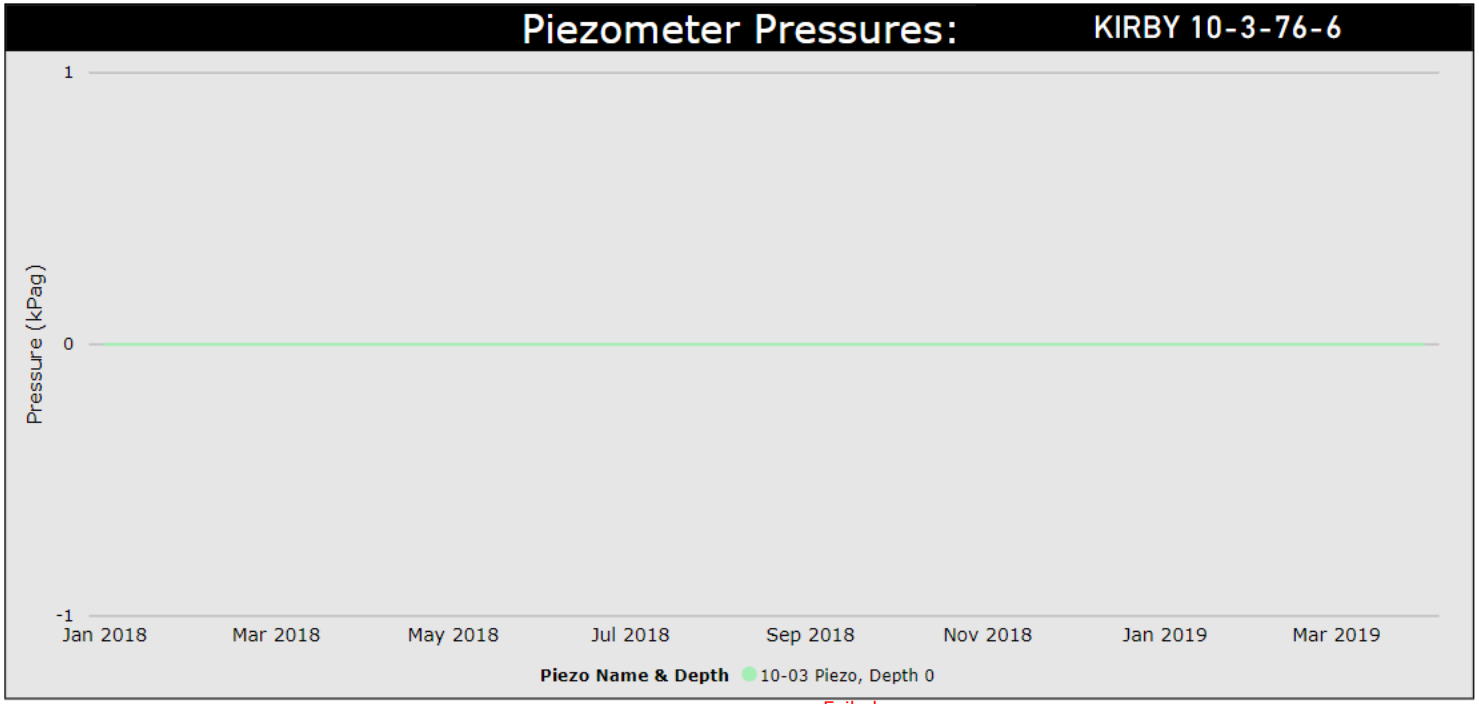

Piezometer Pressures:
HARDY 13-34-76-3
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-34 Piezo, Depth 275
13-34 Piezo, Depth 341
13-34 Piezo, Depth 434


Piezometer Pressures:
HARDY 13-3-77-3
3000
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-03 Piezo, Depth 420


Piezometer Pressures:
HARDY 2-23-76-4
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
02-23 Piezo, Depth 382.5
02-23 Piezo, Depth 393
02-23 Piezo, Depth 410
02-23 Piezo, Depth 447.5


Piezometer Pressures:
HARDY 8-34-76-4
Pressure (kPag)
2200
2000
1800
1600
1400
1200
1000
800
600
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-34 Piezo, Depth 404


Piezometer Pressures:
KIRBY 10-34-75-6
620
600
580
560
540
520
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
10-34 Piezo, Depth 321


Piezometer Pressures:
KIRBY 10-3-76-6
1
0
-1
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
10-03 Piezo, Depth 0

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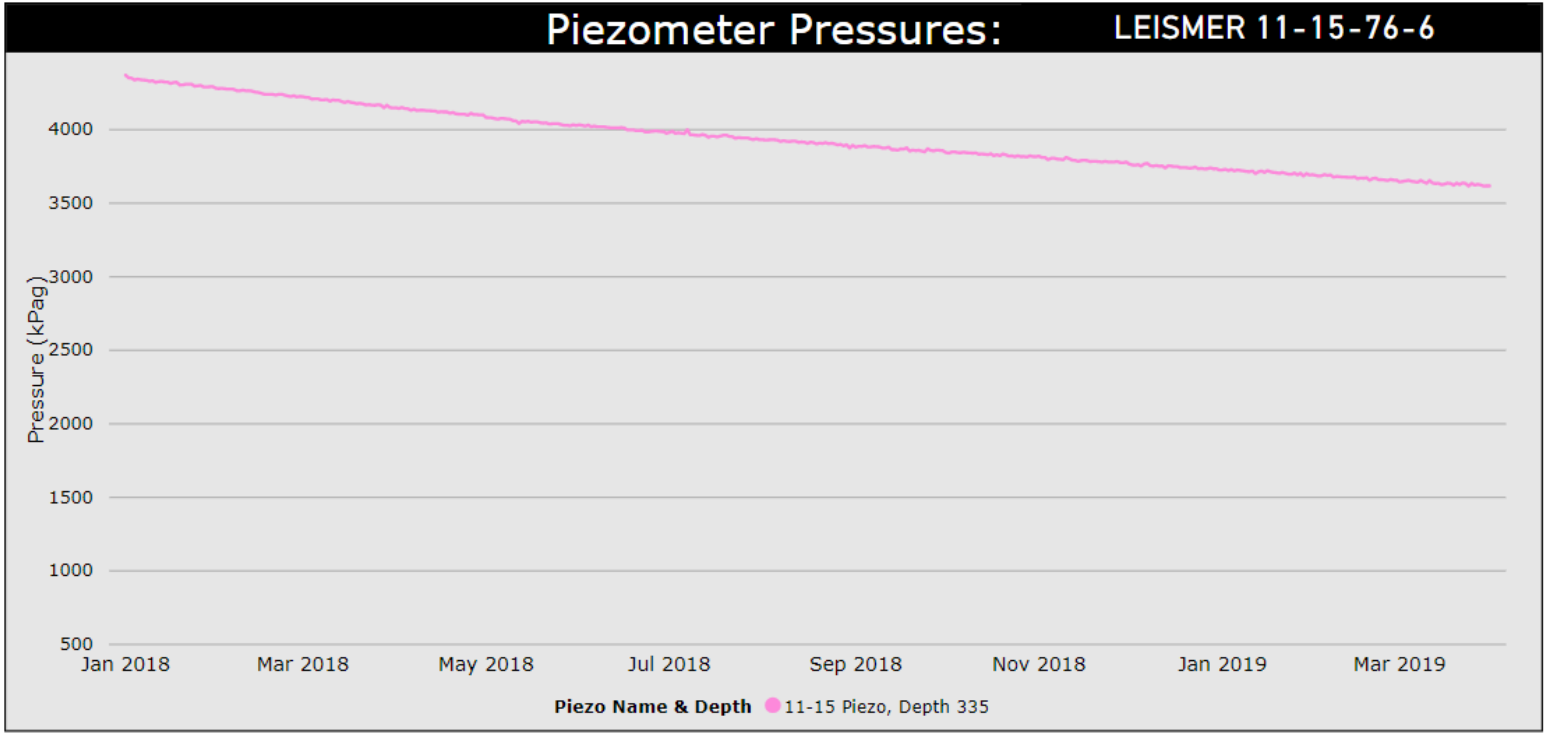
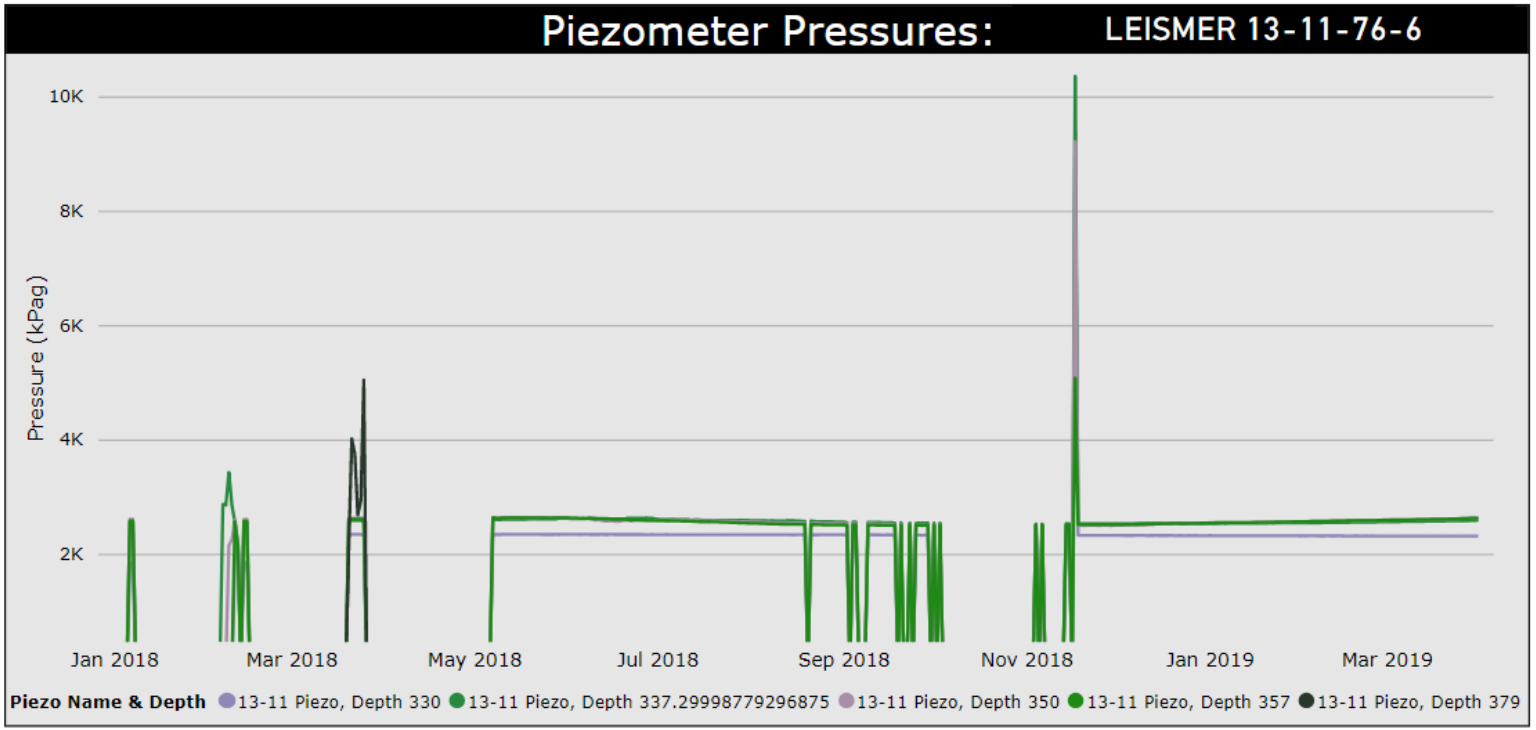

Piezometer Pressures:
LEISMER 11-15-76-6
Pressure (kPag)
4000
3500
3000
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
11-15 Piezo, Depth 335


Piezometer Pressures:
LEISMER 13-11-76-6
10K
8K
6K
4K
2K
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
13-11 Piezo, Depth 330
13-11 Piezo, Depth 337.29998779296875
13-11 Piezo, Depth 350
13-11 Piezo, Depth 357
13-11 Piezo, Depth 379

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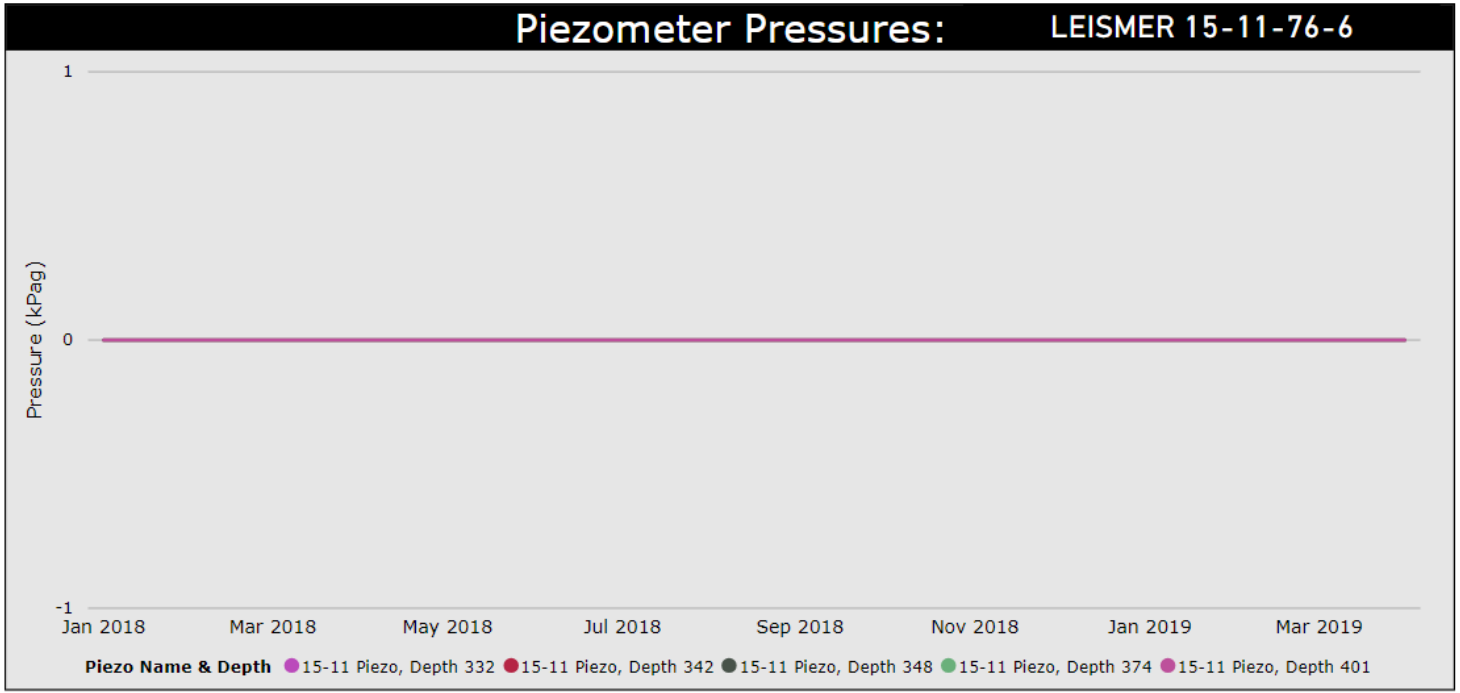
Piezometer Pressures:
LEISMER 15-11-76-6
Pressure (kPag)
1
0
-1
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
15-11 Piezo, Depth 332
15-11 Piezo, Depth 342
15-11 Piezo, Depth 348
15-11 Piezo, Depth 374
15-11 Piezo, Depth 401

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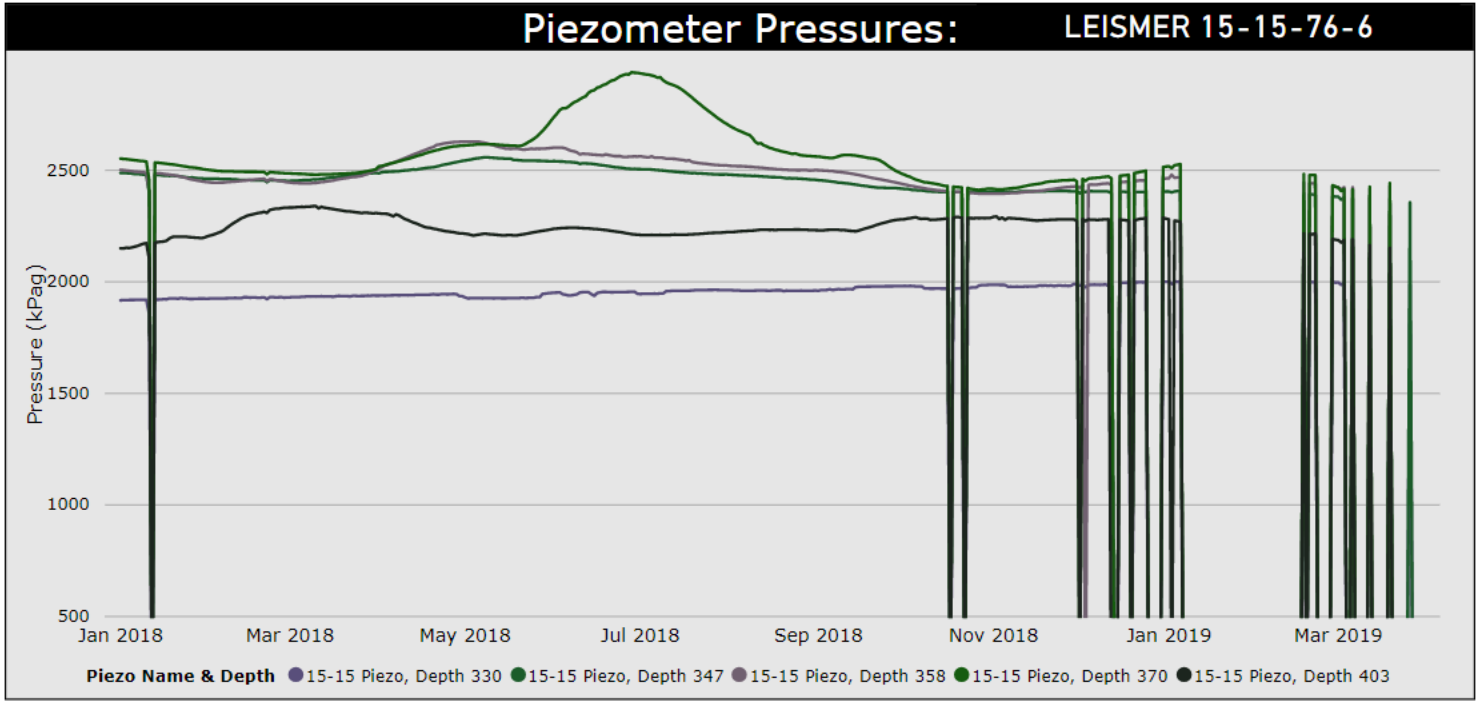
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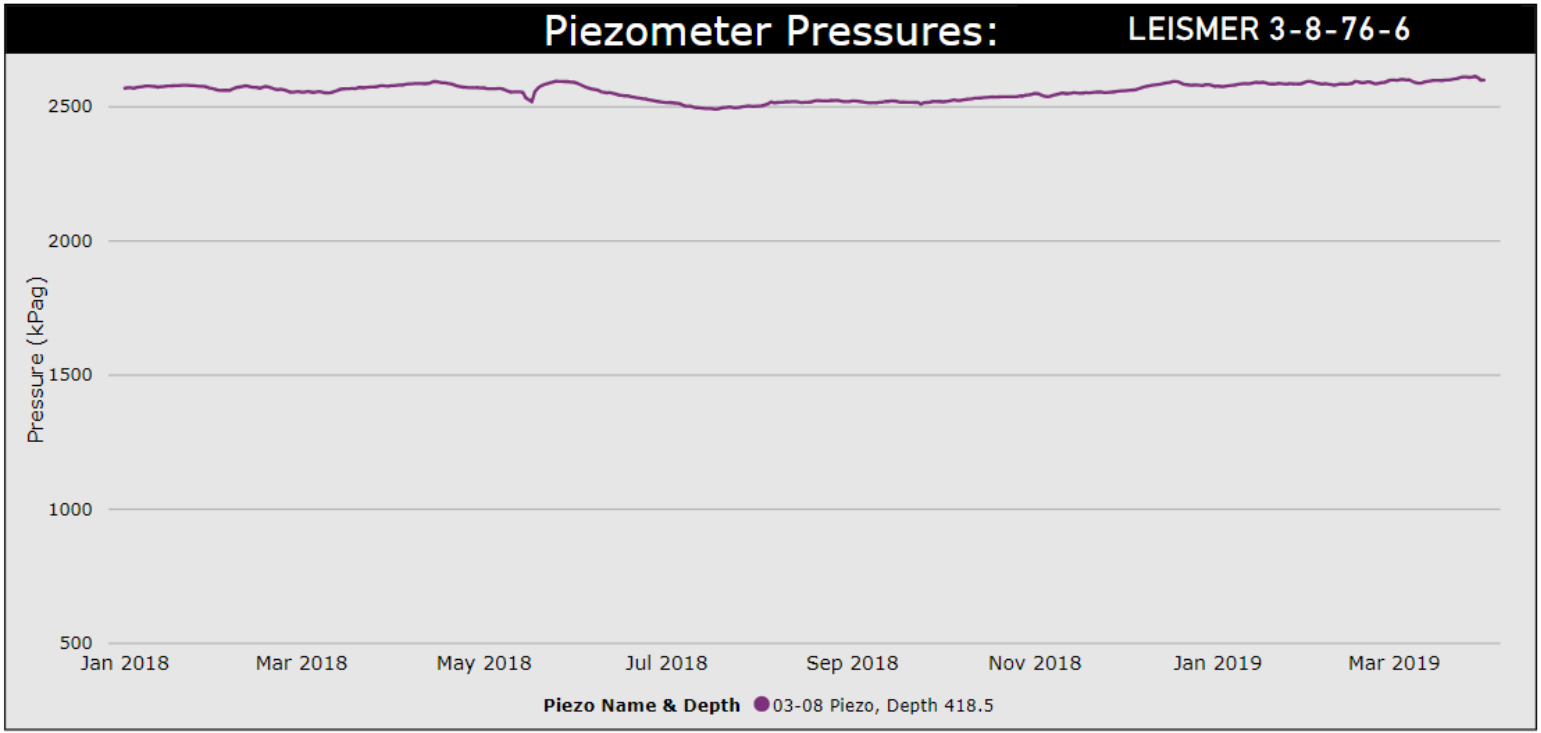
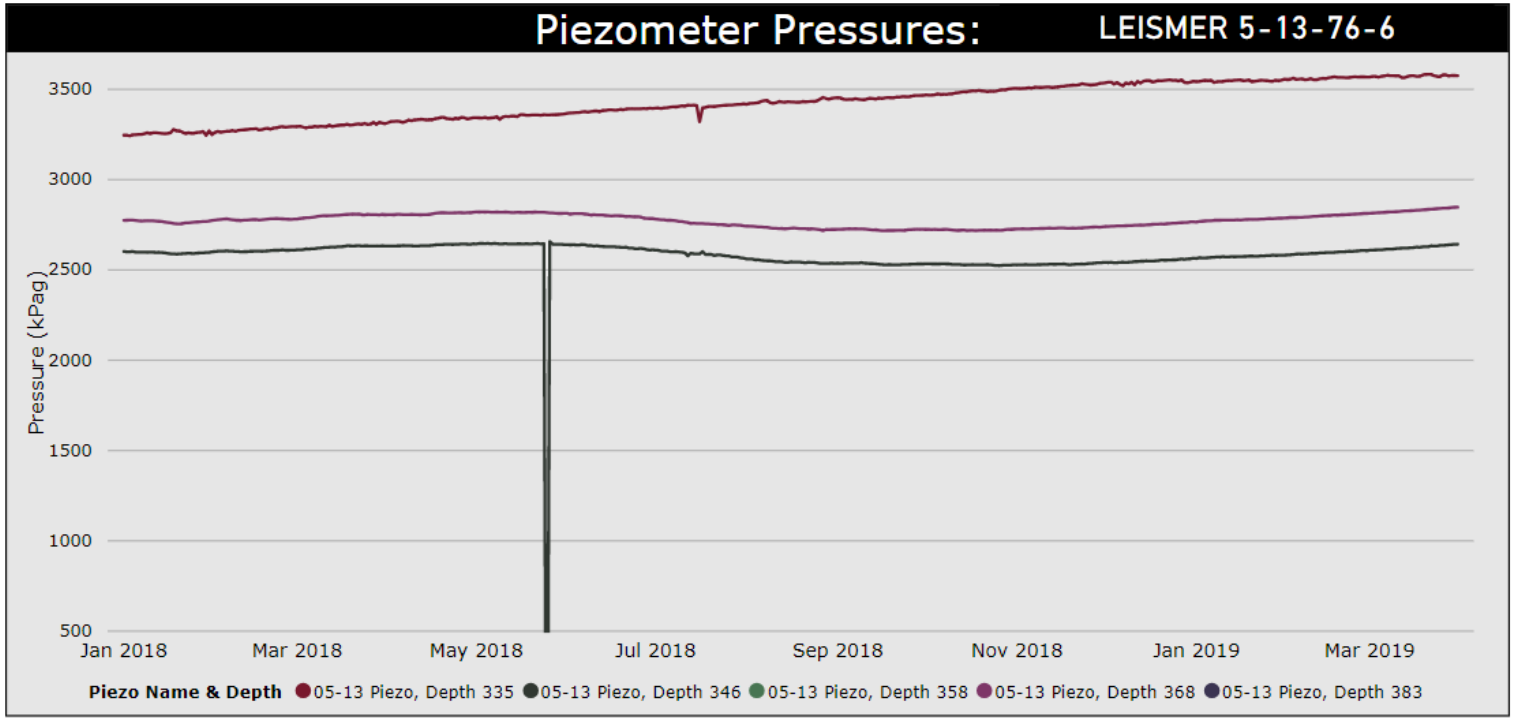
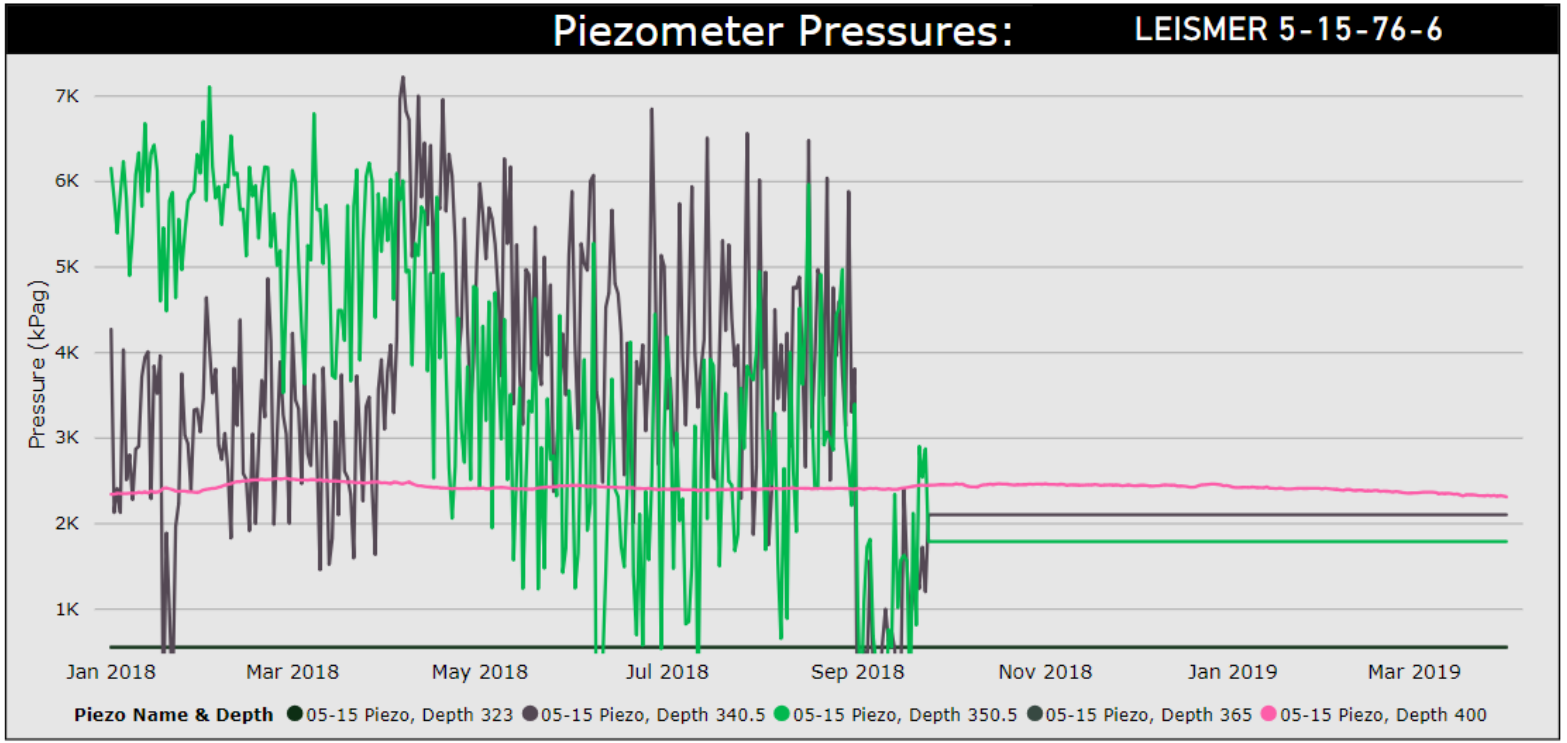
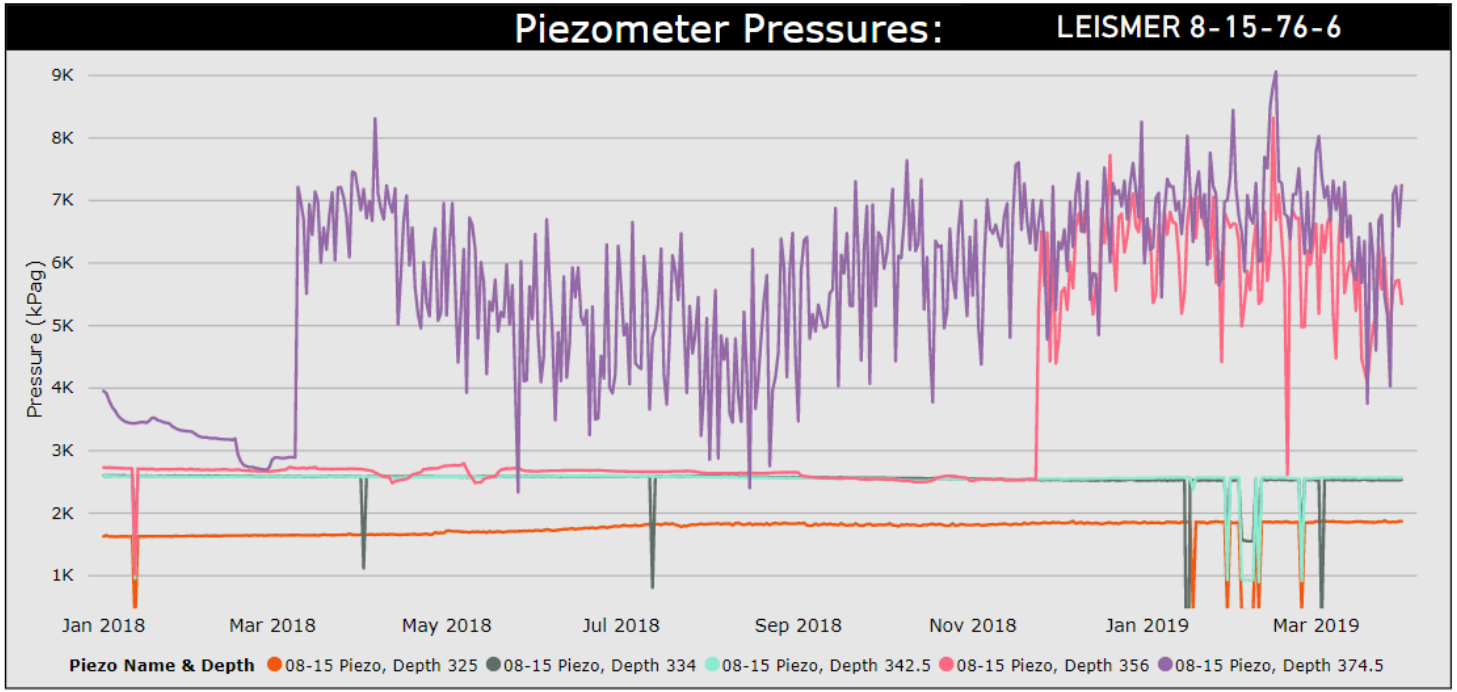
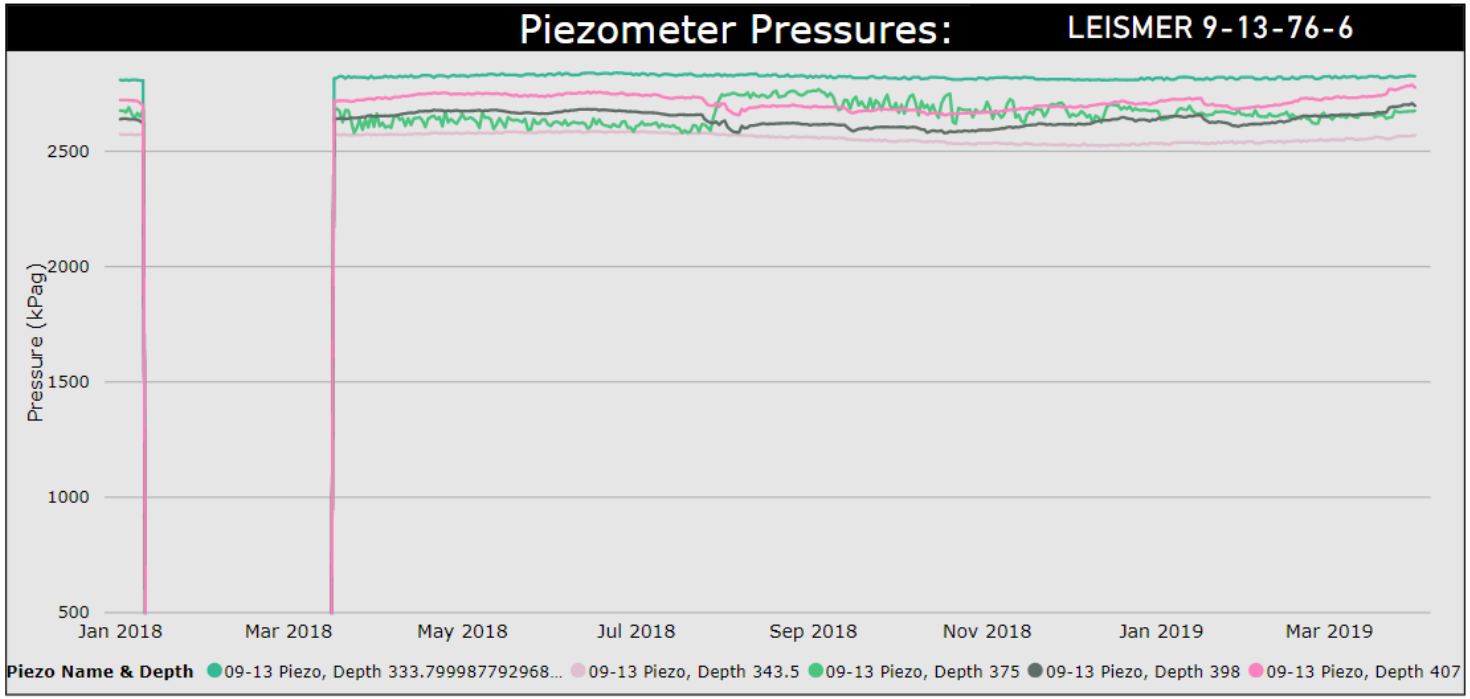
LEISMER 15-15-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
15-15 Piezo, Depth 330
15-15 Piezo, Depth 347
15-15 Piezo, Depth 358
15-15 Piezo, Depth 370
15-15 Piezo, Depth 403

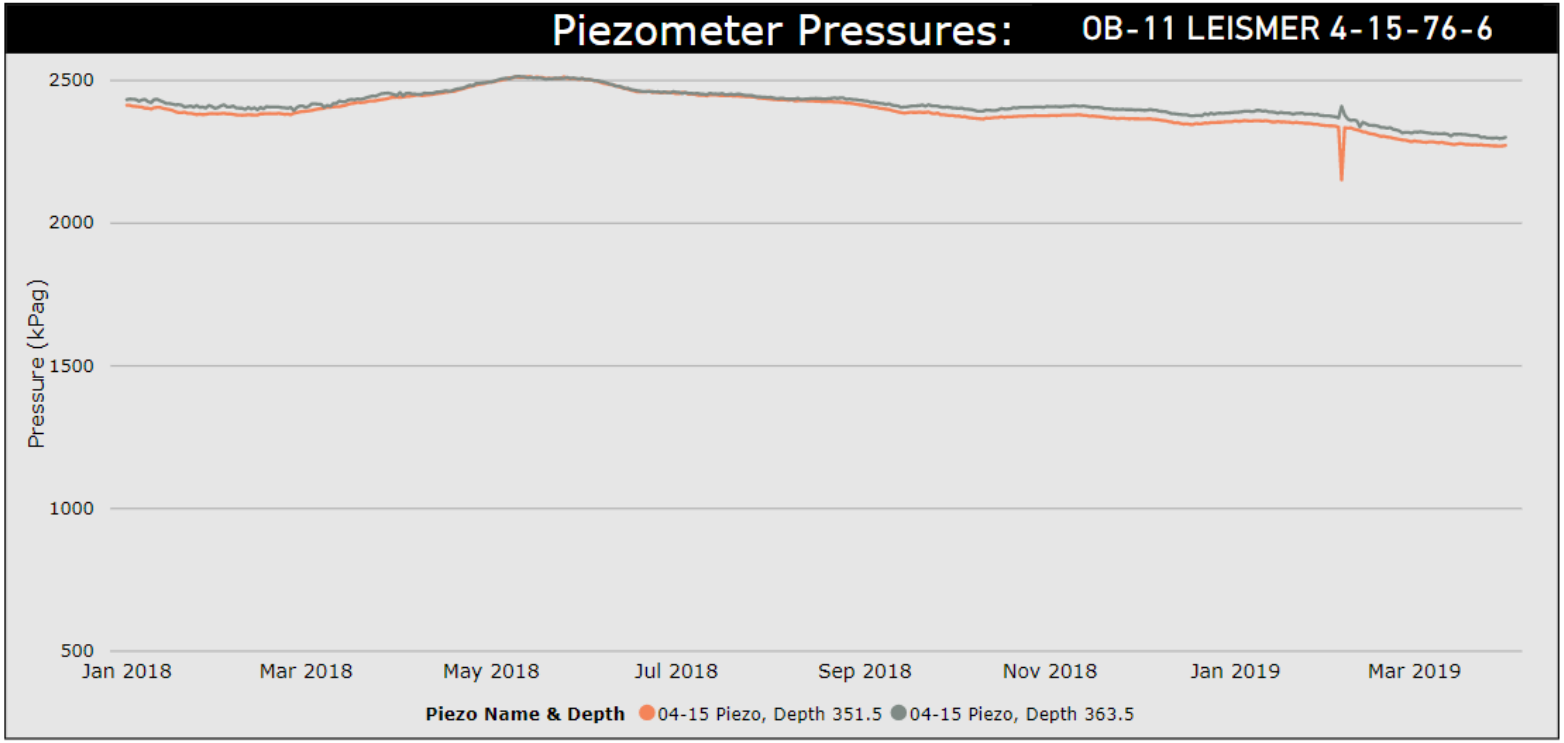

Piezometer Pressures:
LEISMER 3-8-76-6
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
03-08 Piezo, Depth 418.5

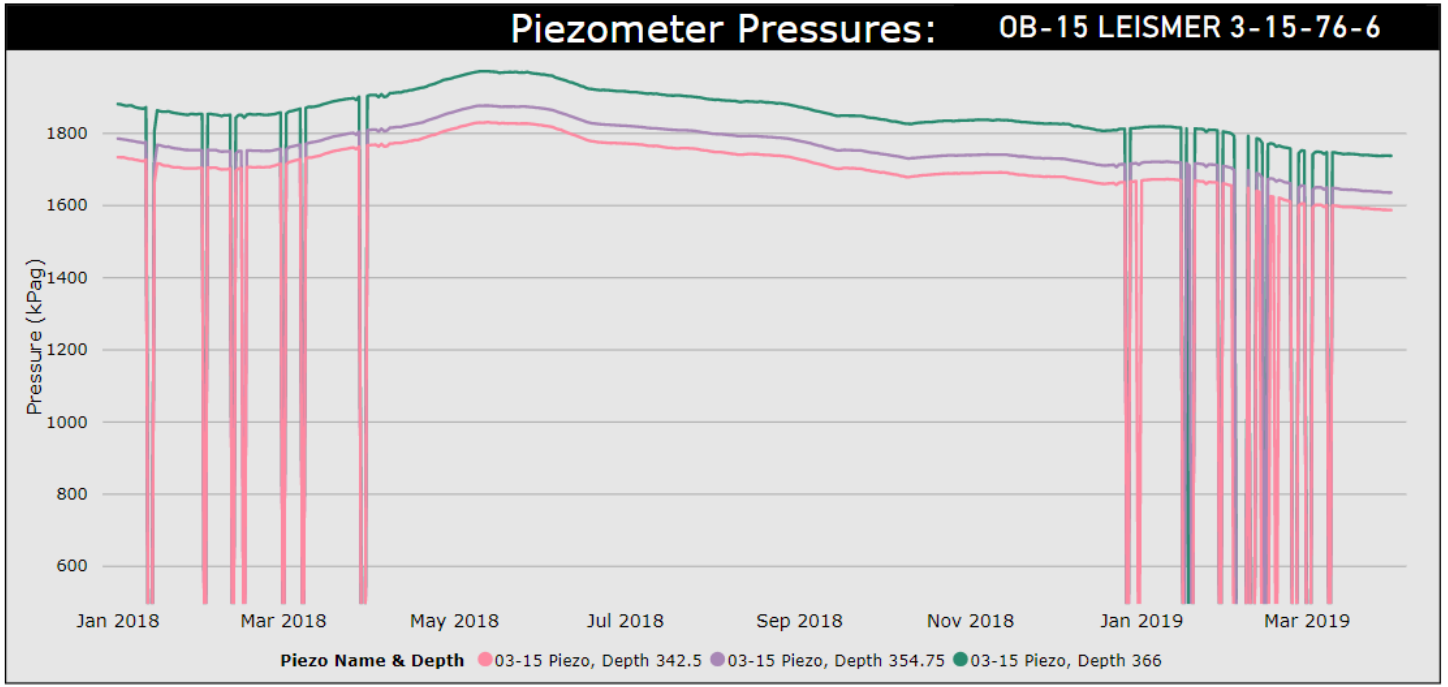

Piezometer Pressures:
LEISMER 5-13-76-6
Pressure (kPag)
3500
3000
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
05-13 Piezo, Depth 335
05-13 Piezo, Depth 346
05-13 Piezo, Depth 358
05-13 Piezo, Depth 368
05-13 Piezo, Depth 383
Failed
Failed


Piezometer Pressures:
LEISMER 5-15-76-6
Pressure (kPag)
7K
6K
5K
4K
3K
2K
1K
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
05-15 Piezo, Depth 323
05-15 Piezo, Depth 340.5
05-15 Piezo, Depth 350.5
05-15 Piezo, Depth 365
05-15 Piezo, Depth 400
Failed
Failed
Failed
Failed


Piezometer Pressures:
LEISMER 8-15-76-6
Pressure (kPag)
9K
8K
7K
6K
5K
4K
3K
2K
1K
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
08-15 Piezo, Depth 325
08-15 Piezo, Depth 334
08-15 Piezo, Depth 342.5
08-15 Piezo, Depth 356
08-15 Piezo, Depth 374.5

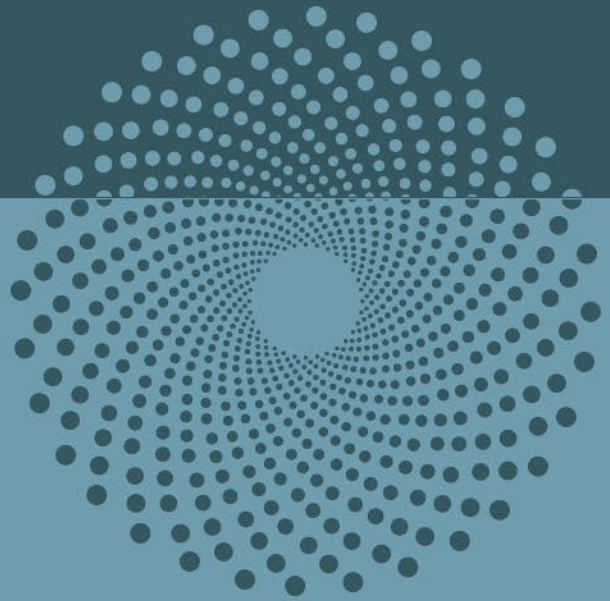

Piezometer Pressures:
LEISMER 9-13-76-6
Pressure (kPag)
2500
2000
1500
1000
500
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
09-13 Piezo, Depth 333.799987792968...
09-13 Piezo, Depth 343.5
09-13 Piezo, Depth 375
09-13 Piezo, Depth 398
09-13 Piezo, Depth 407


Piezometer Pressures: OB-11 LEISMER 4-15-76-6
2500
2000
1500
1000
500
Pressure (kPag)
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
04-15 Piezo, Depth 351.5
04-15 Piezo, Depth 363.5


Piezometer Pressures: OB-15 LEISMER 3-15-76-6
Pressure (kPag)
1800
1600
1400
1200
1000
800
600
Jan 2018
Mar 2018
May 2018
Jul 2018
Sep 2018
Nov 2018
Jan 2019
Mar 2019
Piezo Name & Depth
03-15 Piezo, Depth 342.5
03-15 Piezo, Depth 354.75
03-15 Piezo, Depth 366

Appendix 3
Subsection 3.1.1 – 5d)

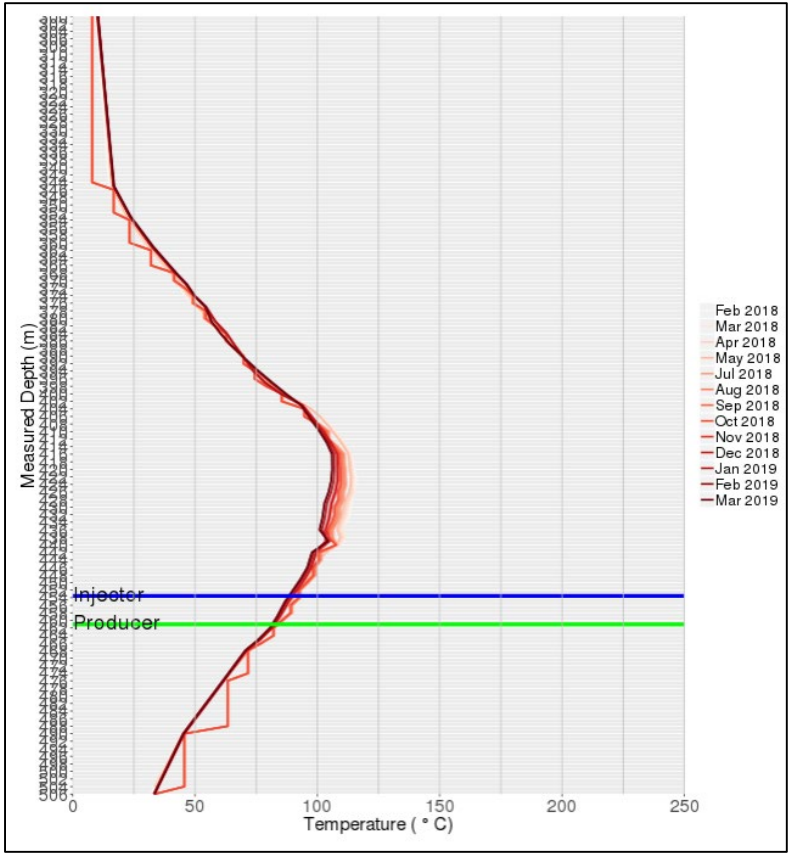
Observation Well Temperature Data



2018 Cenovus Energy Inc.

Thermocouple Data

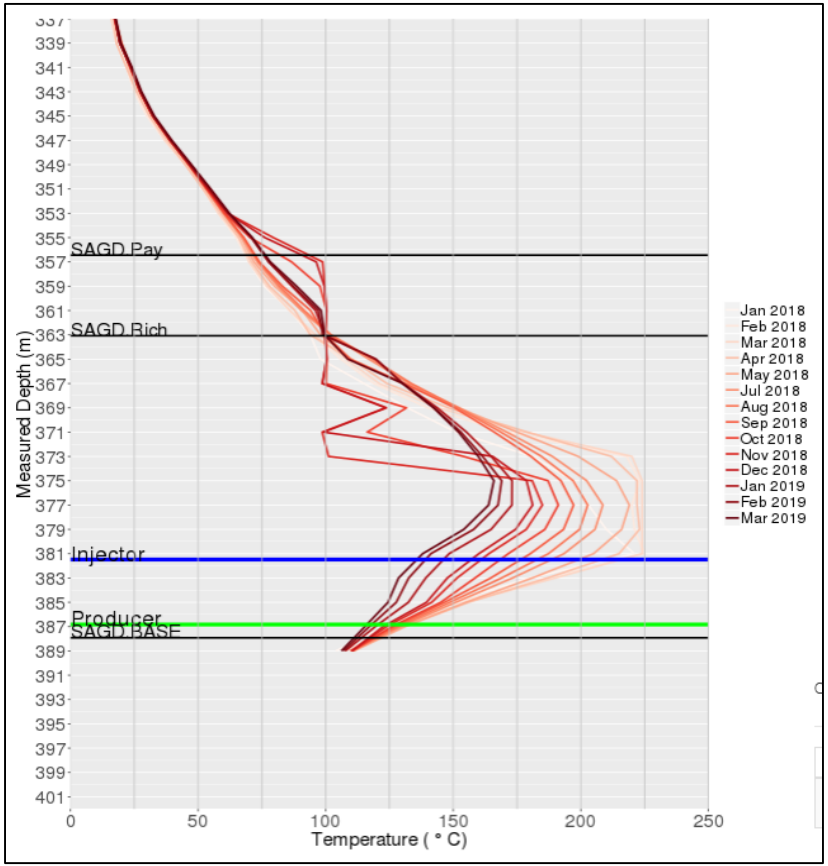
A01 Pad: CVE FCCL B10-16 D6 LEISMER 6-16-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

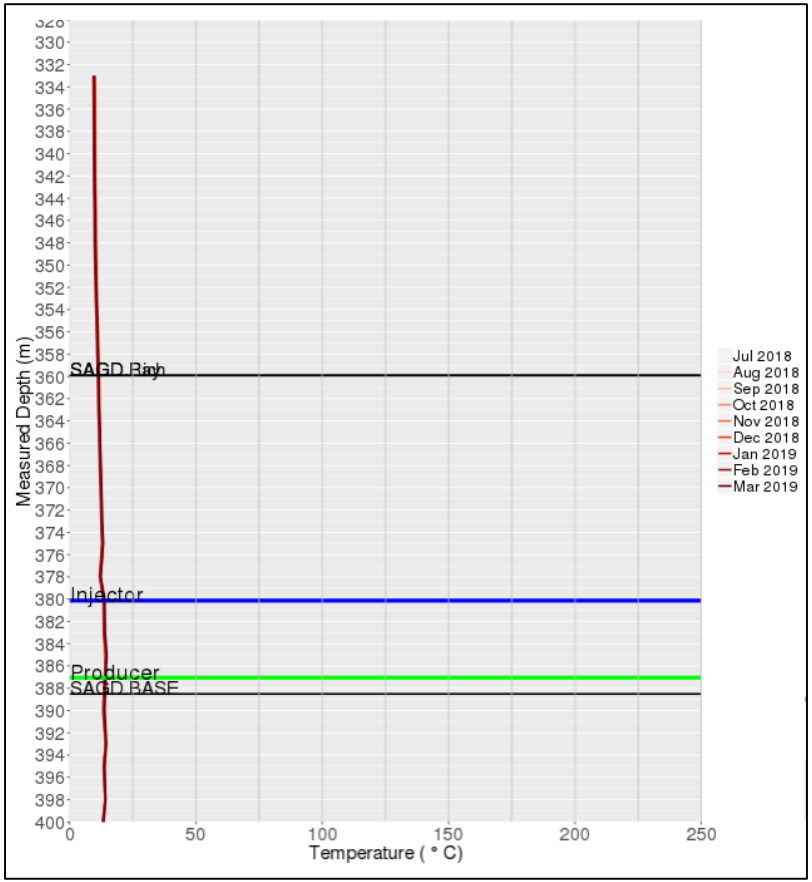
A02 Pad: CVE FCCL D3 LEISMER 3-16-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

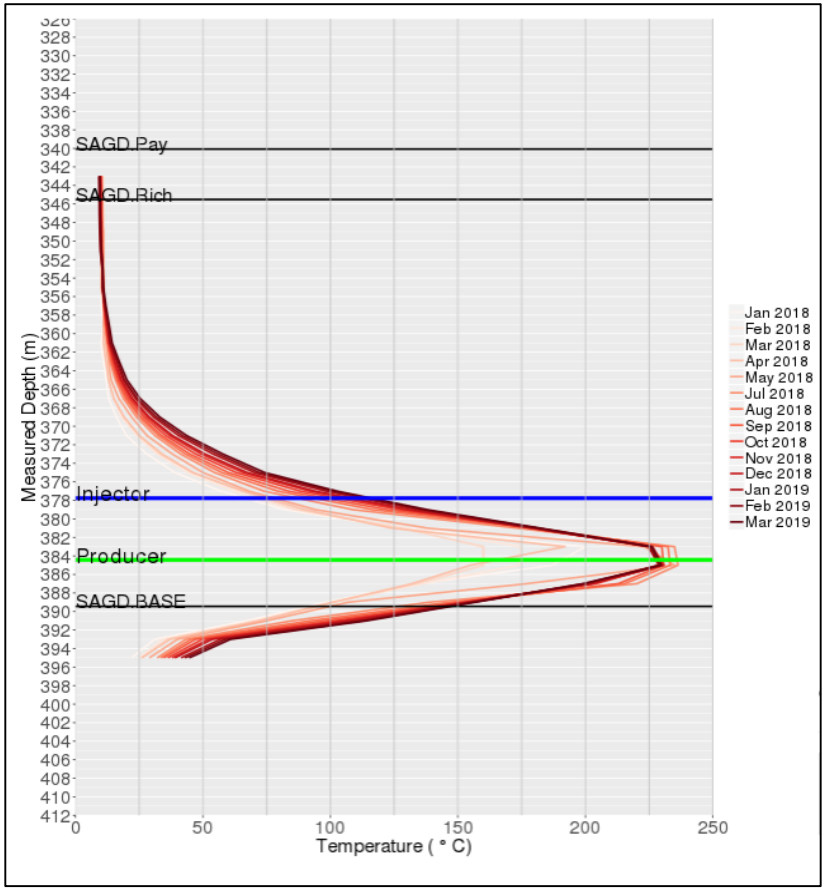
A02 Pad: CVE FCCL LEISMER 2-16-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

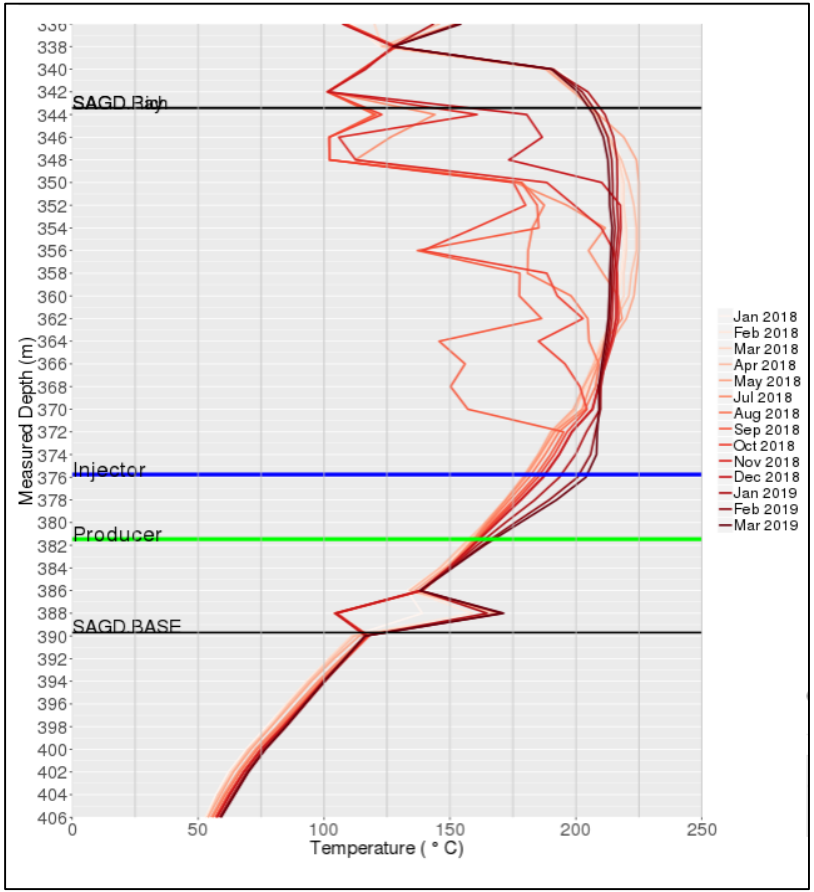
A02 Pad: CVE FCCL C1 LEISMER 1-16-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

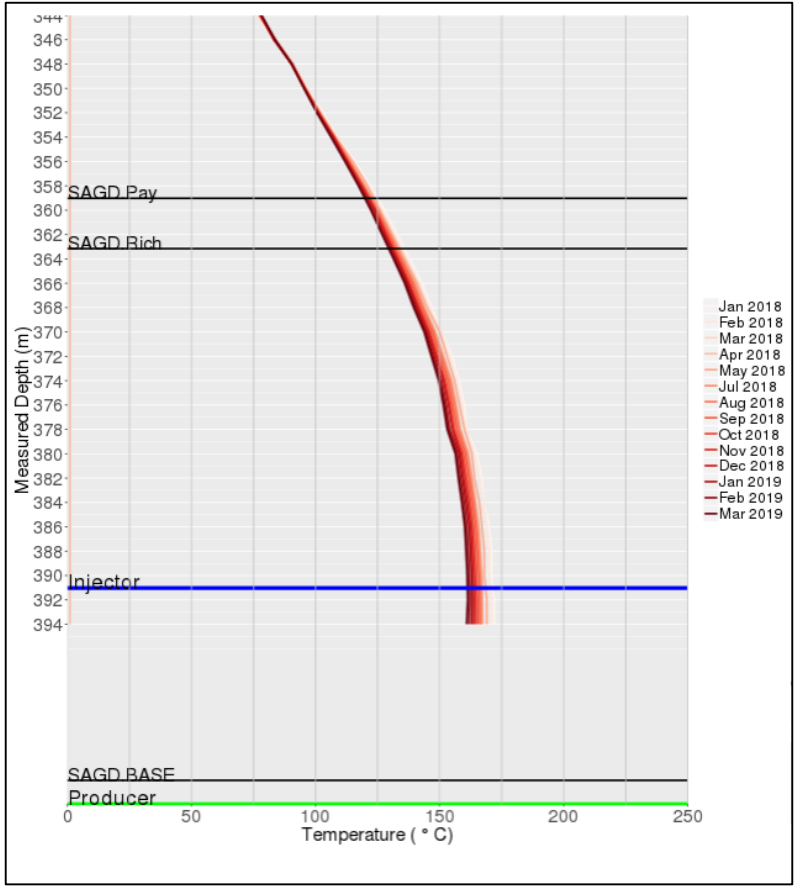
B01 Pad: CVE FCCL A5 LEISMER 5-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

B01 Pad: CVE FCCL 4-15 LEISMER 6-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

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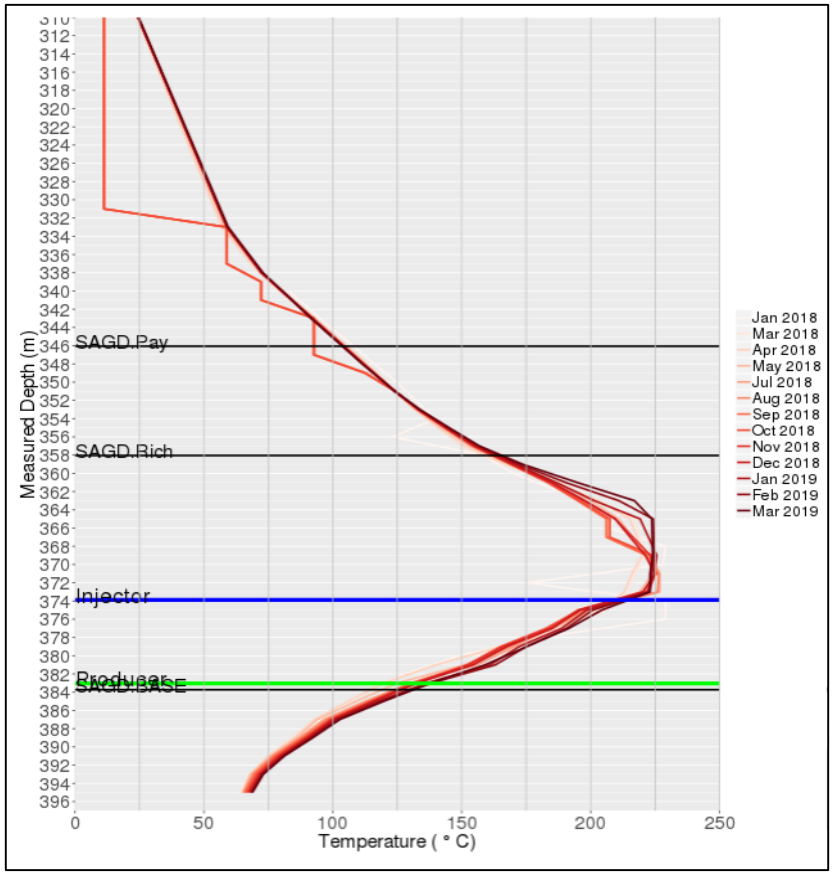

2018 Cenovus Energy Inc.

Thermocouple Data

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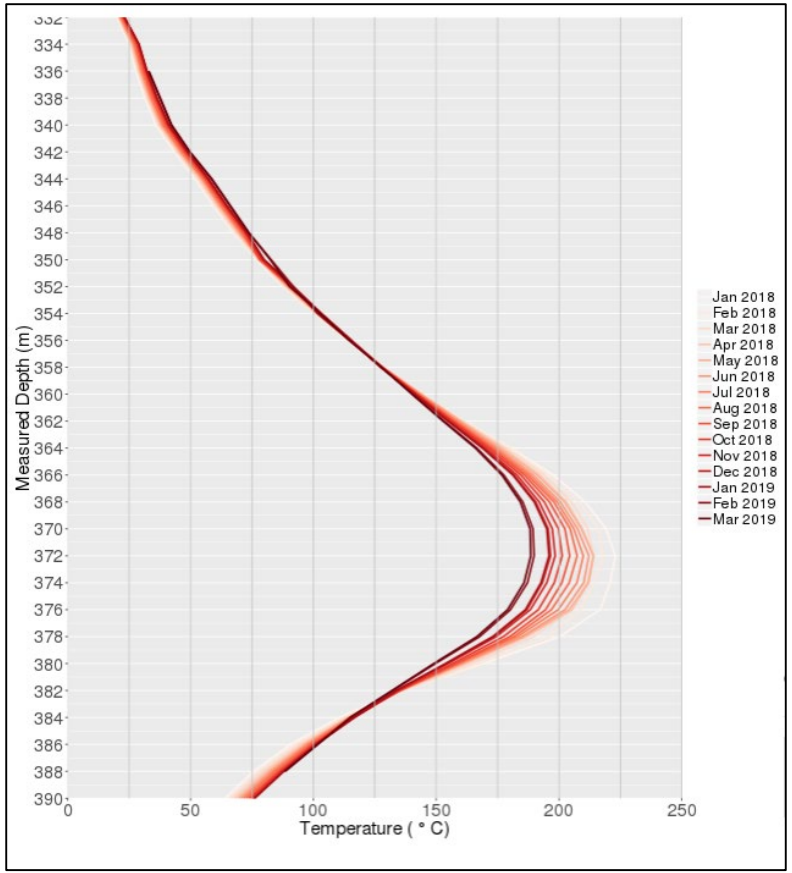
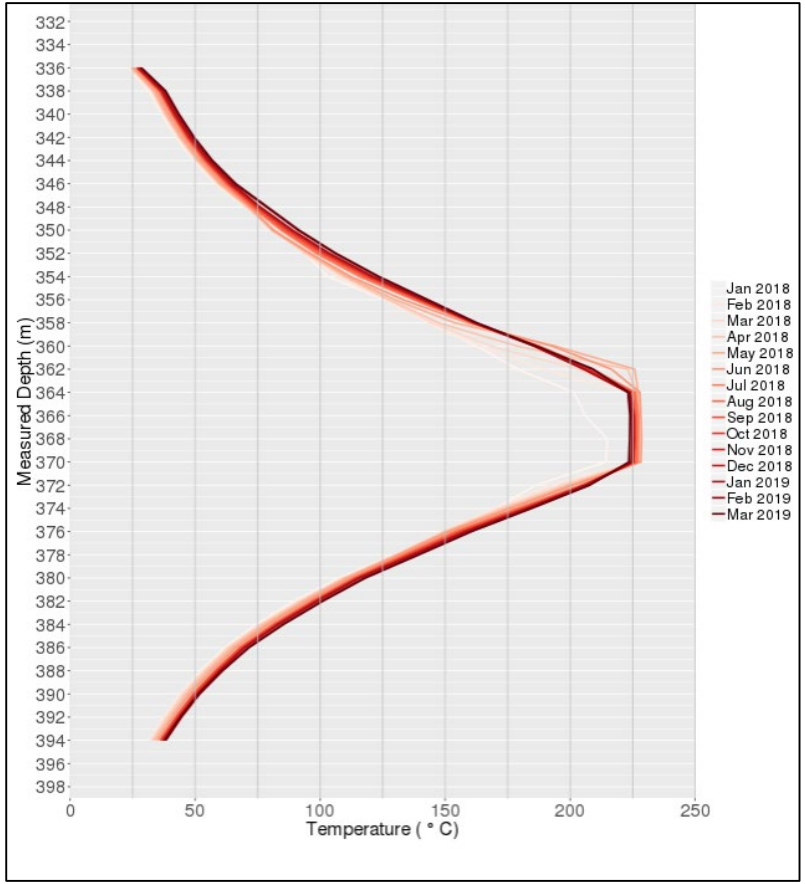


2018 Cenovus Energy Inc.

Thermocouple Data

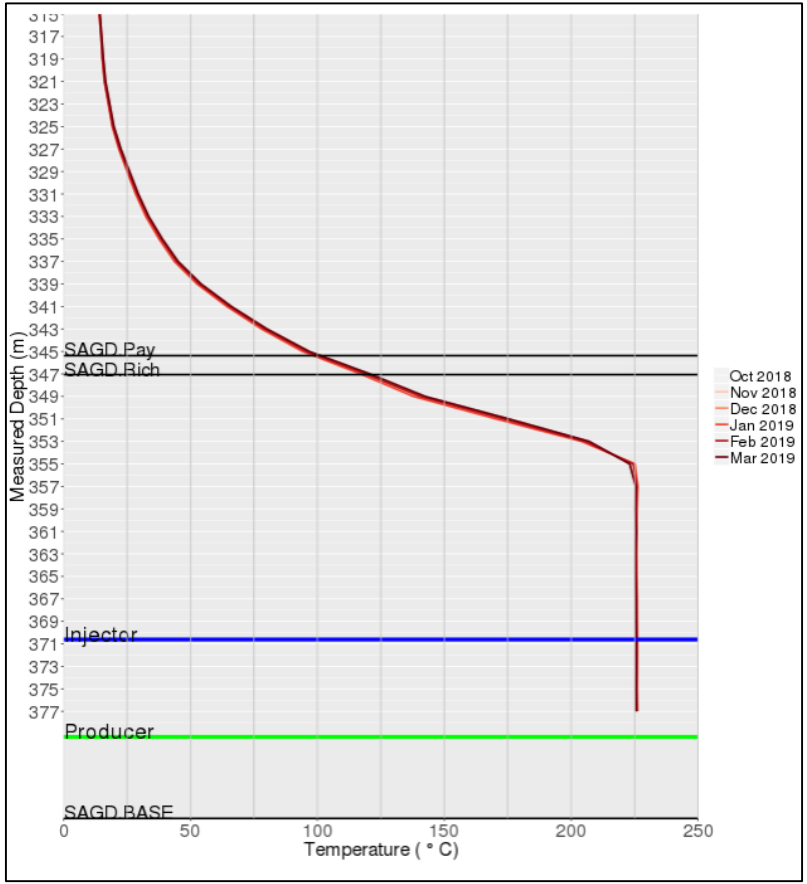
B01 Pad: CVE FCCL OB-12 LESIMER 4-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

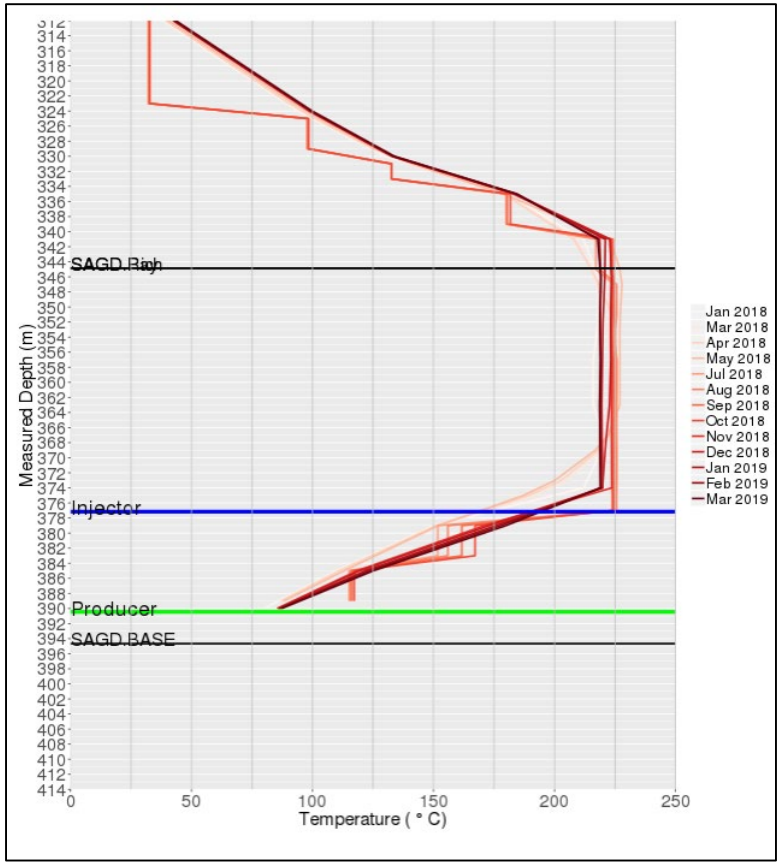
B02 Pad: CVE FCCL D5 LEISMER 5-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

B02 Pad: CVE FCCL A12 LEISMER 12-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

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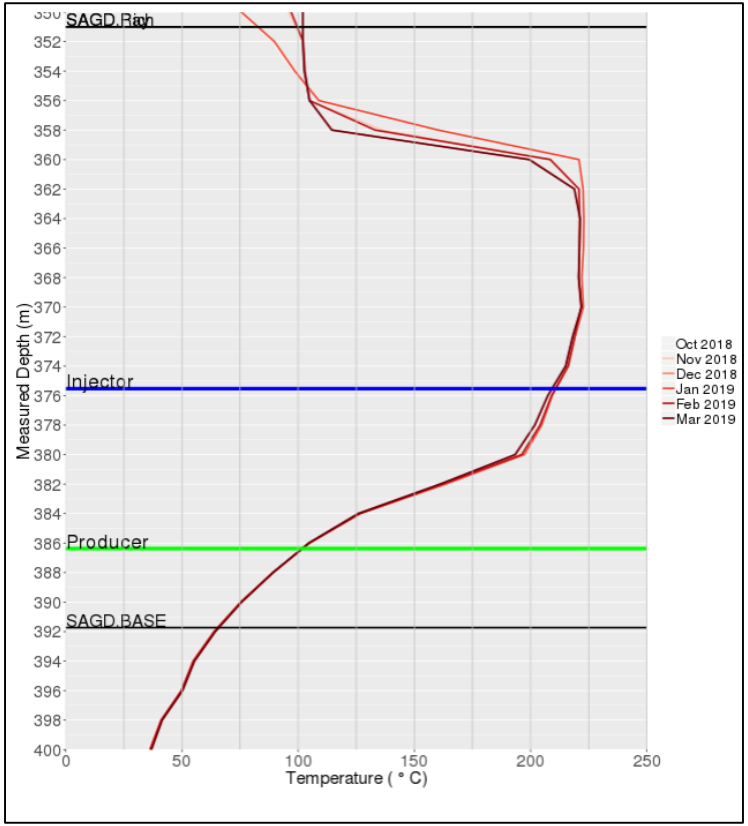

2018 Cenovus Energy Inc.

Thermocouple Data

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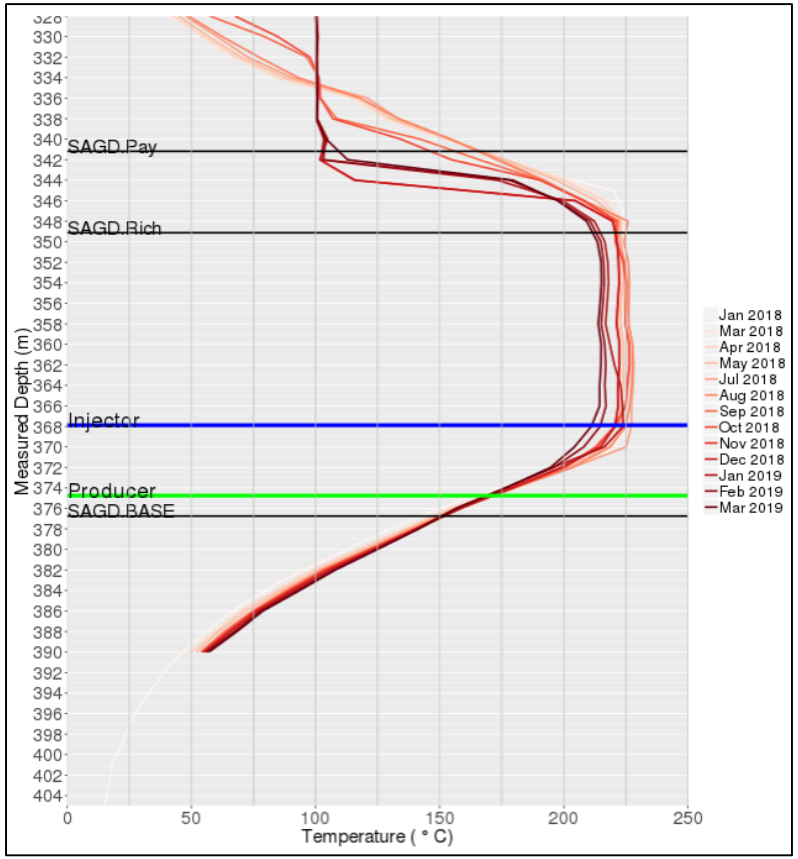

2018 Cenovus Energy Inc.

Thermocouple Data

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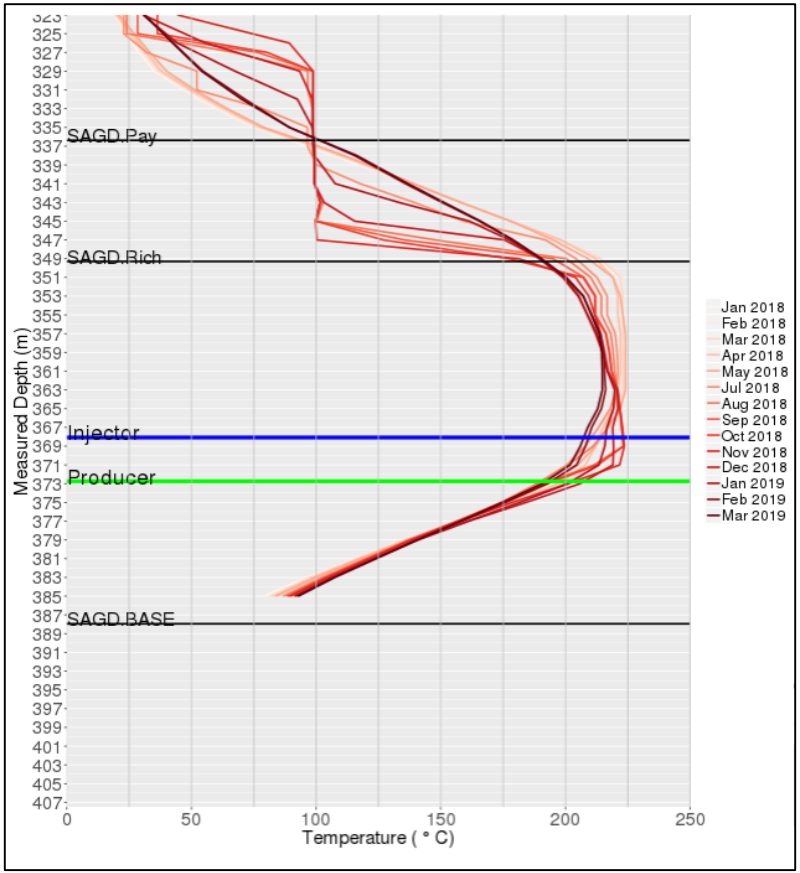
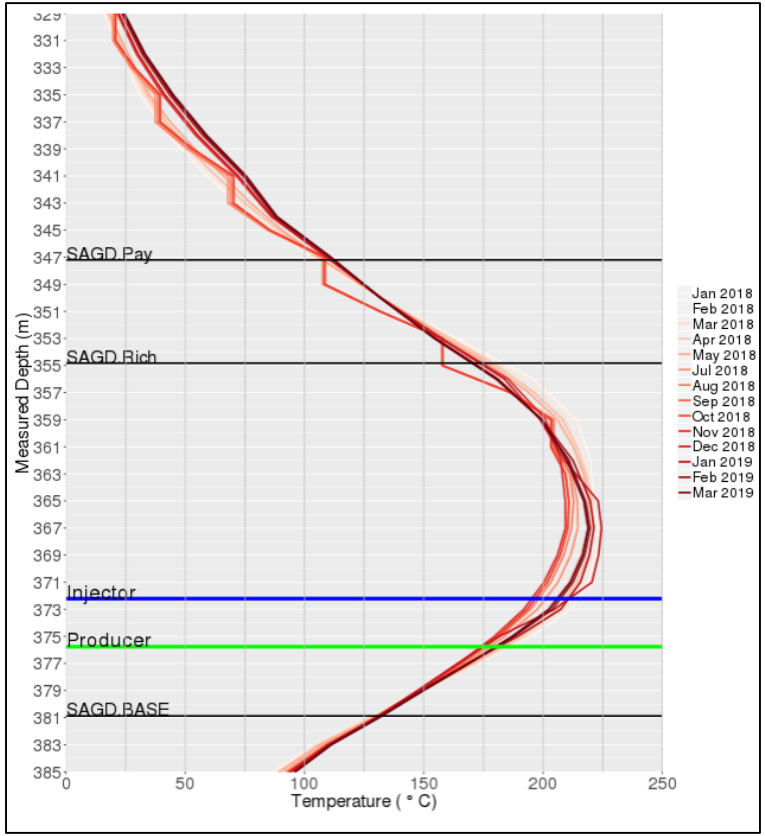


2018 Cenovus Energy Inc.

Thermocouple Data

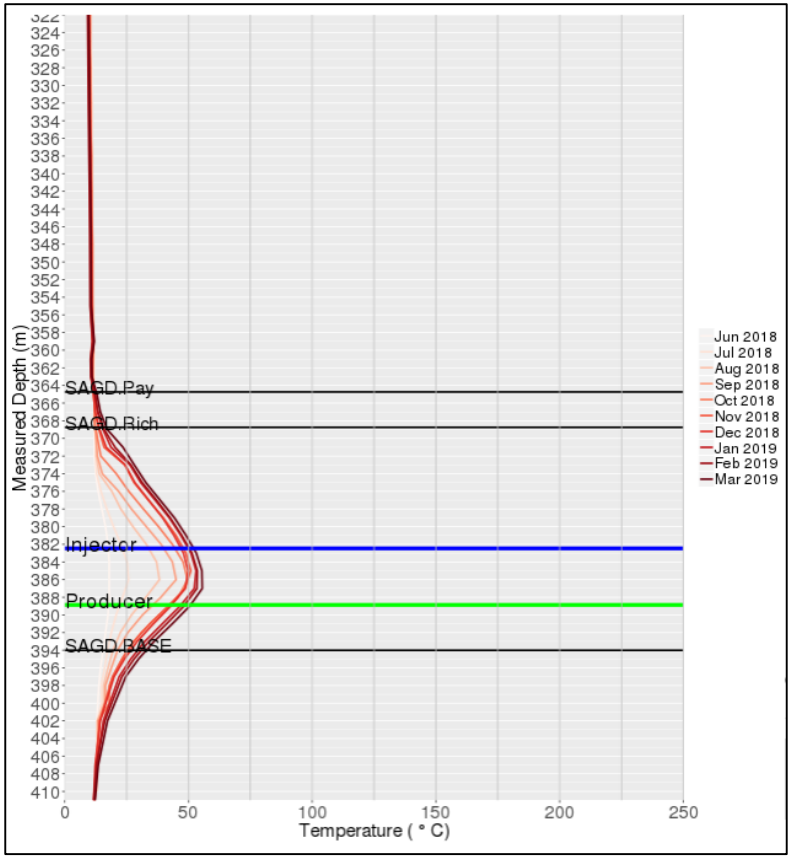
B02C Pad: CVE FCCL B15 LEISMER 15-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

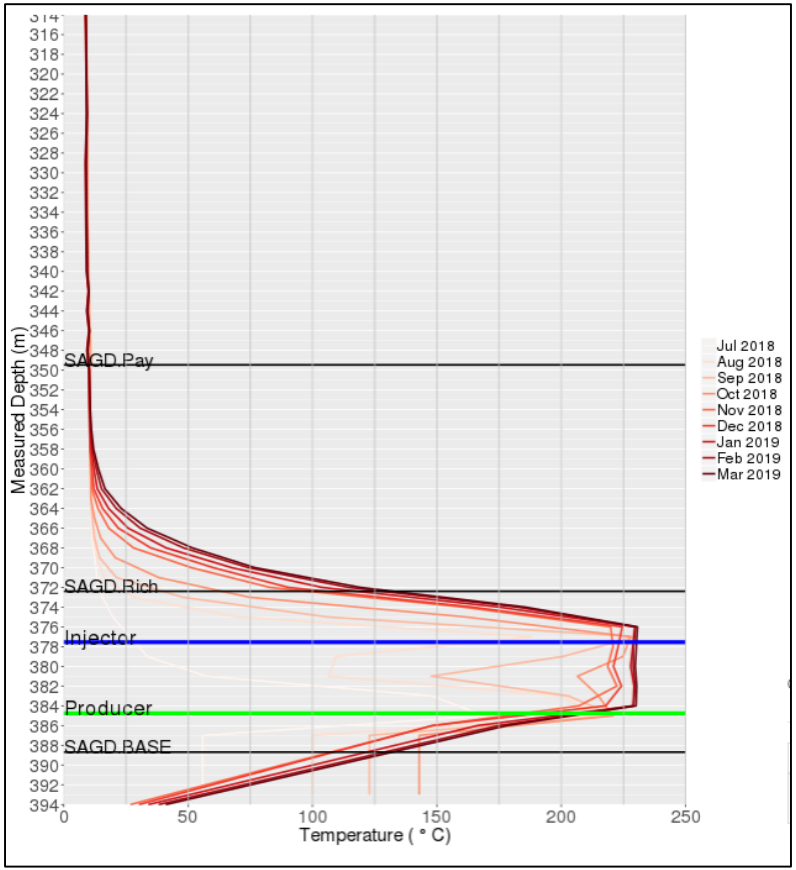
L09 Pad: CVE FCCL A15 LEISMER 15-23-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

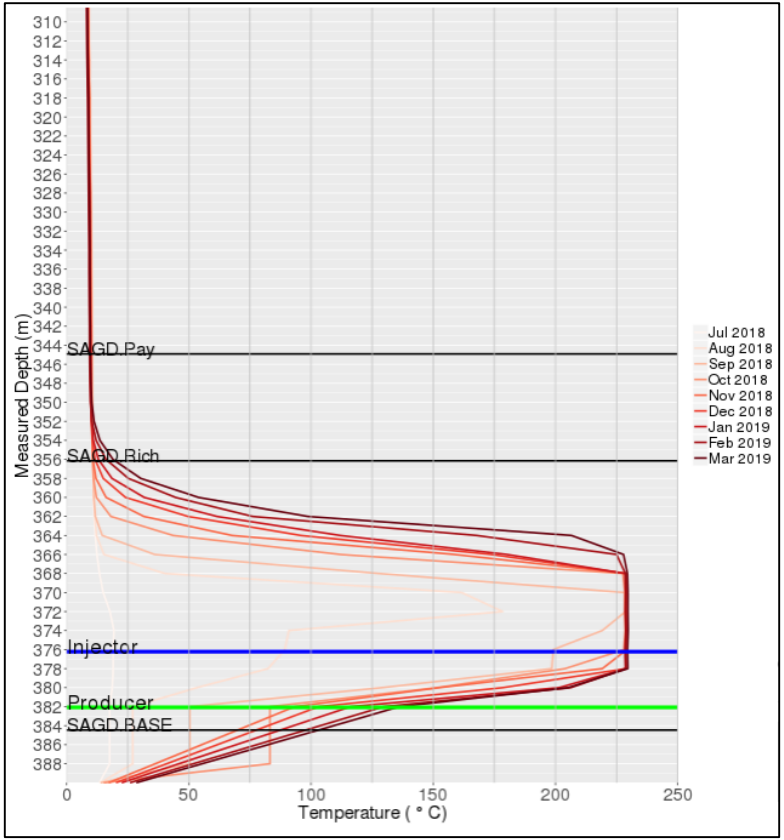
L05 Pad: CVE FCCL D14 LEISMER 14-14-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

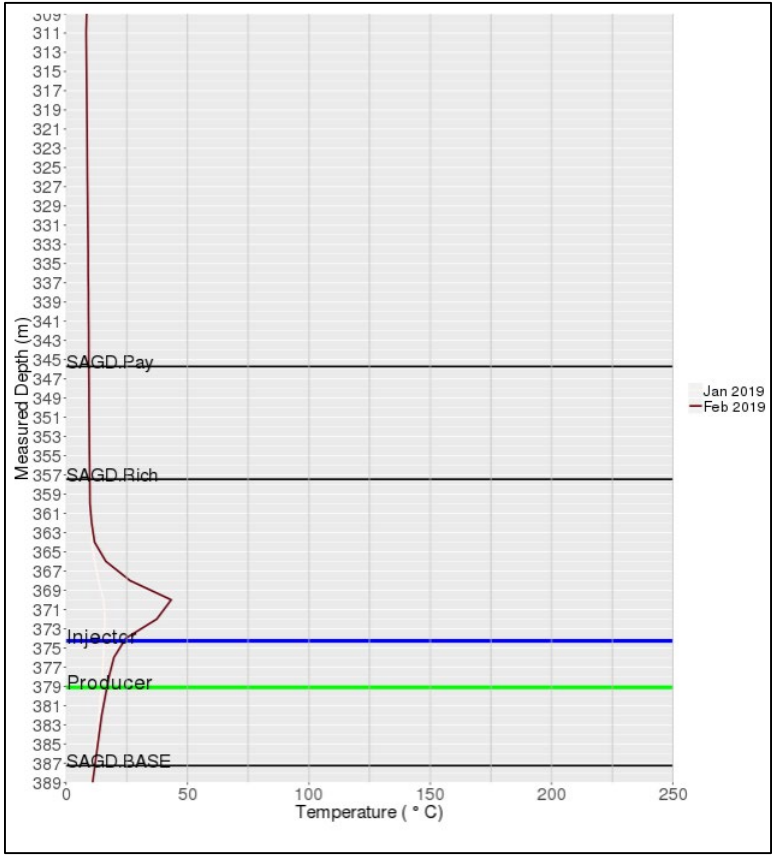
L05 Pad: CVE FCCL D11 LEISMER 11-14-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

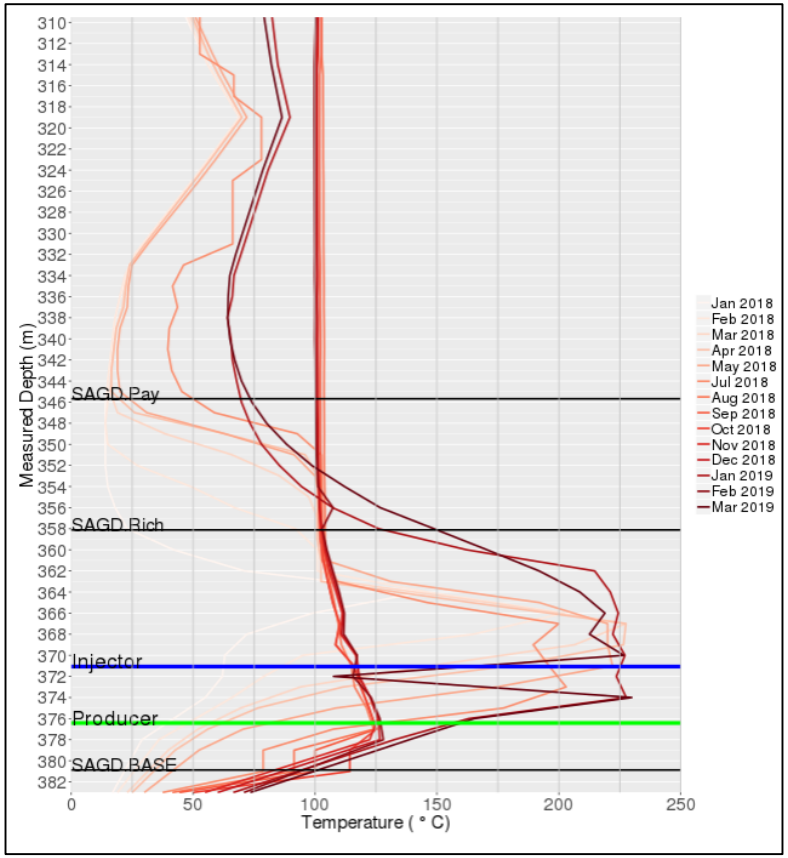
L05 Pad: CVE FCCL A13 LEISMER 13-14-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

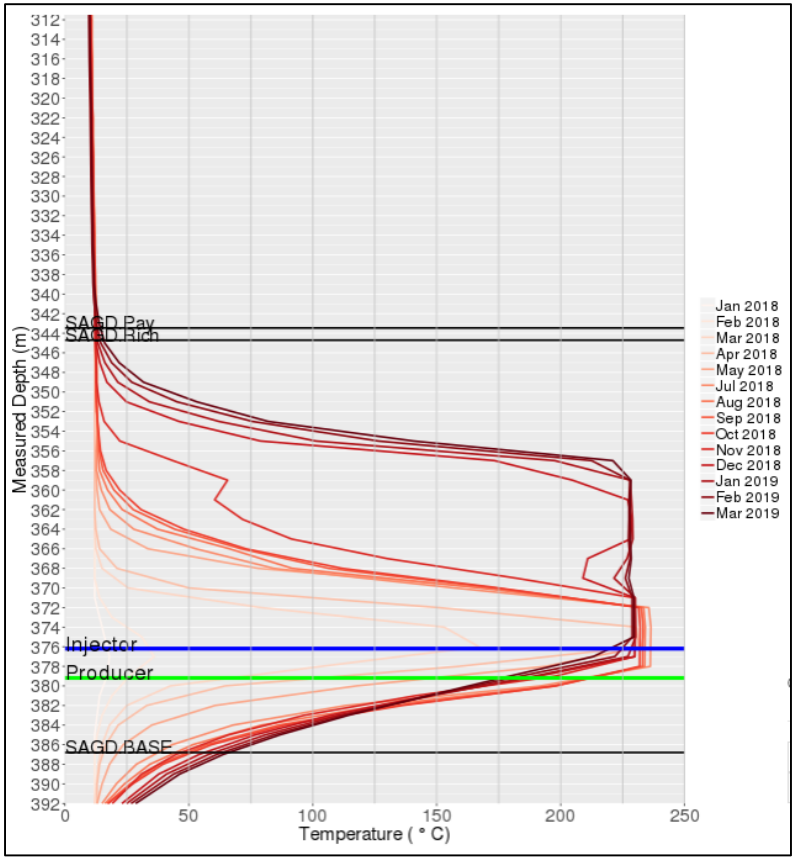
L03 Pad: CVE FCCL B9 LEISMER 9-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

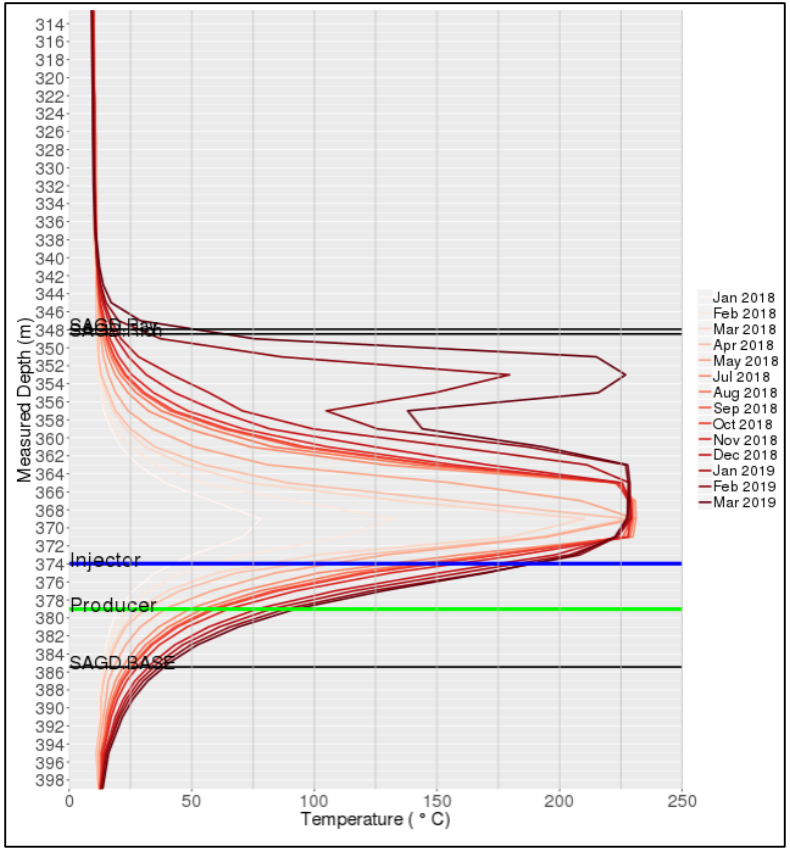
L03 Pad: CVE FCCL LEISMER 8-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

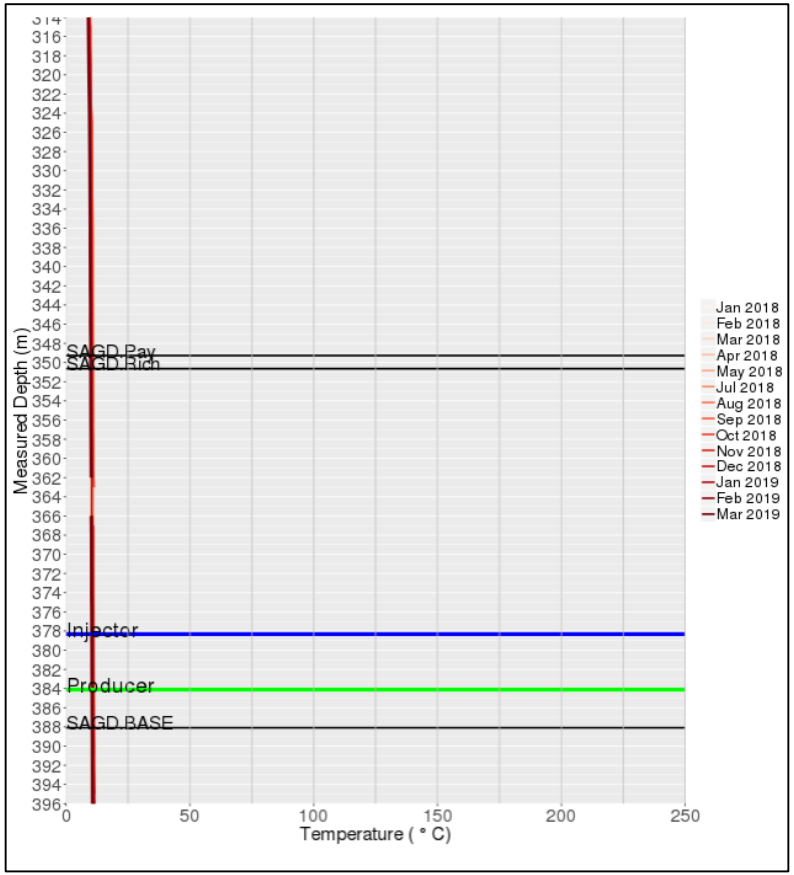
L03 Pad: CVE FCCL D2 LEISMER 2-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

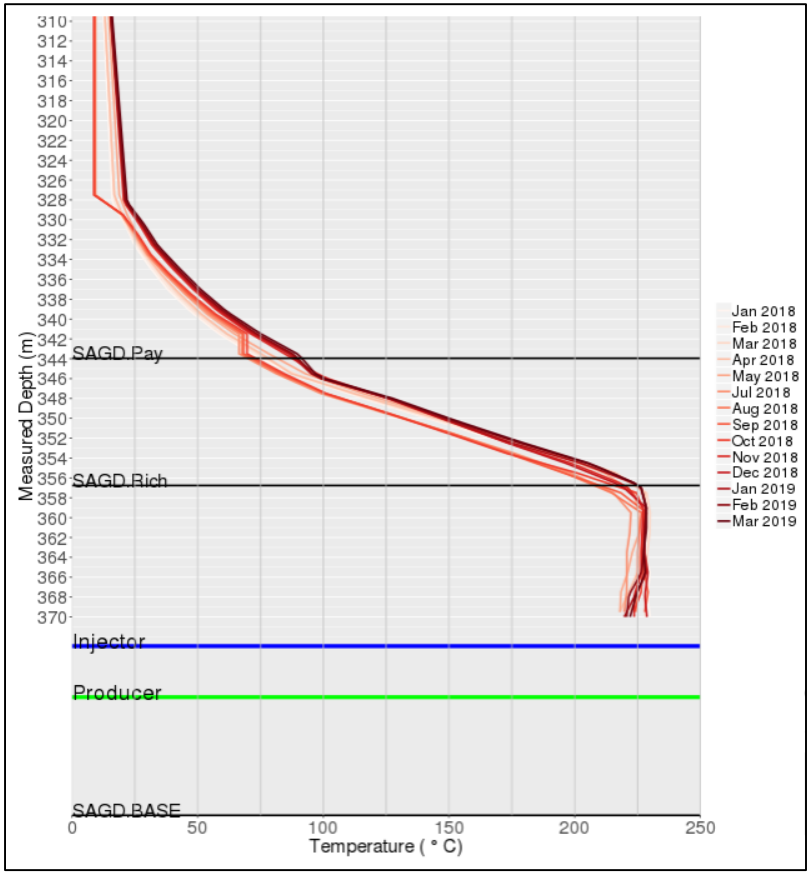
L03 Pad: CVE FCCL 2A2 LEISMER 2-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

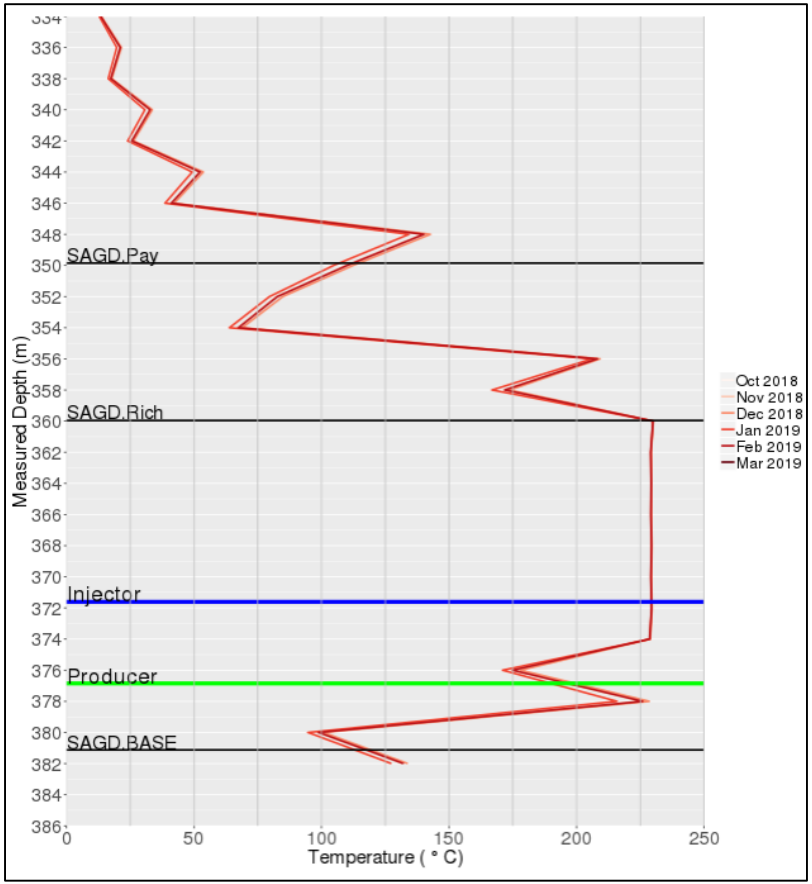
B11 Pad: CVE FCCL 2B11 LEISMER 11-14-76-6



2018 Cenovus Energy Inc.

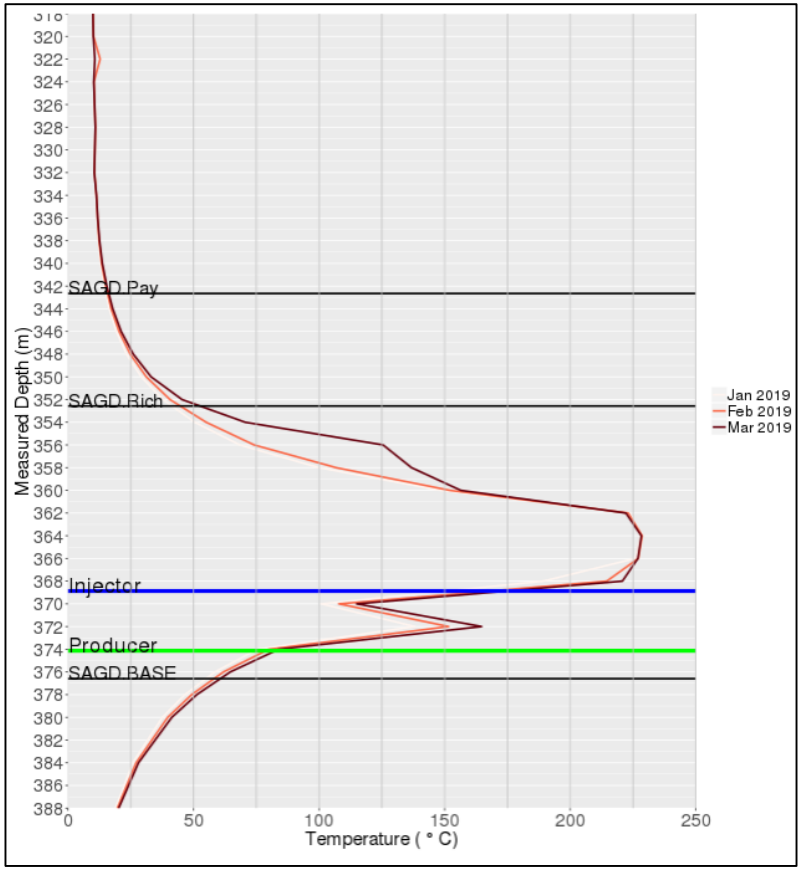
Thermocouple Data

B11 Pad: CVE FCCL D5 LEISMER 5-14-76-6



Thermocouple Data

B11 Pad: CVE FCCL 2B5 LEISMER 5-14-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

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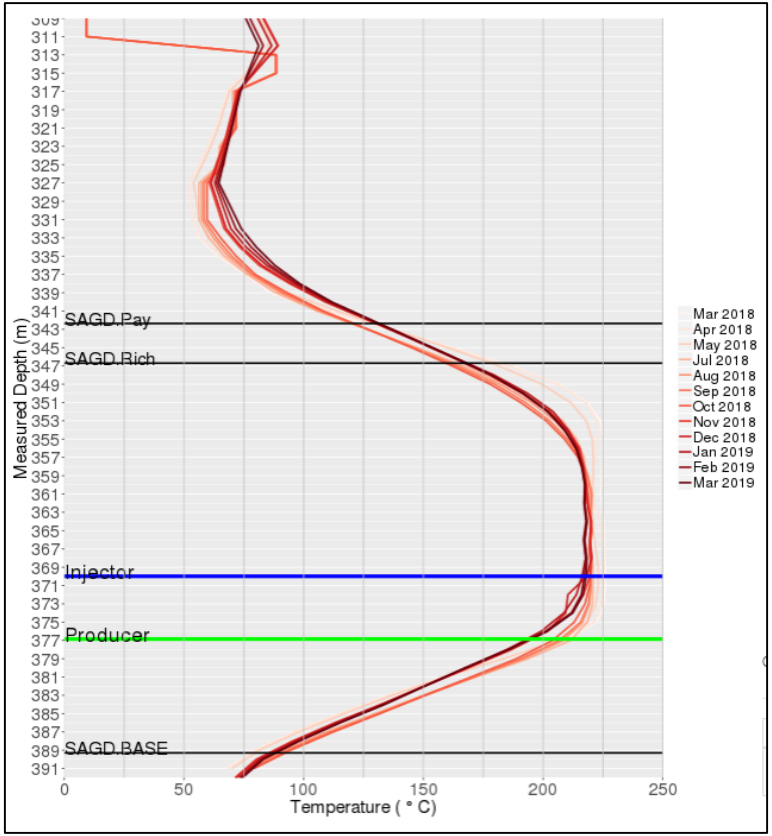
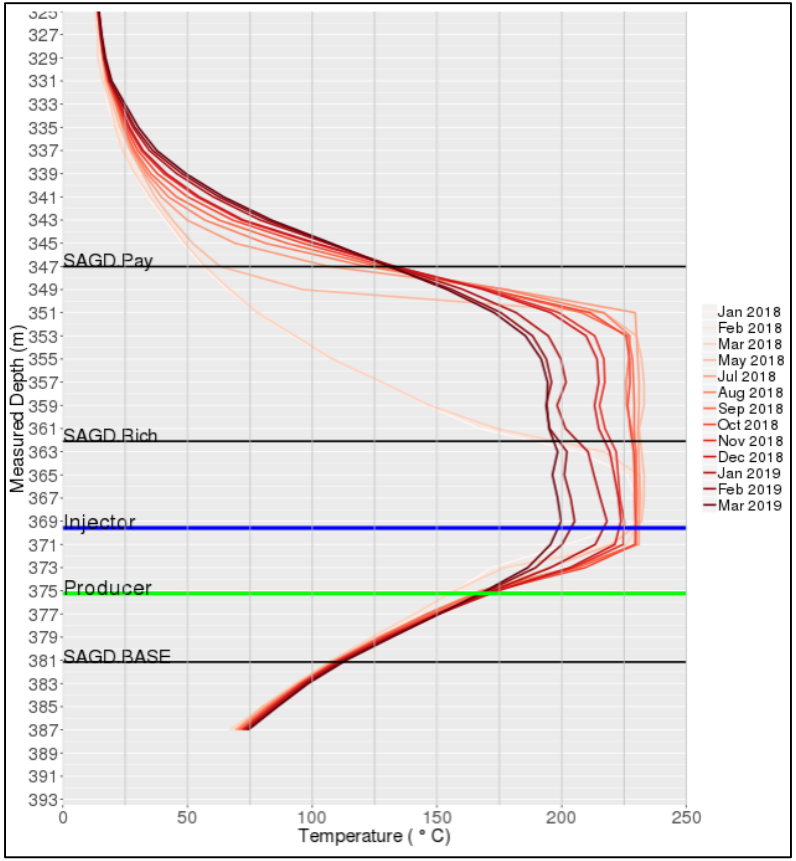


2018 Cenovus Energy Inc.

Thermocouple Data

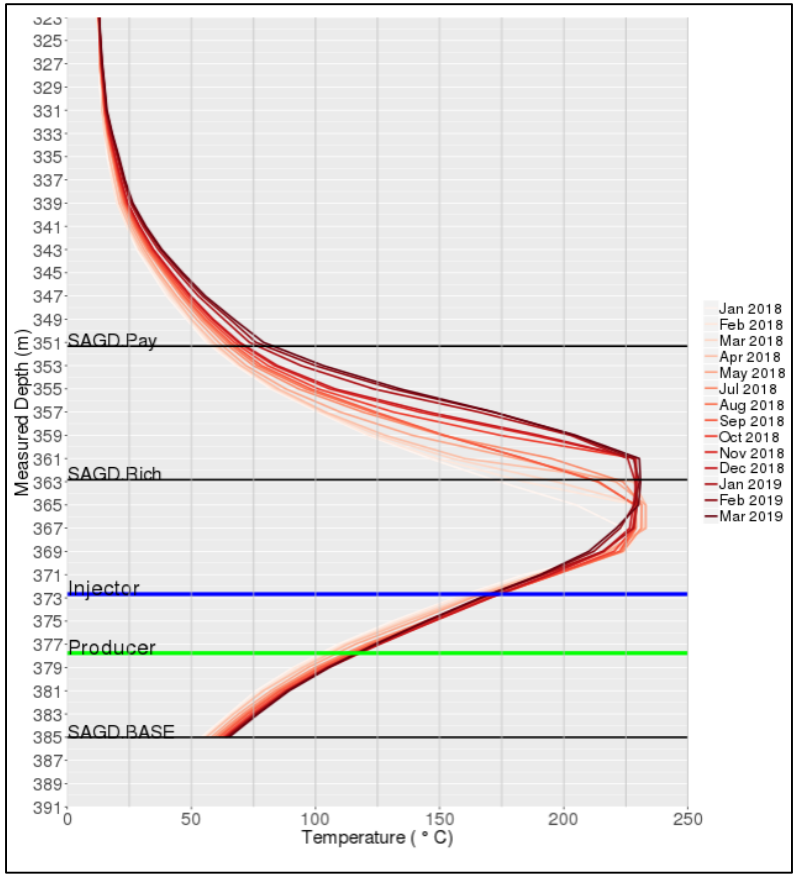
B08 Pad: CVE FCCL D1 LEISMER 1-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

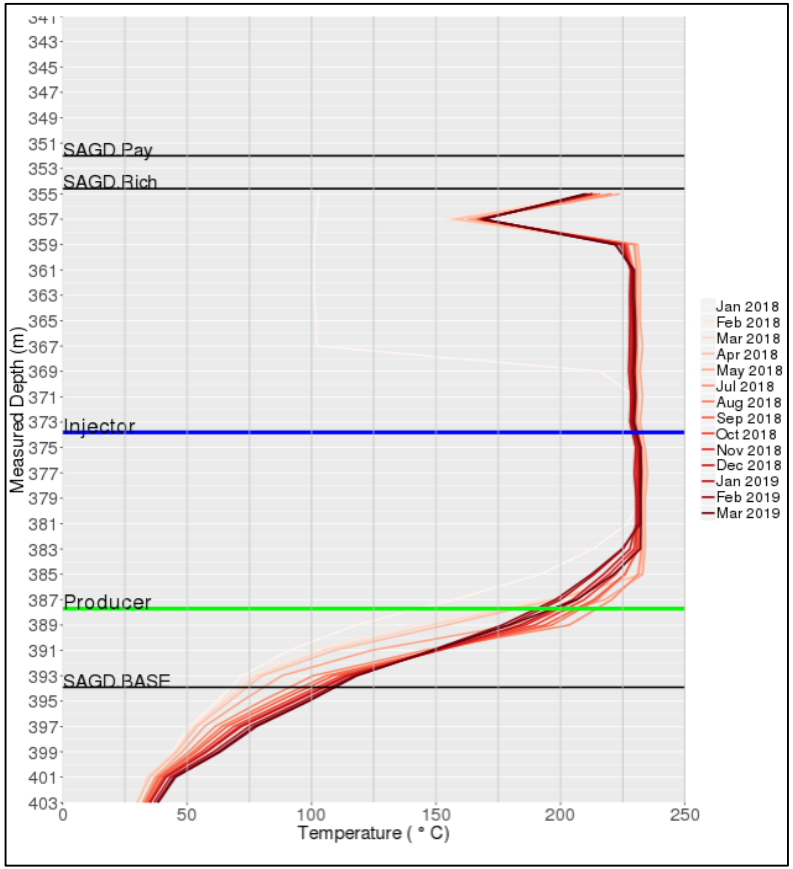
B08 Pad: CVE FCCL B1 LEISMER 1-15-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

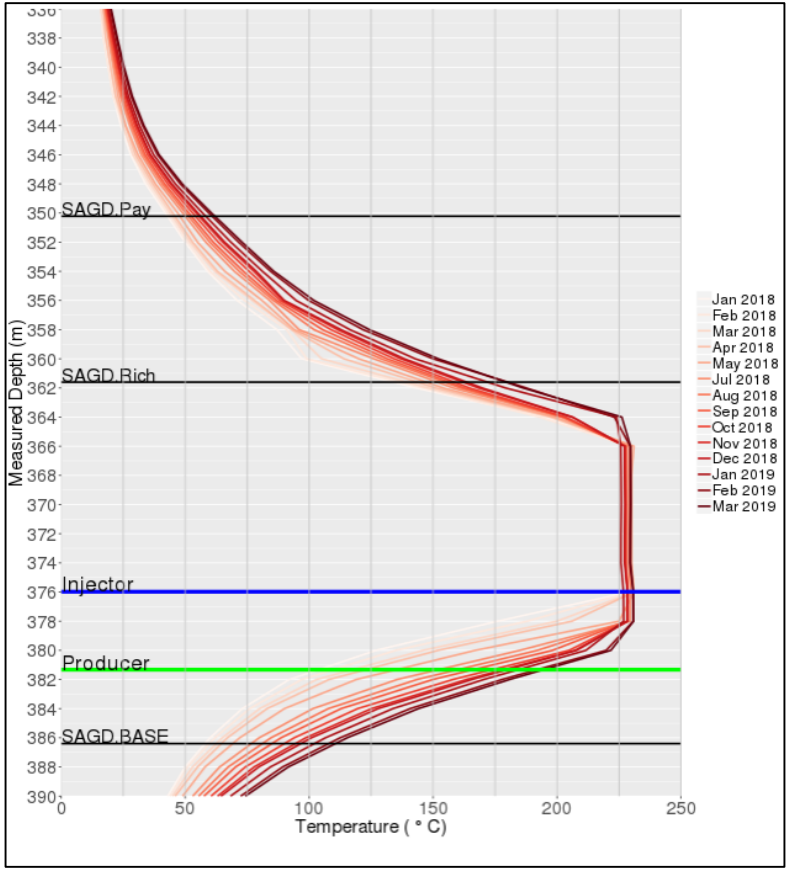
B08 Pad: CVE FCCL C13 LEISMER 13-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

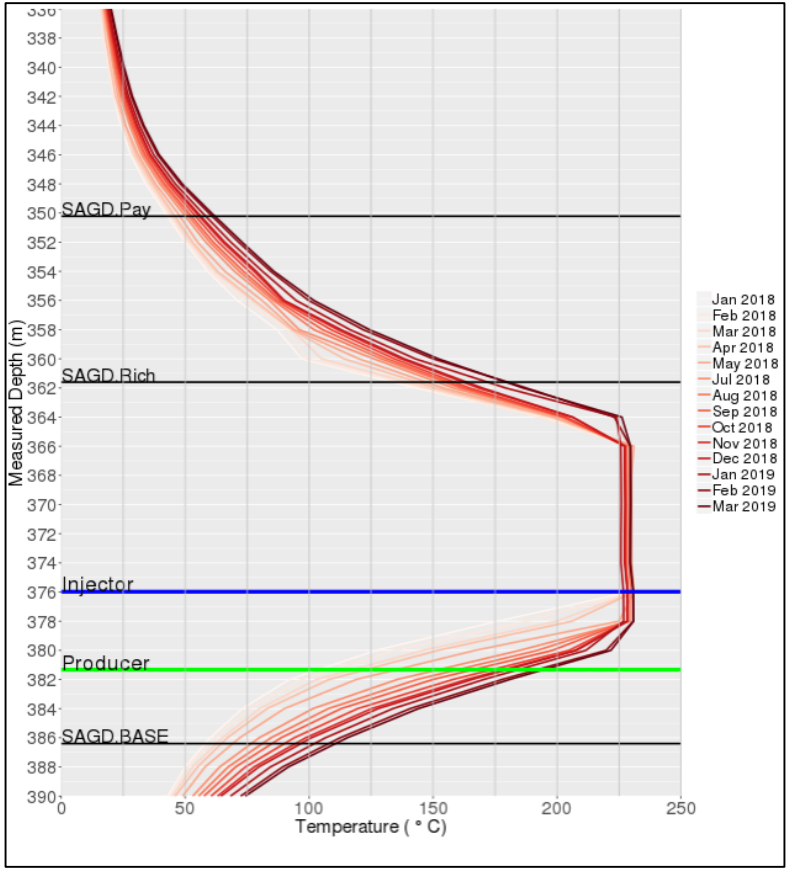
B08 Pad: CVE FCCL C12 LEISMER 12-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

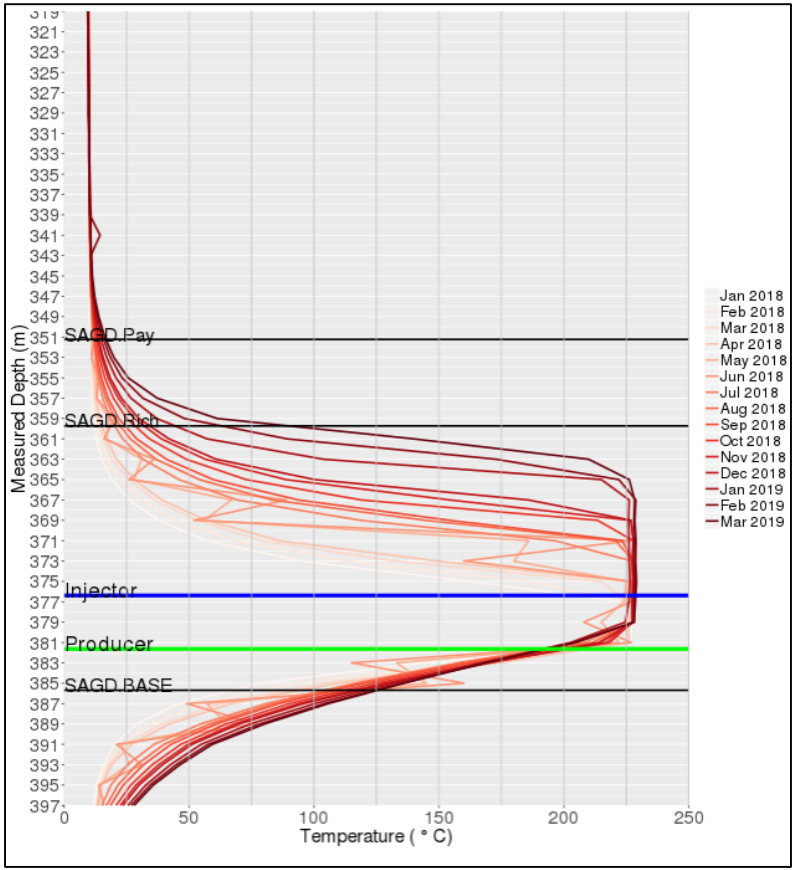
B08 Pad: CVE FCCL C12 LEISMER 12-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

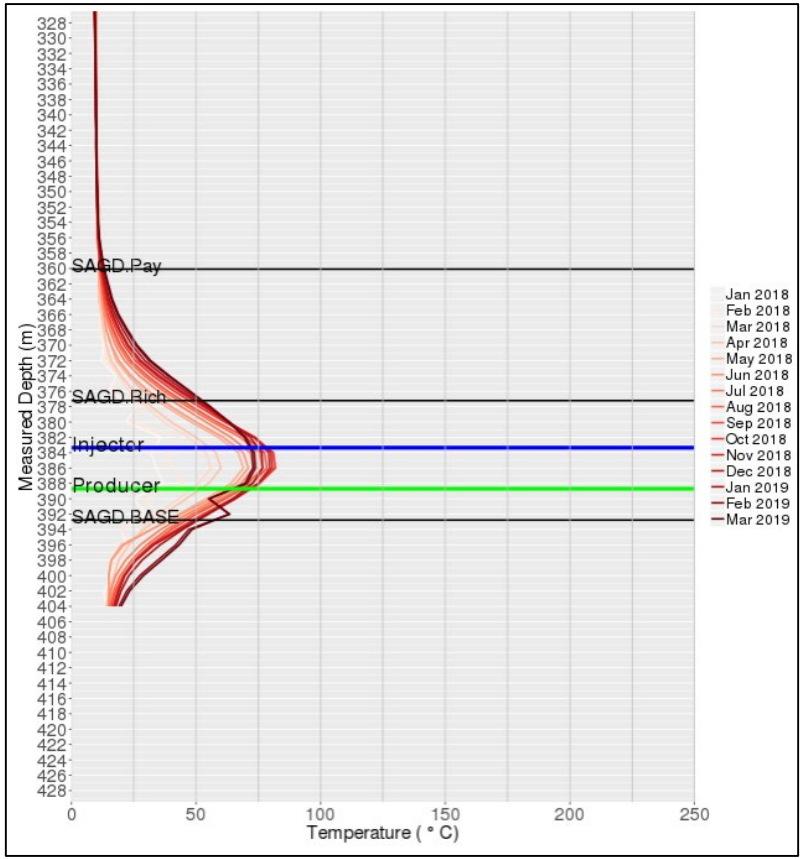
H03 Pad: CVE FCCL 2C9 LEISMER 9-10-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

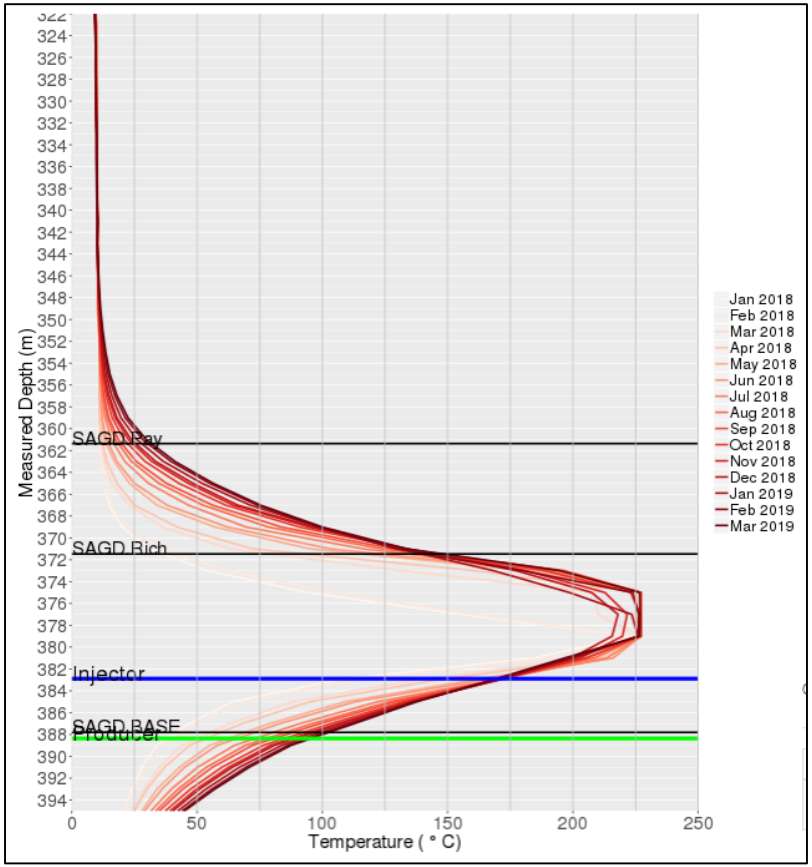
H03 Pad: CVE FCCL D8 LEISMER 8-10-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

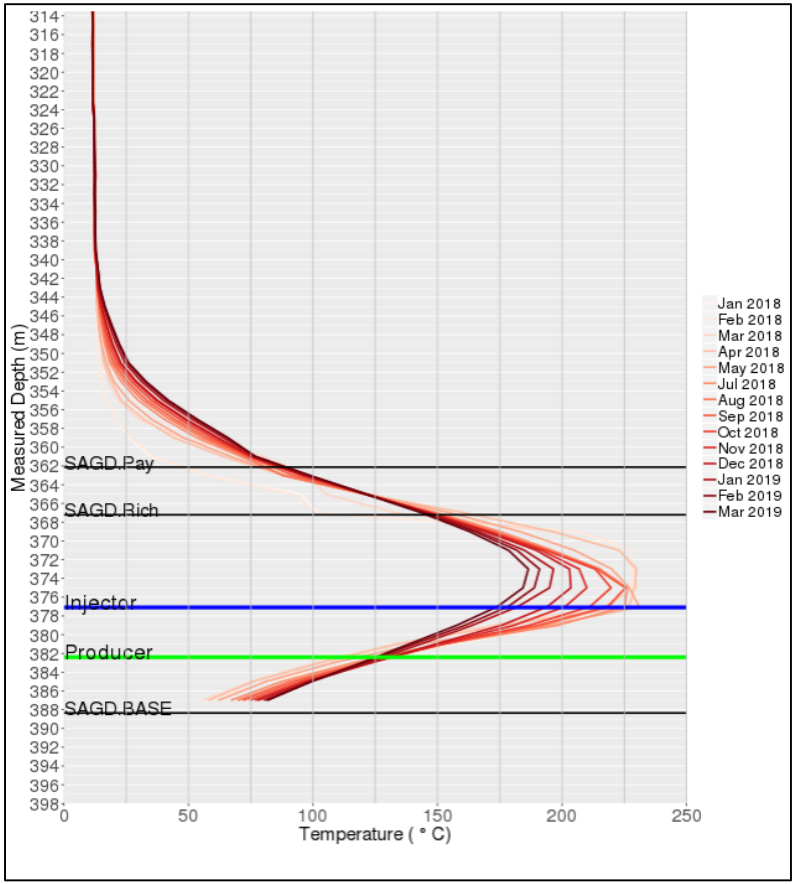
H03 Pad: CVE FCCL D7 LEISMER 7-10-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

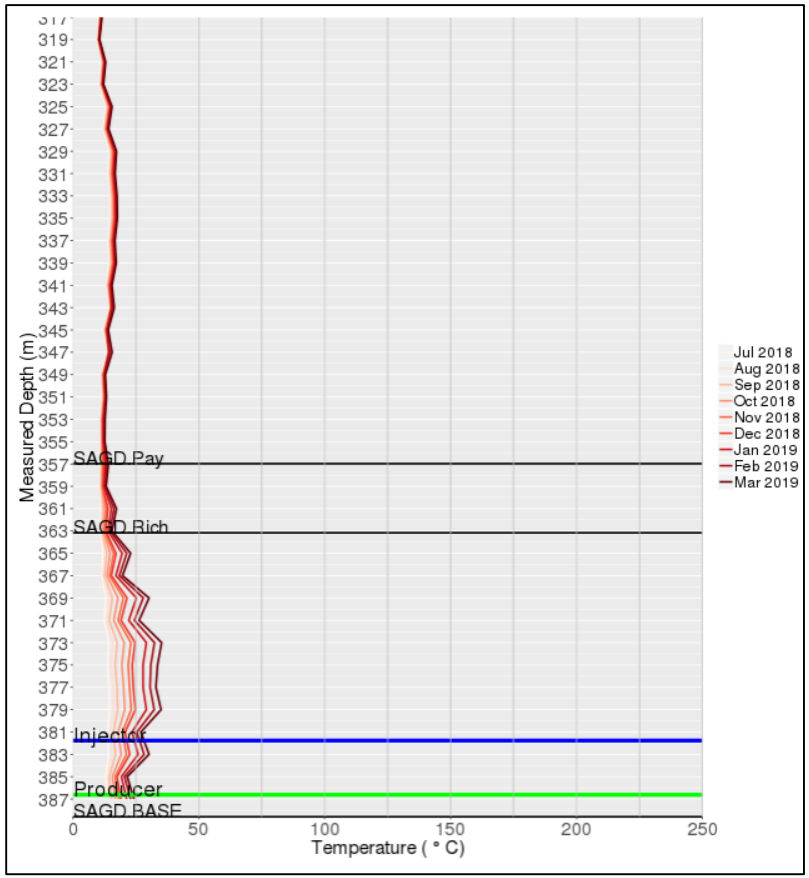
H01 Pad: CVE FCCL D14 LEISMER 14-10-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

H01 Pad: CVE FCCL B15 LEISMER 15-10-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

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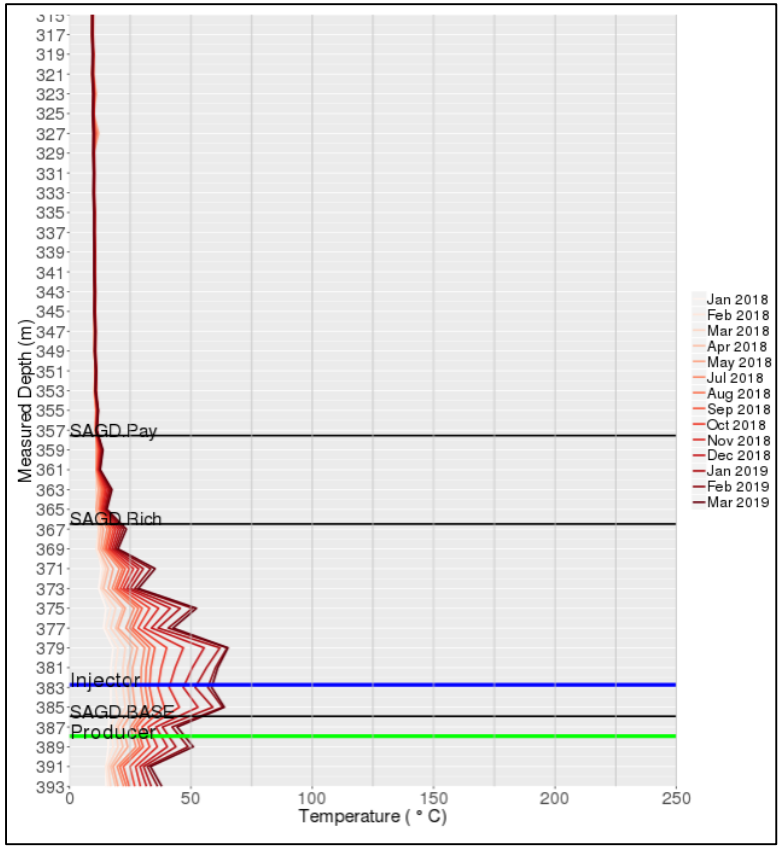
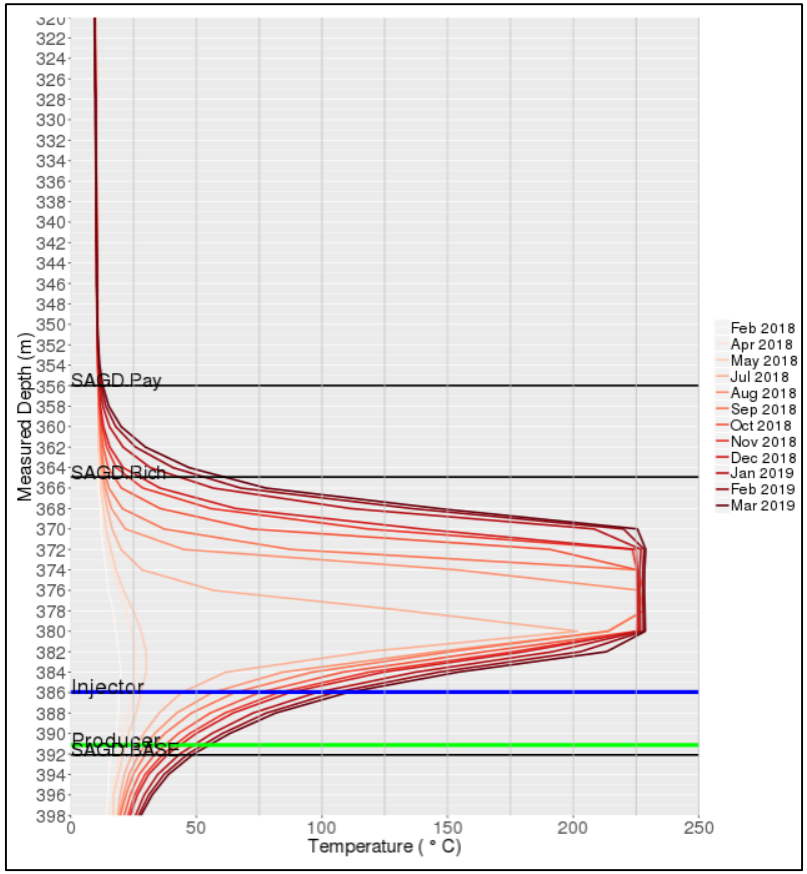


2018 Cenovus Energy Inc.

Thermocouple Data

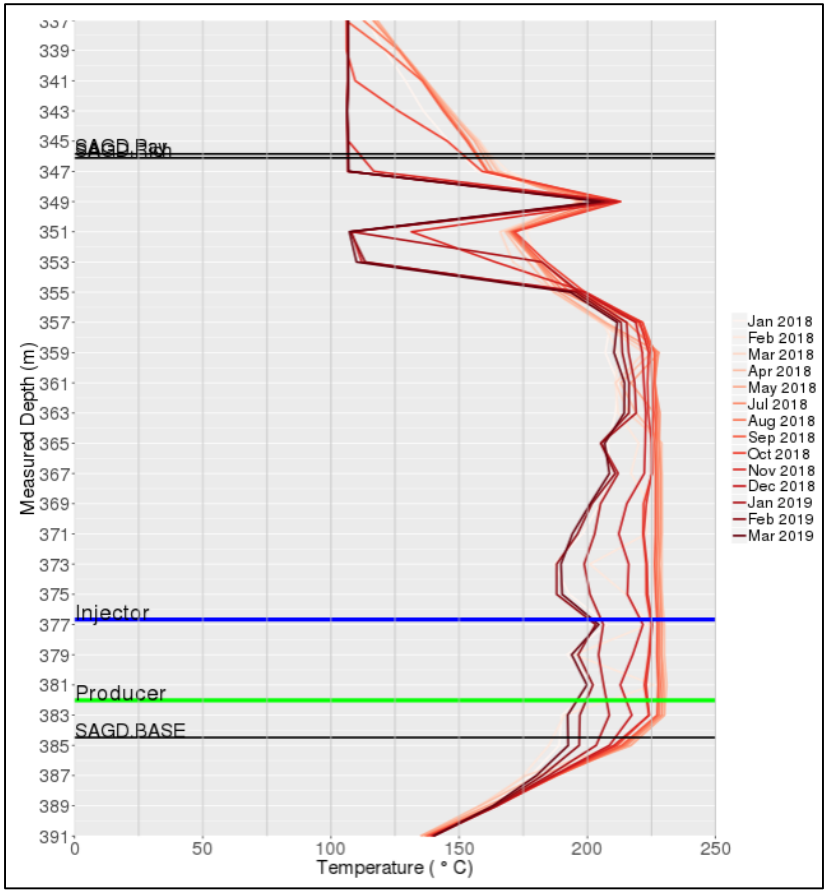
H01 Pad: CVE FCCL A12 LEISMER 12-10-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

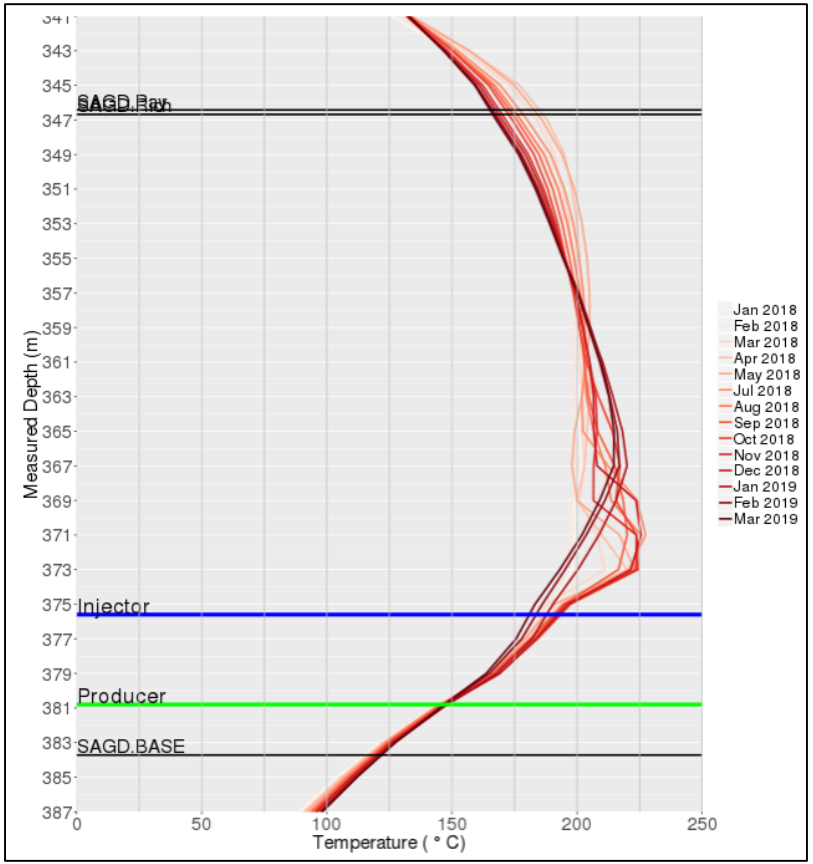
B04 Pad: CVE FCCL A7 LEISMER 7-14-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

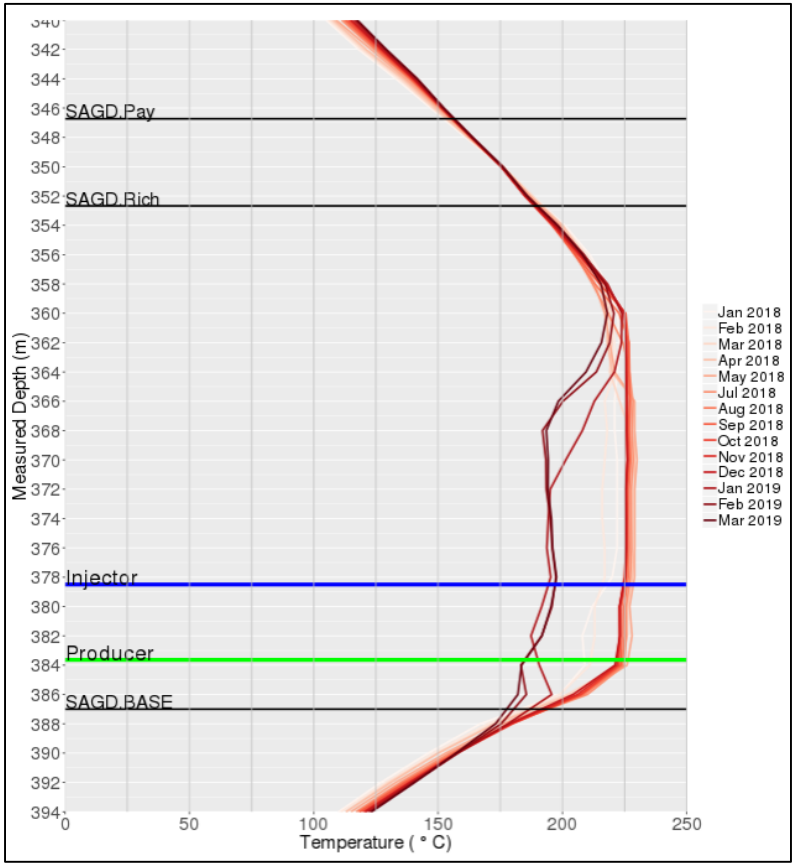
B04 Pad: CVE FCCL D1 LEISMER 1-14-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

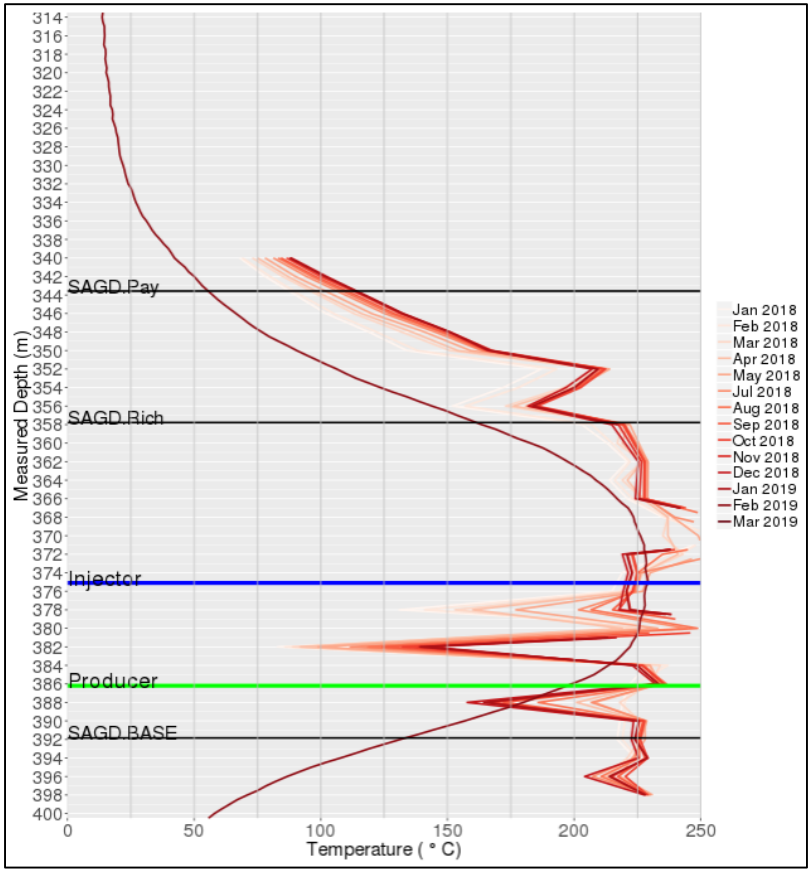
B04 Pad: CVE FCCL A2 LEISMER 2-14-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

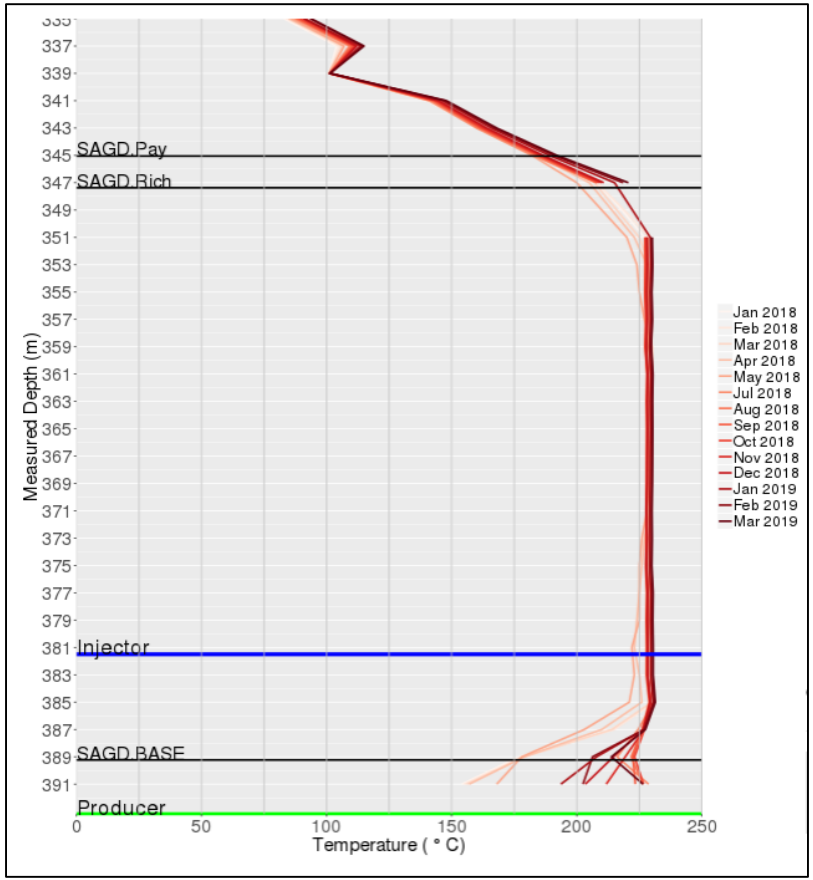
B05 Pad: CVE FCCL 2C14 LEISMER 14-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

B05 Pad: CVE FCCL C11 LEISMER 11-11-76-6



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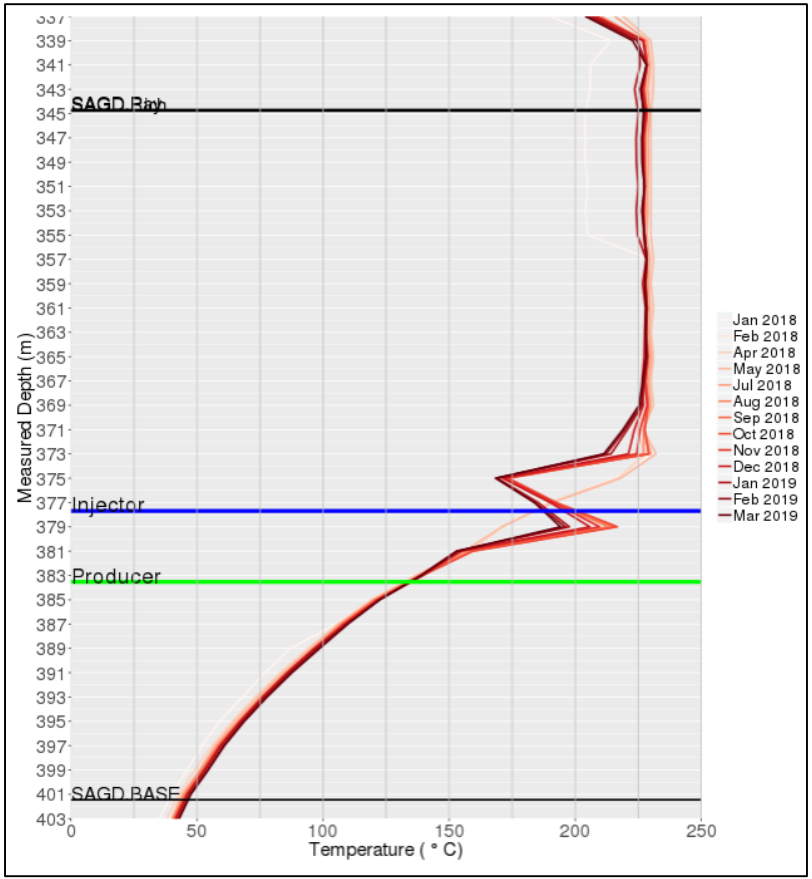
Thermocouple Data

B05 Pad: CVE FCCL B15 LEISMER 15-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

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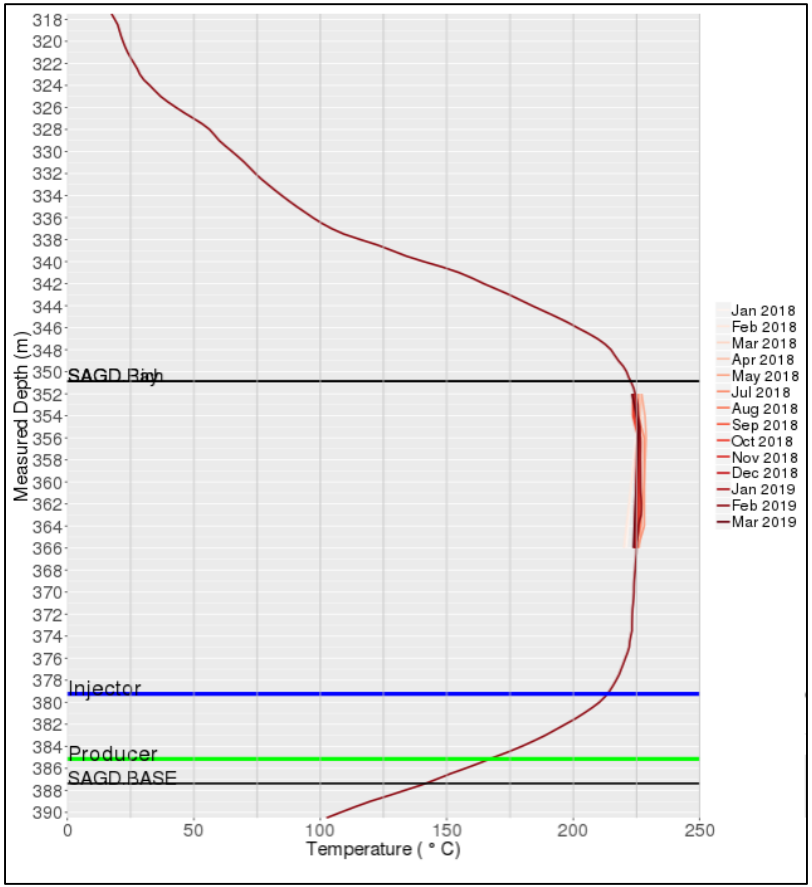
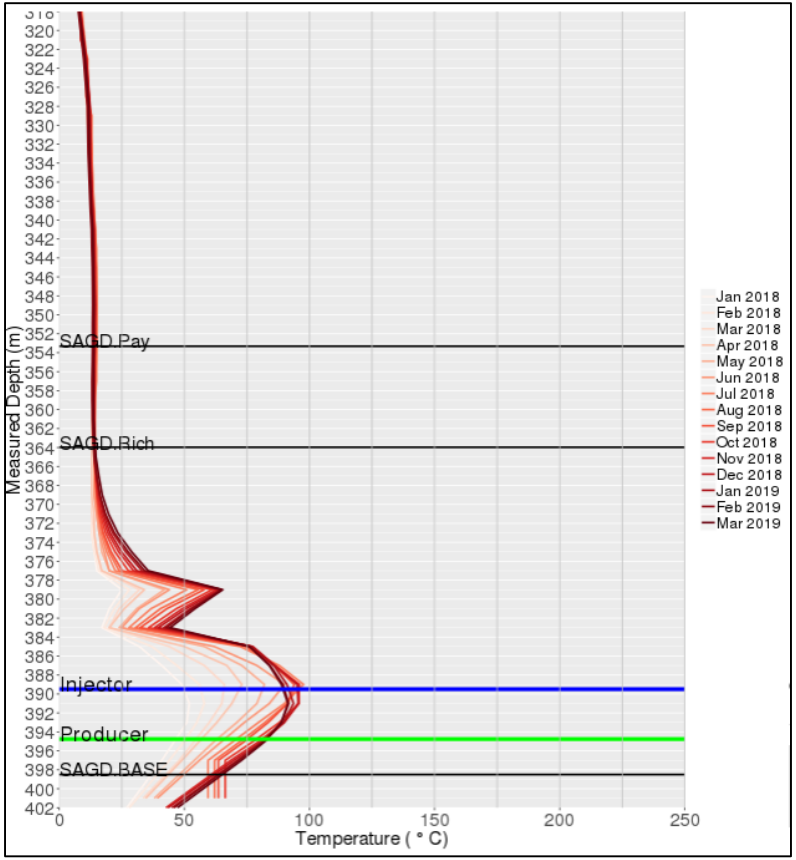


2018 Cenovus Energy Inc.

Thermocouple Data

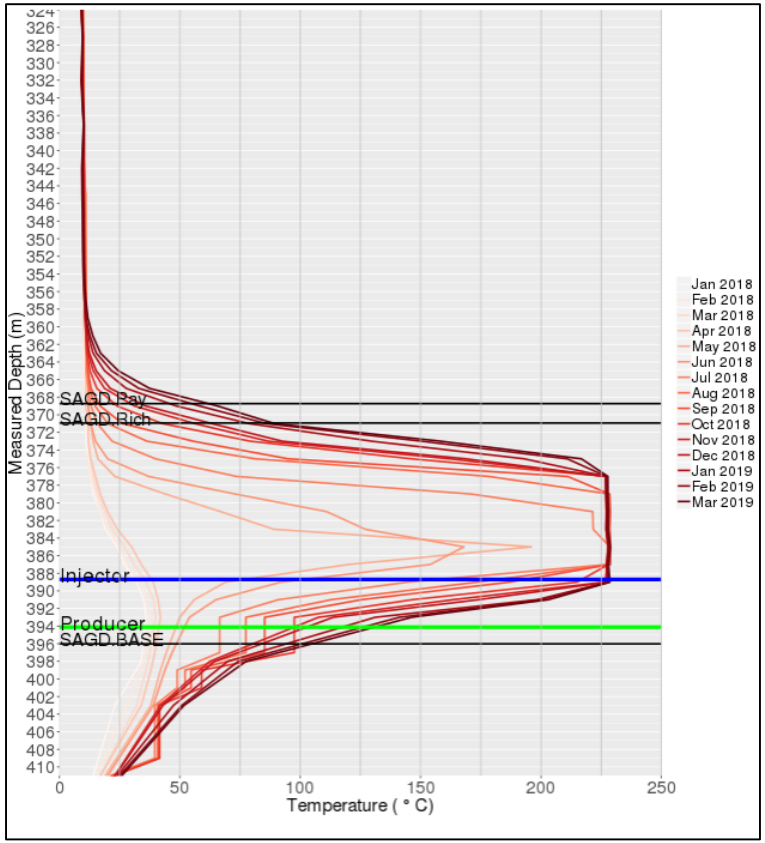
J03 Pad: CVE FCCL A12 LEISMER 12-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

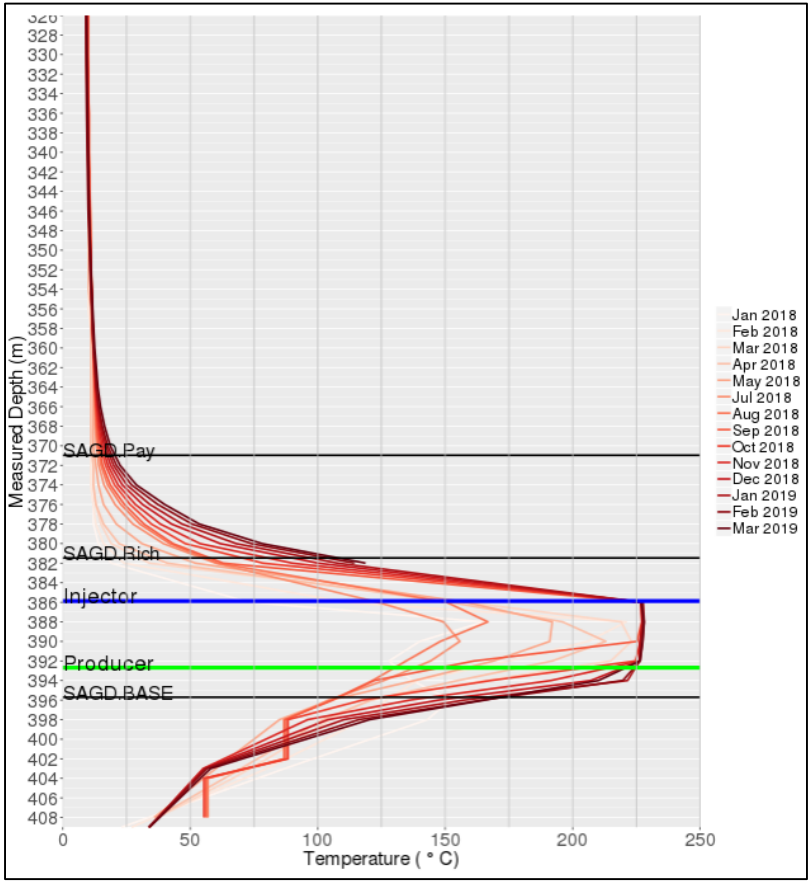
J03 Pad: CVE FCCL A8 LEISMER 8-10-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

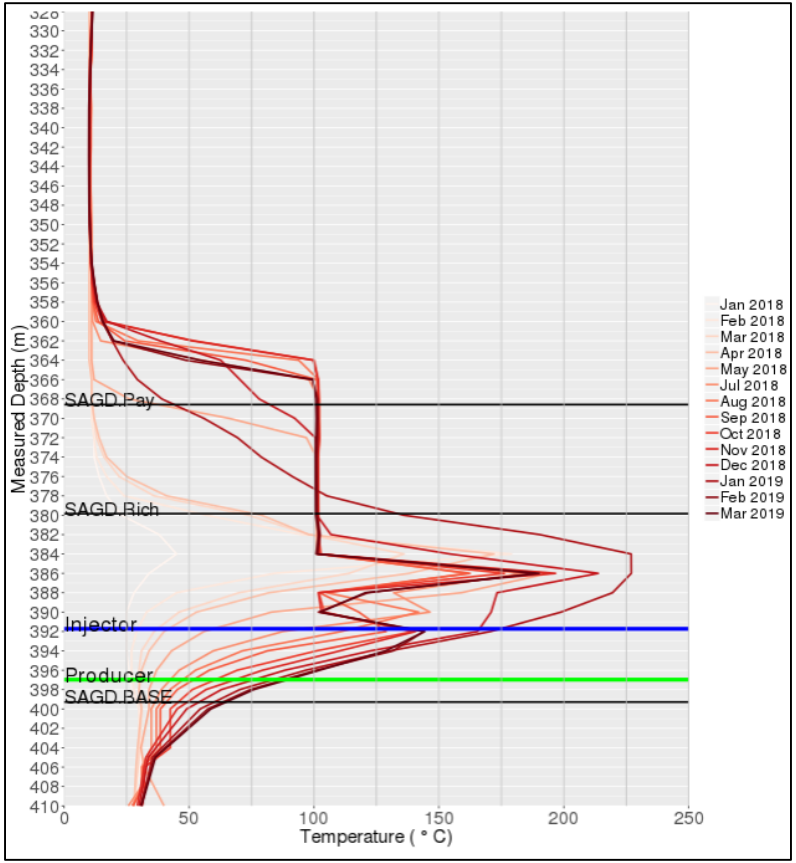
J01 Pad: CVE FCCL D13 KIRBY 13-2-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

J01 Pad: CVE FCCL A1 LEISMER 1-10-76-6



2018 Cenovus Energy Inc.

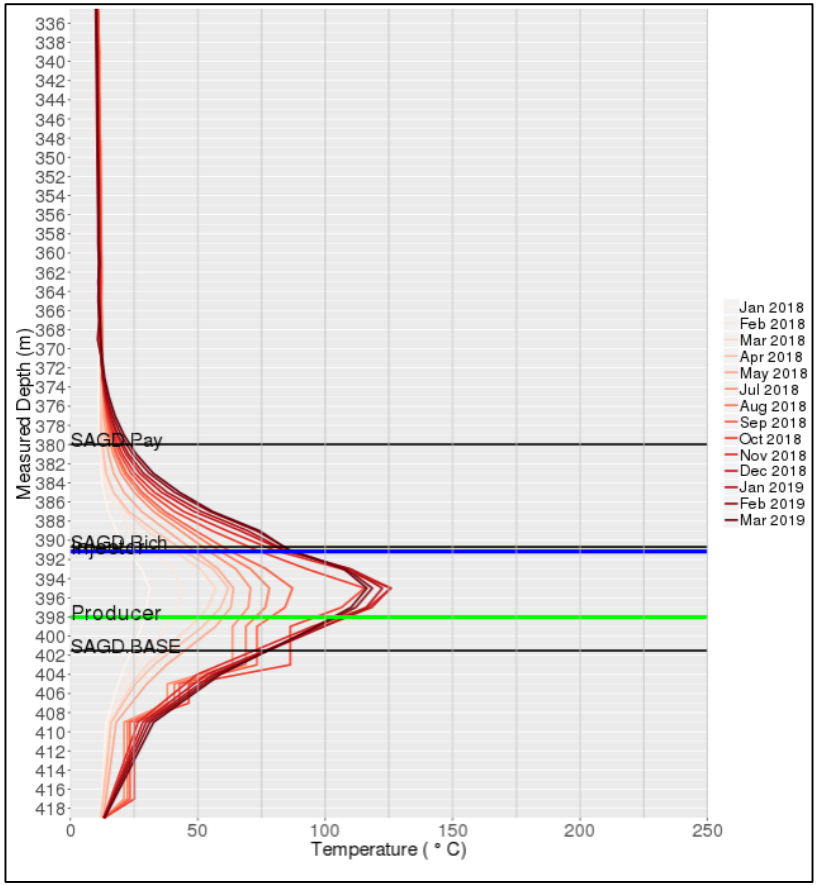
Thermocouple Data

J01 Pad: CVE FCCL A16 KIRBY 16-3-76-6

2018 Cenovus Energy Inc.

Thermocouple Data

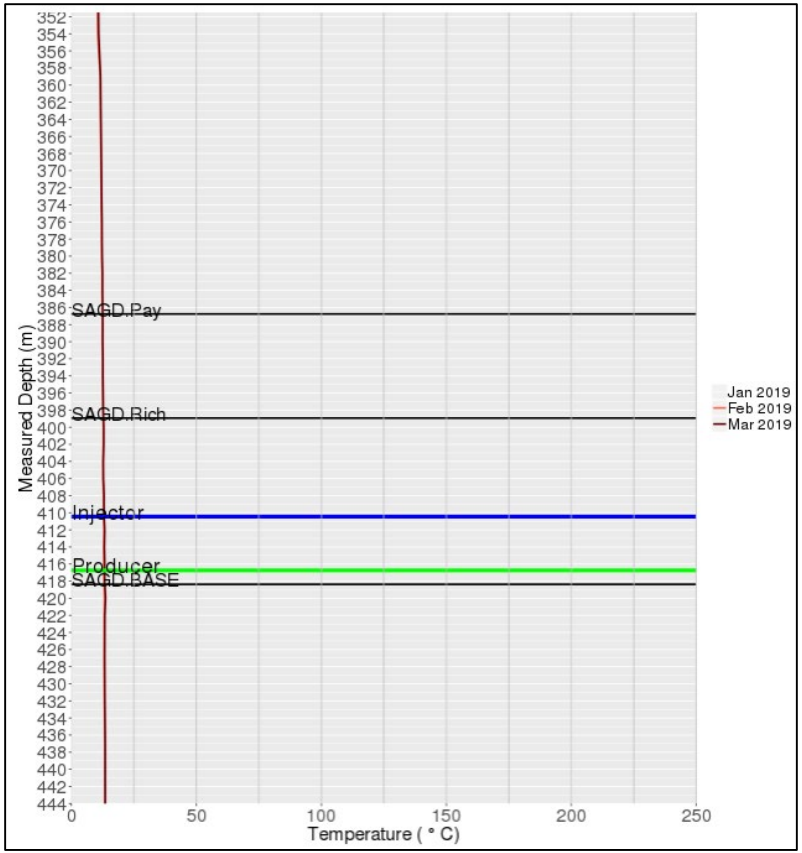
J01 Pad: CVE FCCL C12 KIRBY 12-2-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

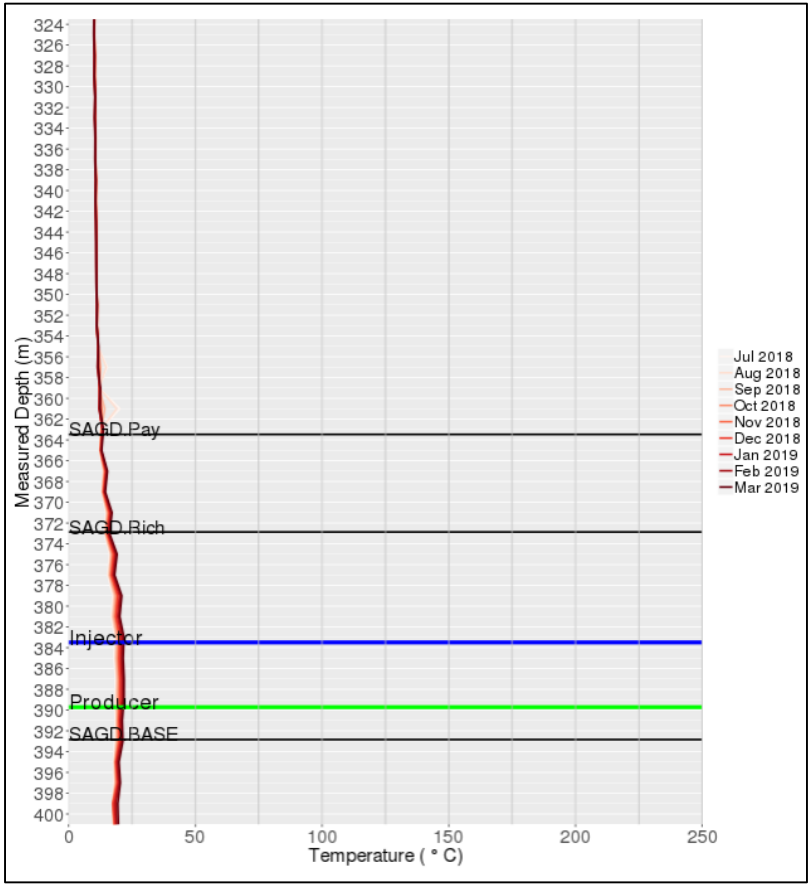
J09 Pad: CVE FCCL 2A3 KIRBY 3-2-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

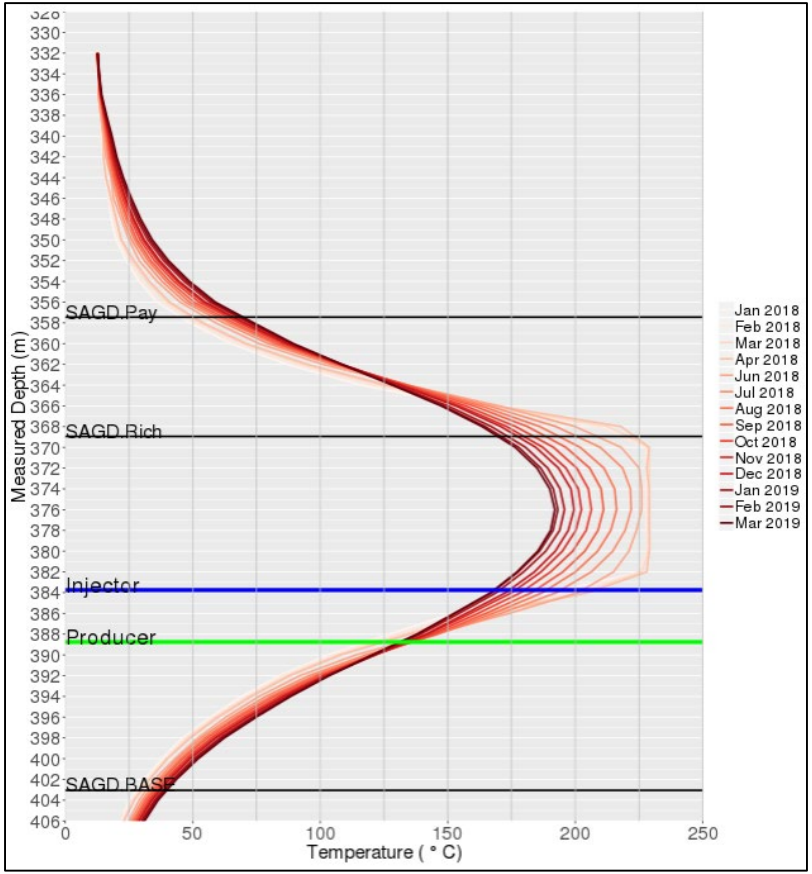
B07B Pad: CVE FCCL D14 KIRBY 14-2-76-6



2018 Cenovus Energy Inc.

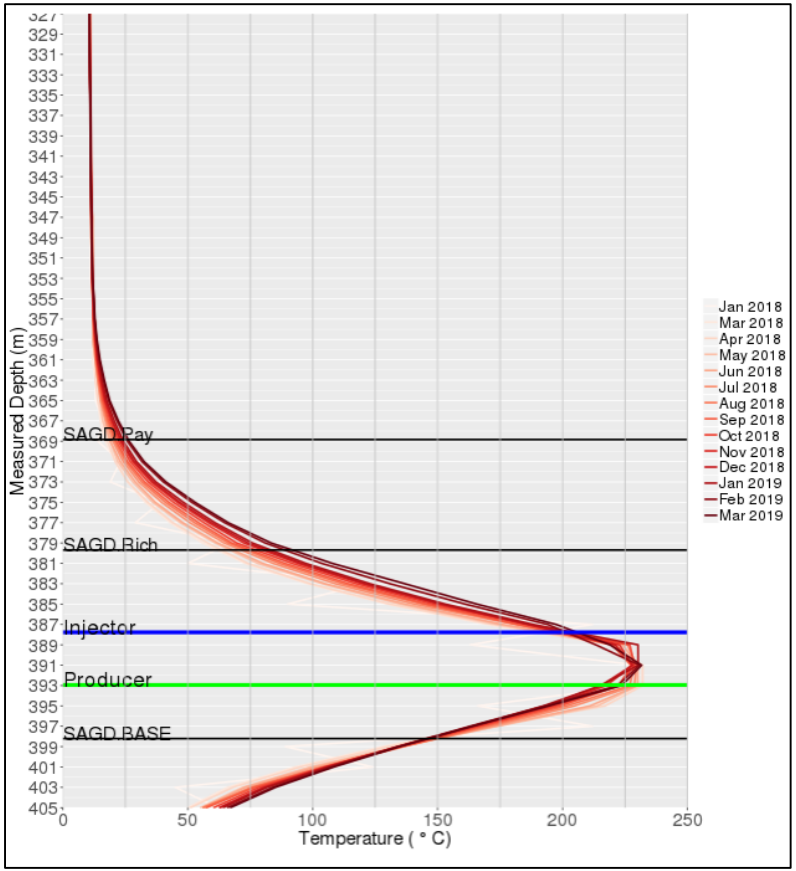
Thermocouple Data

B07B Pad: CVE FCCL D3 LEISMER 3-11-76-6



Thermocouple Data

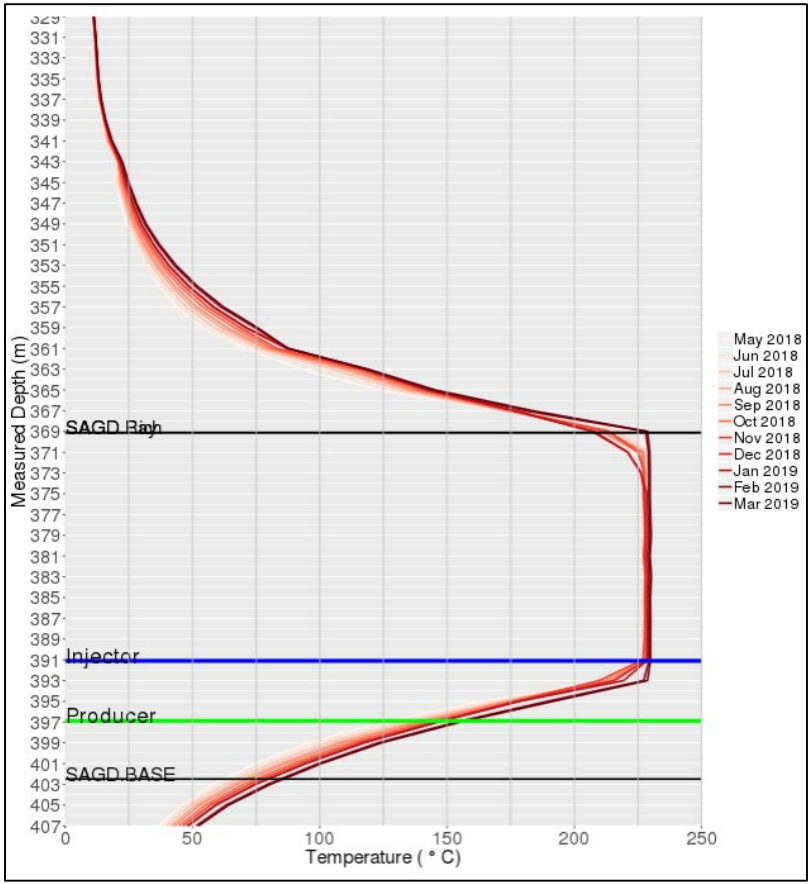
B07B Pad: CVE FCCL D15 KIRBY 15-2-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

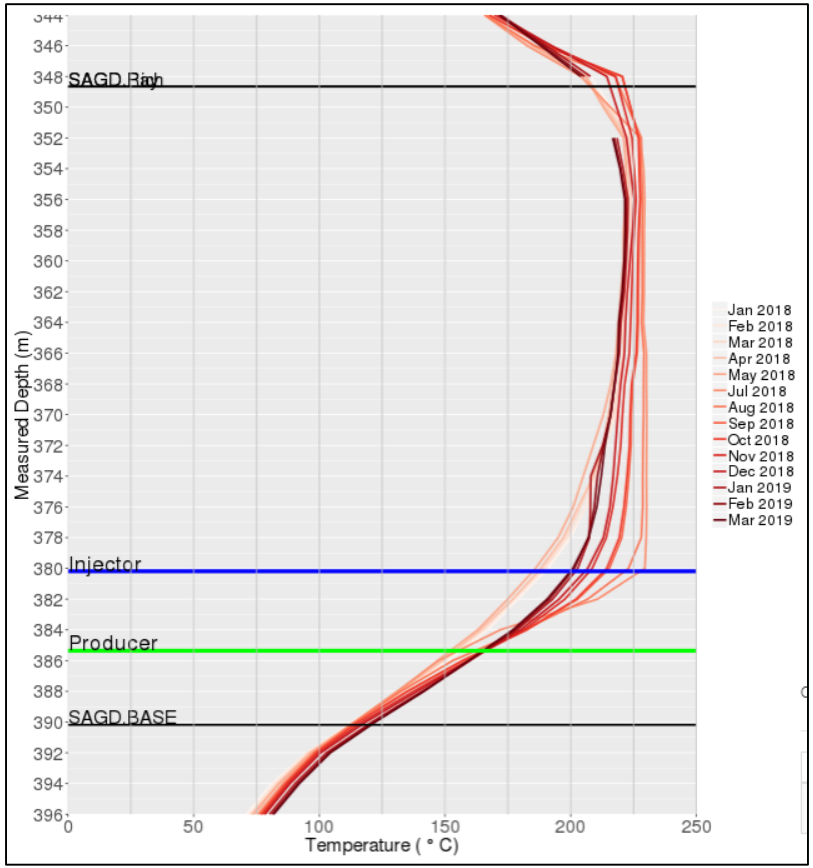
B07B Pad: CVE FCCL A8 LEISMER 8-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

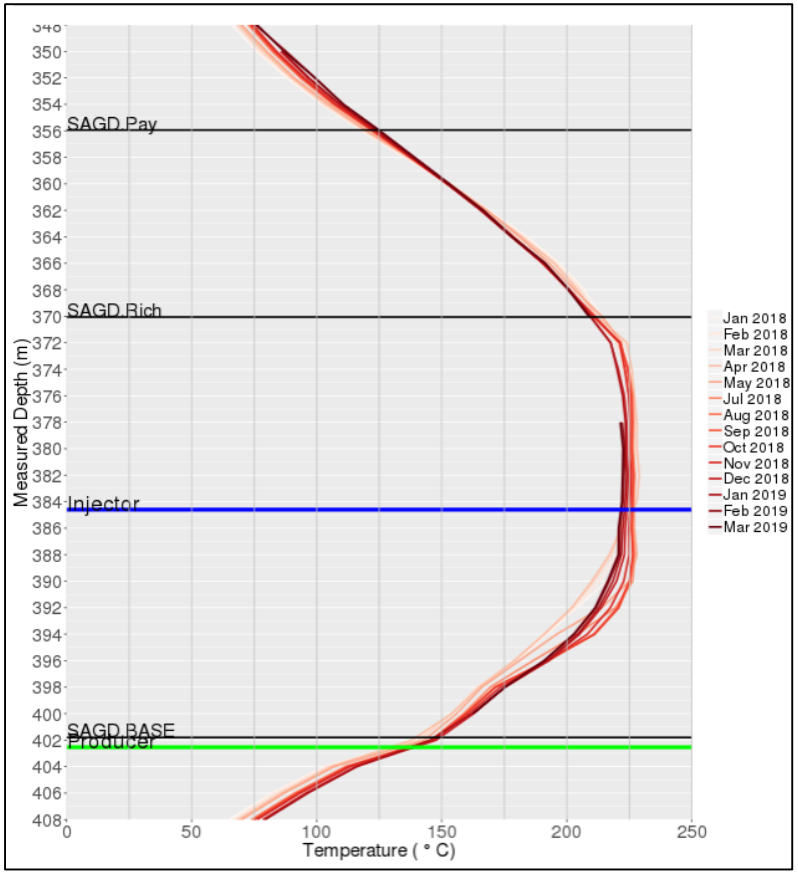
B03 Pad: CVE FCCL A10 LEISMER 10-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

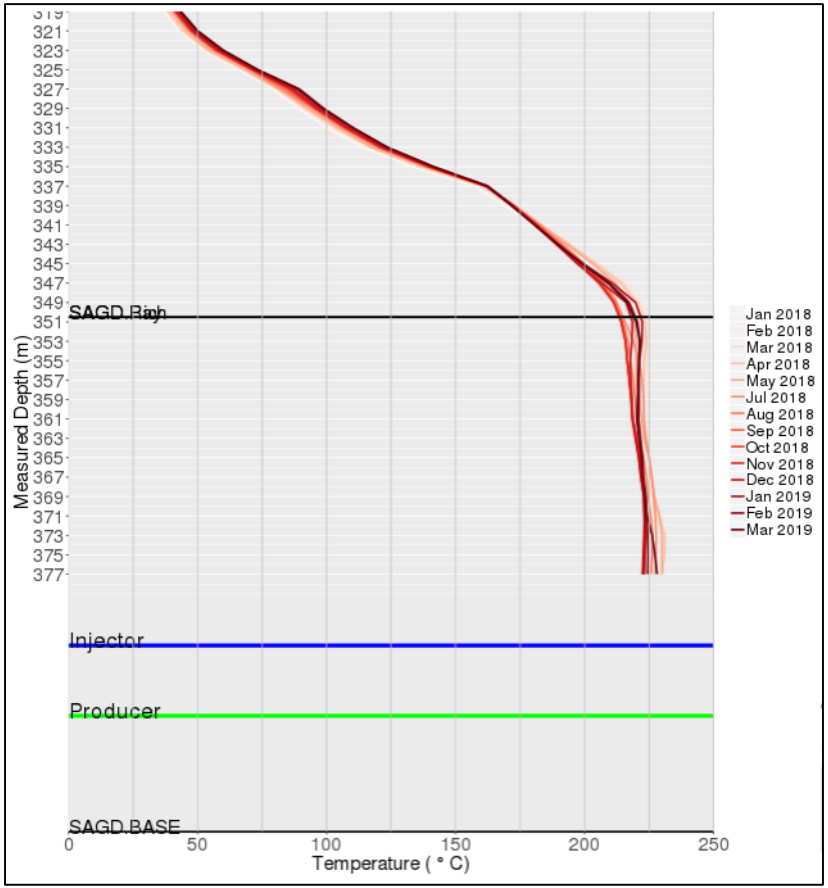
B03 Pad: CVE FCCL A9 LEISMER 9-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

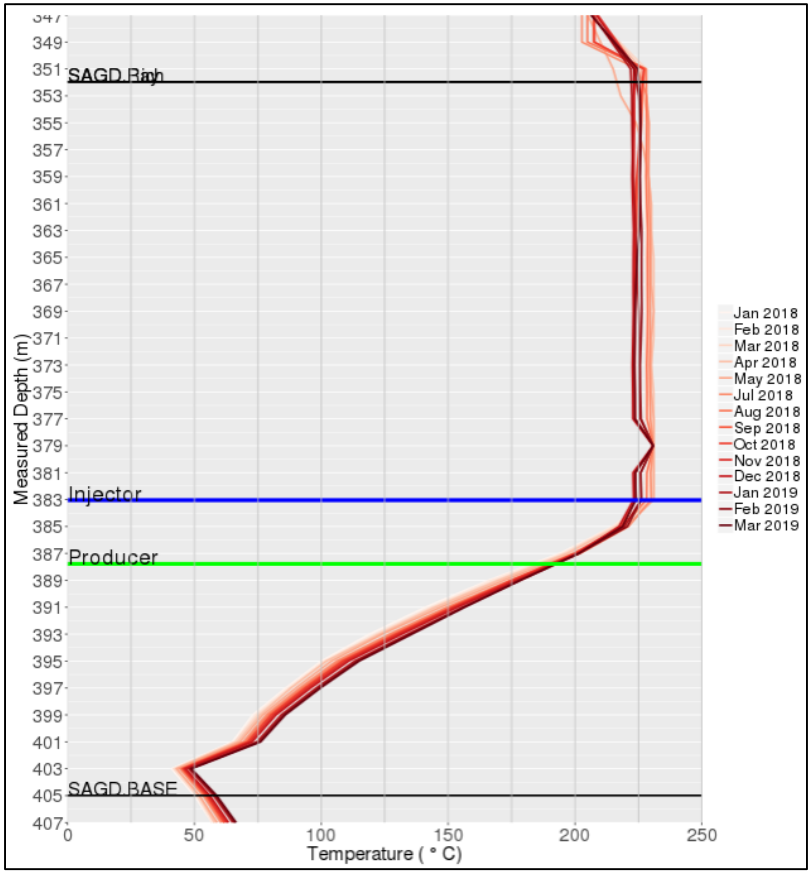
B03 Pad: CVE FCCL B13 LEISMER 13-12-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

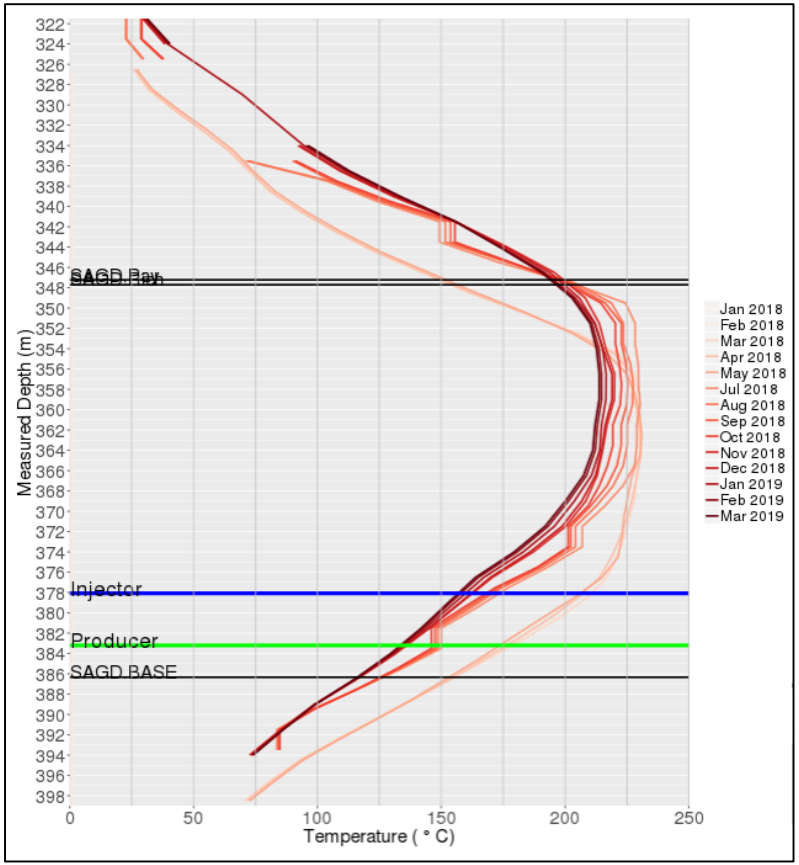
B03 Pad: CVE FCCL A16 LEISMER 16-11-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

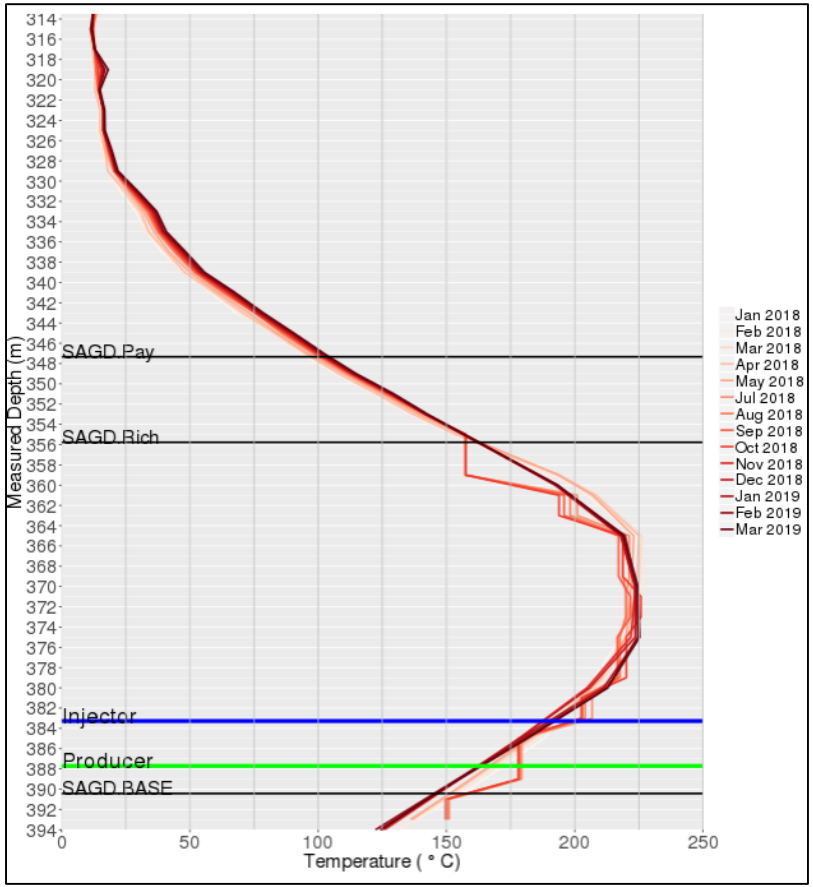
B07 Pad: CVE FCCL B5 LEISMER 5-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

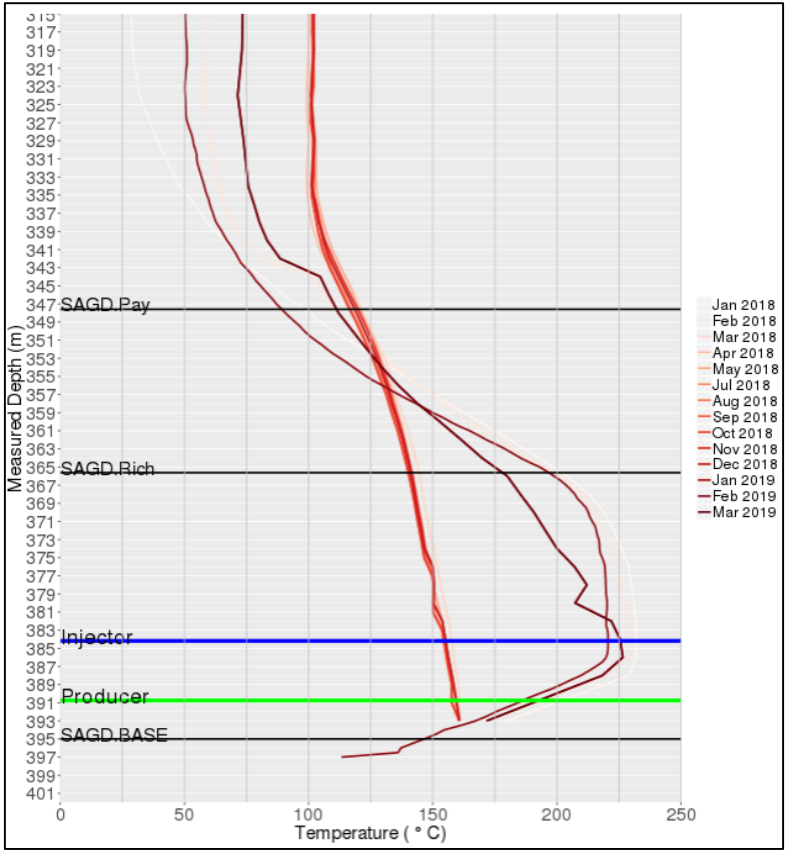
B07 Pad: CVE FCCL LEISMER 5-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

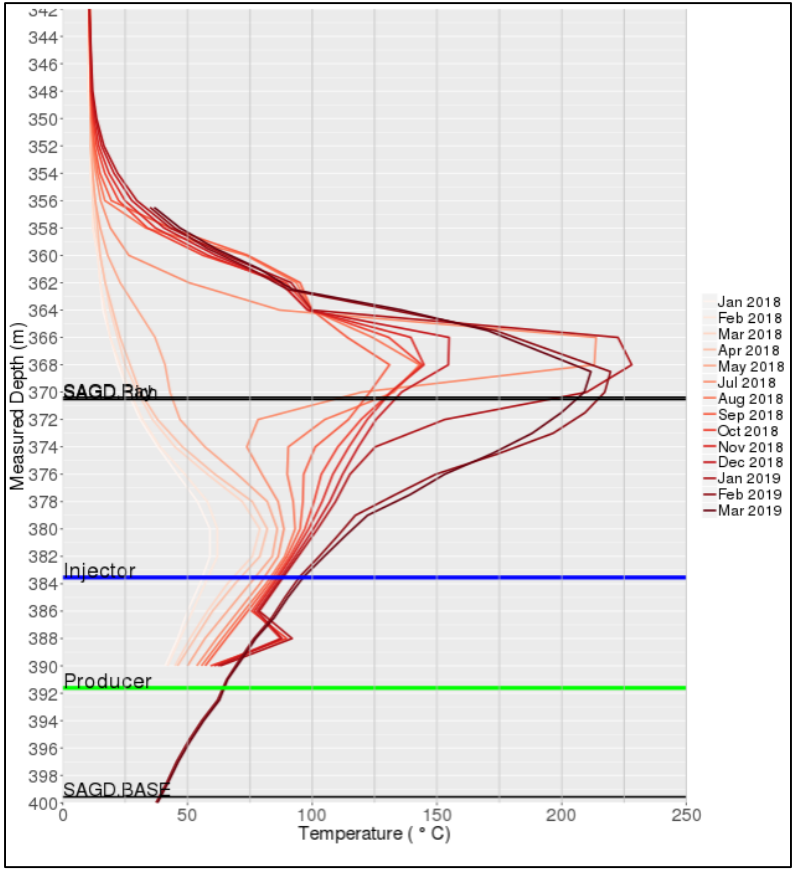
B07 Pad: CVE FCCL B6 LEISMER 6-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

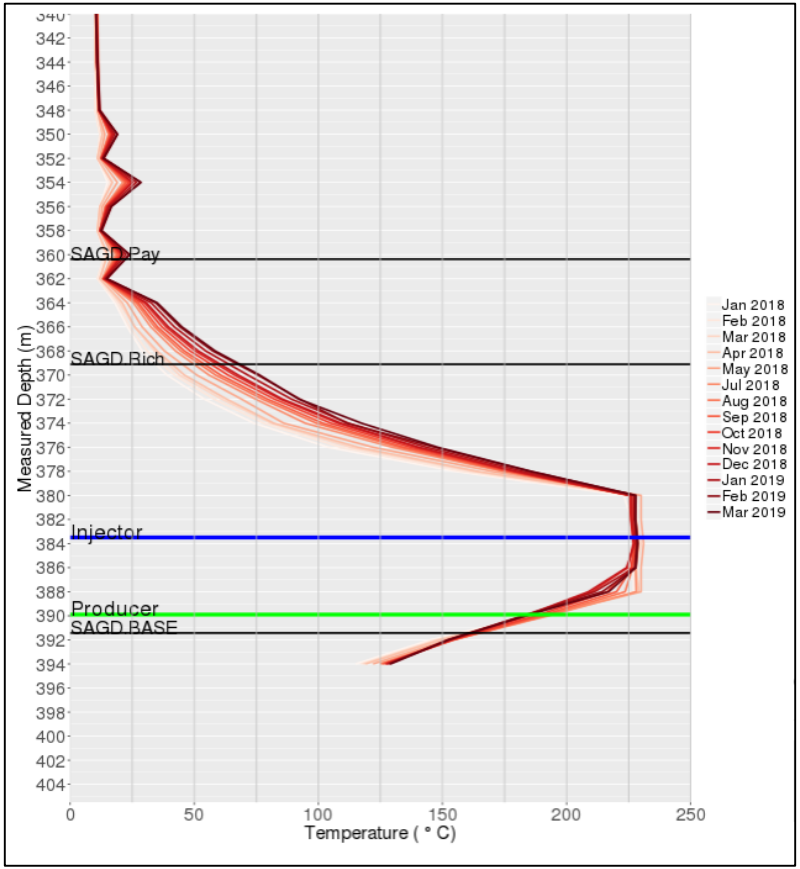
F01 Pad: CVE FCCL A12 LEISMER 12-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

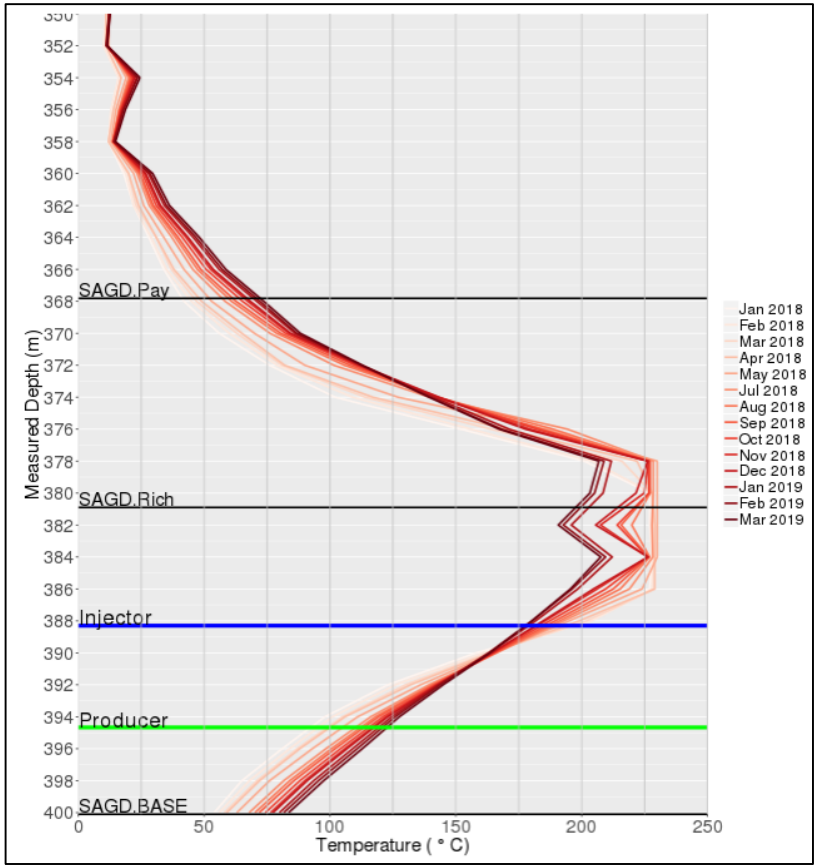
F01 Pad: CVE FCCL B14 LEISMER 14-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

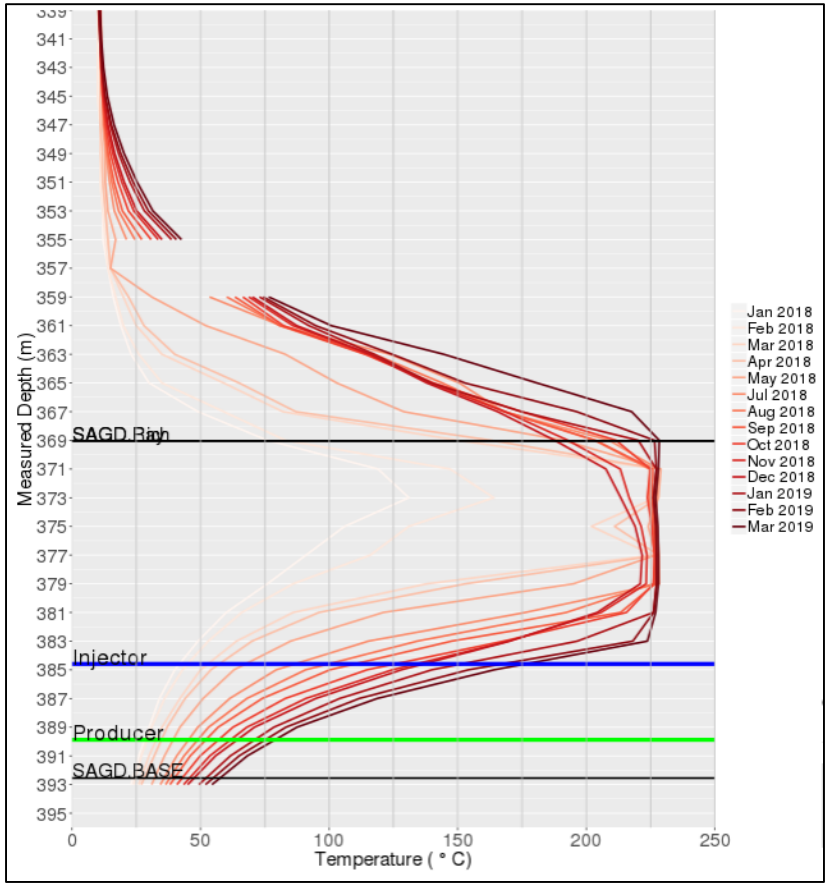
F01 Pad: CVE FCCL D11 LEISMER 11-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

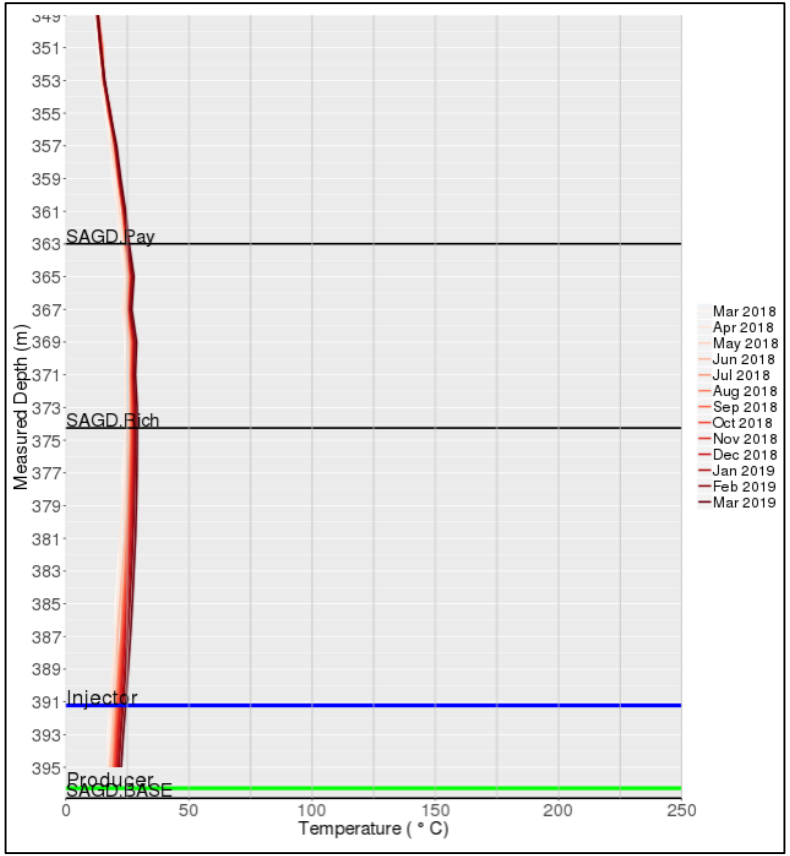
F01 Pad: CVE FCCL D6 LEISMER 6-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

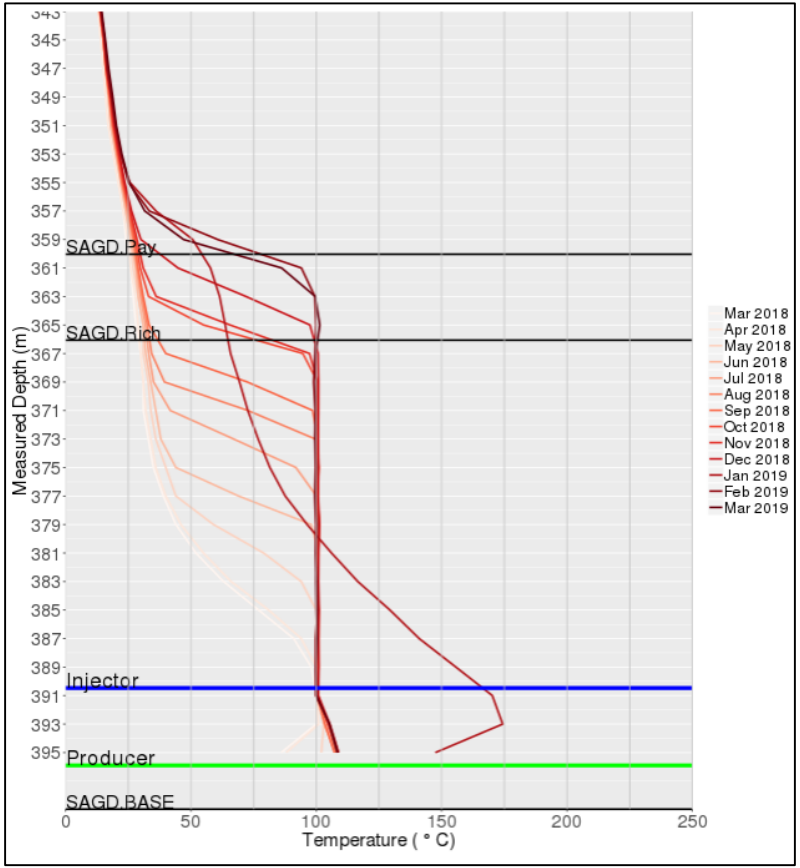
B10 Pad: CVE FCCL B7 LEISMER 7-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

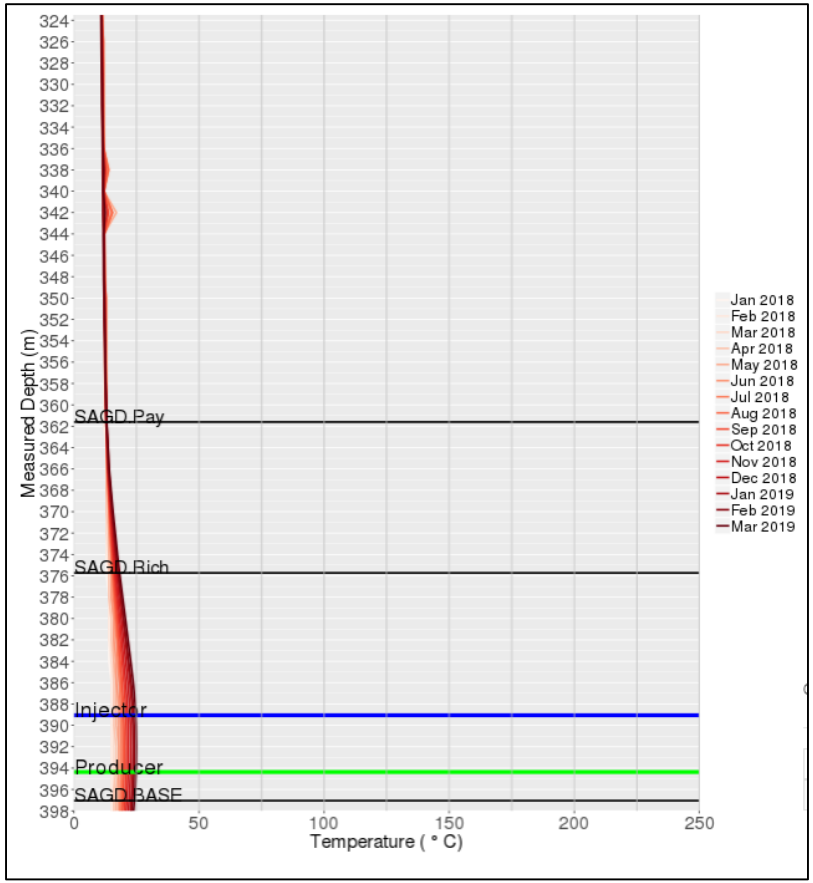
B10 Pad: CVE FCCL D2 HARDY 2-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

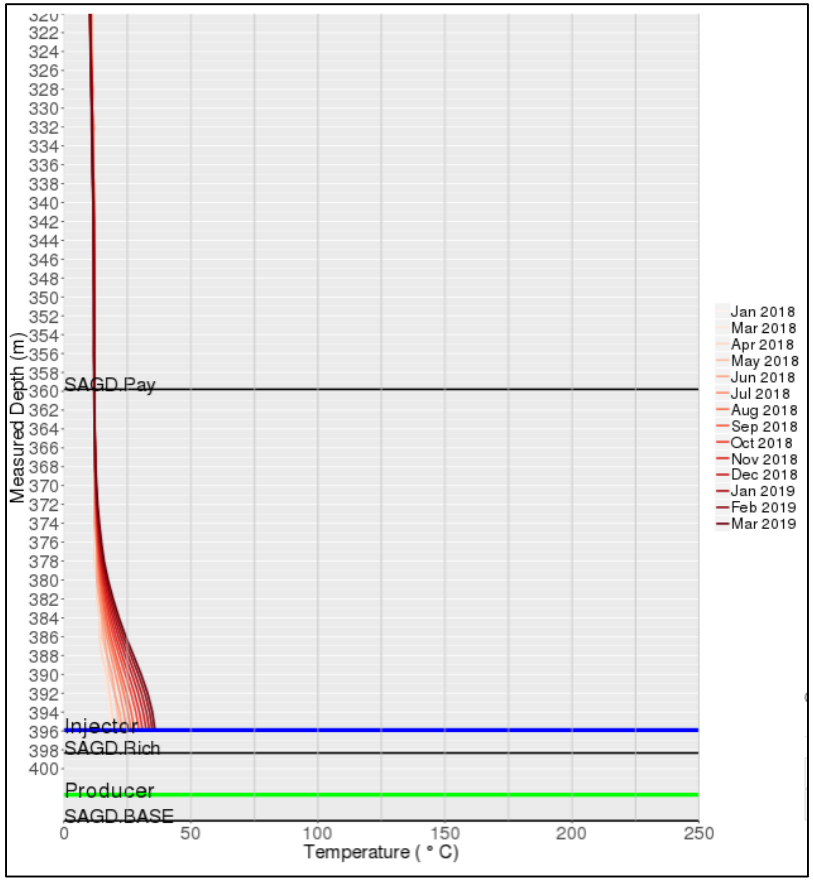
B10 Pad: CVE FCCL B8 HARDY 8-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

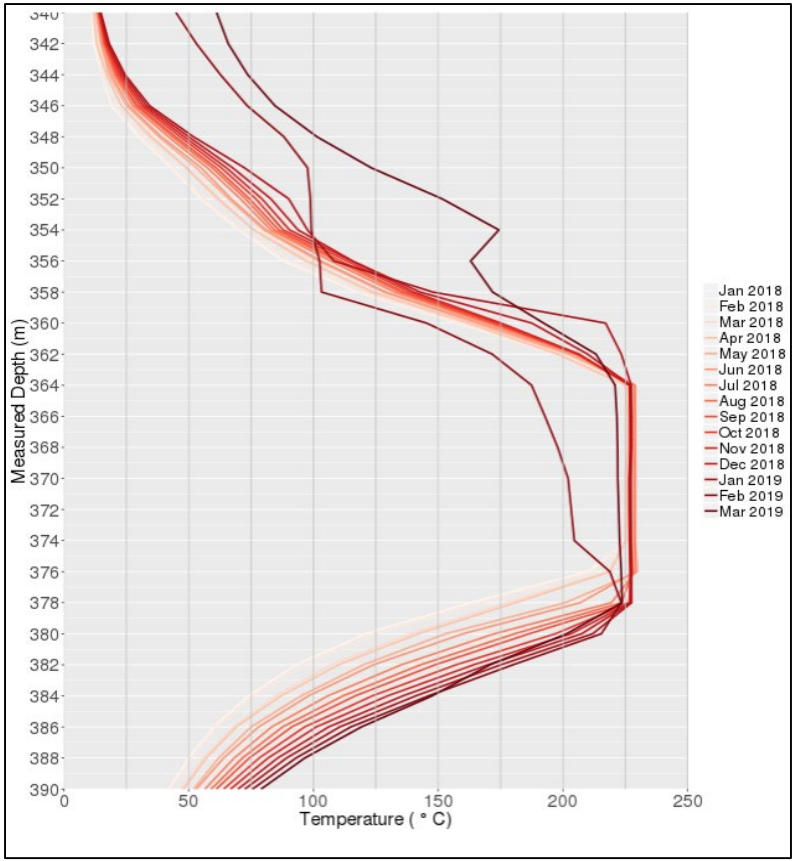
B10 Pad: CVE FCCL LEISMER 9-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

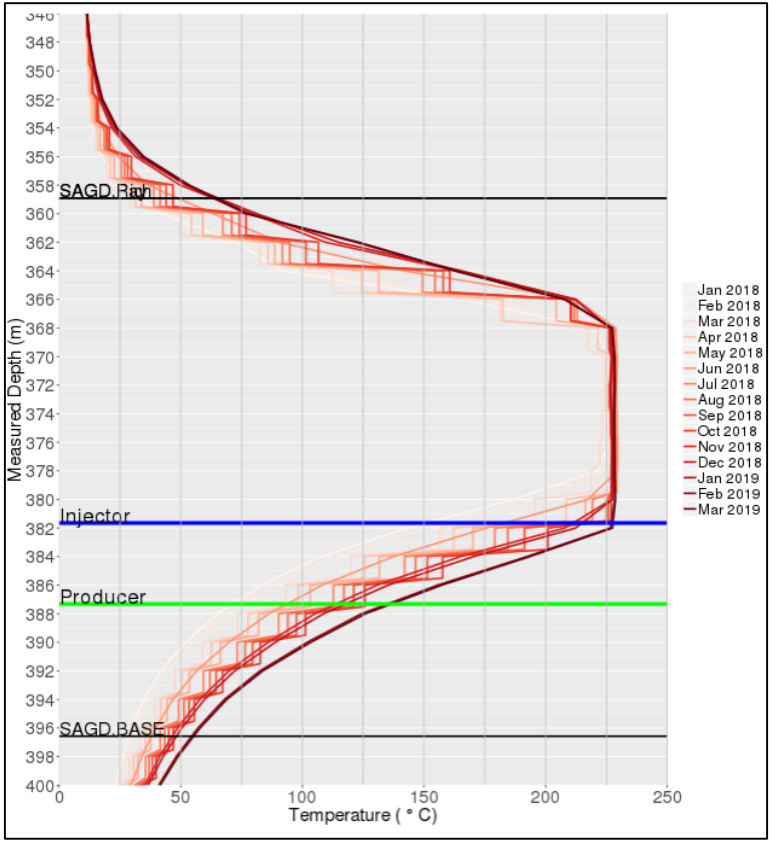
B09 Pad: CVE FCCL B1 LEISMER 1-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

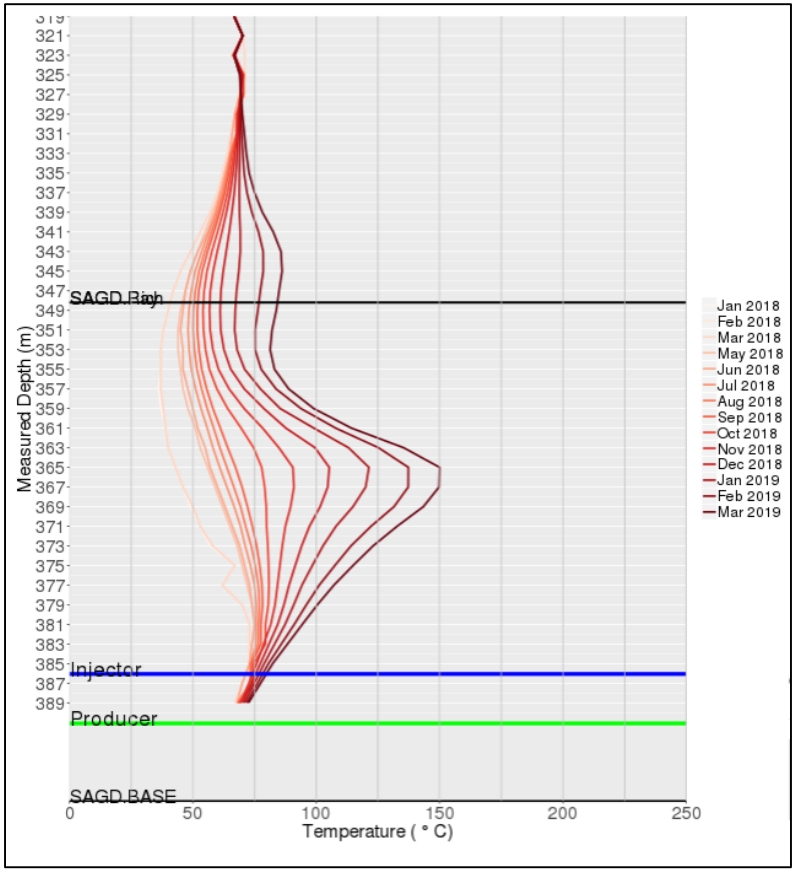
B09 Pad: CVE FCCL A2 LEISMER 2-13-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

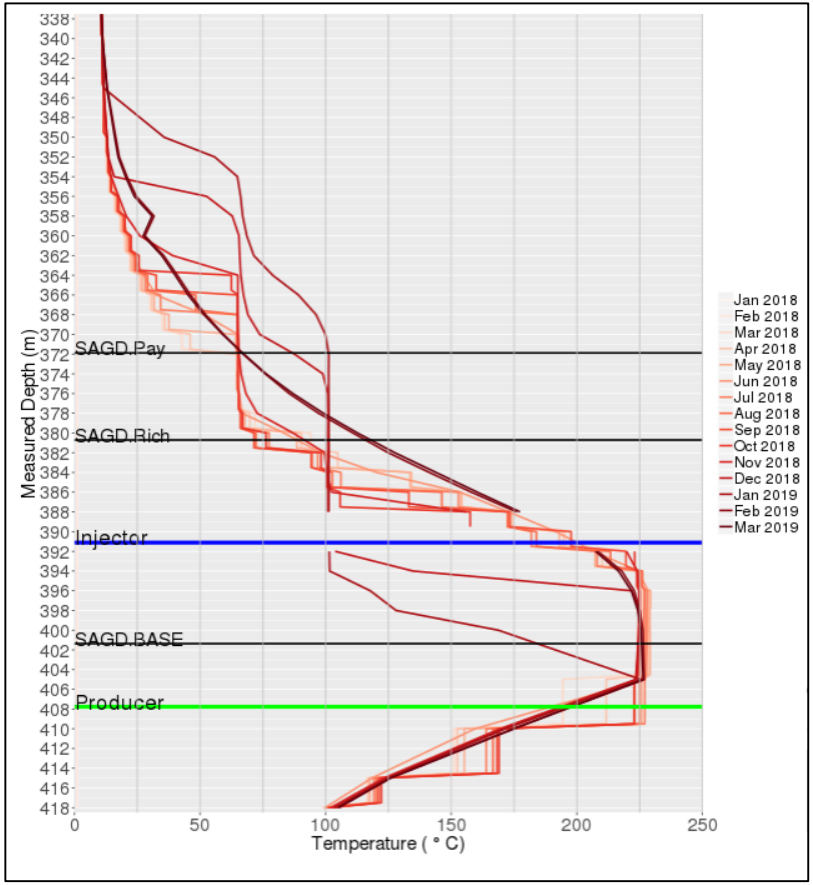
B09 Pad: CVE FCCL B15 LEISMER 15-12-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

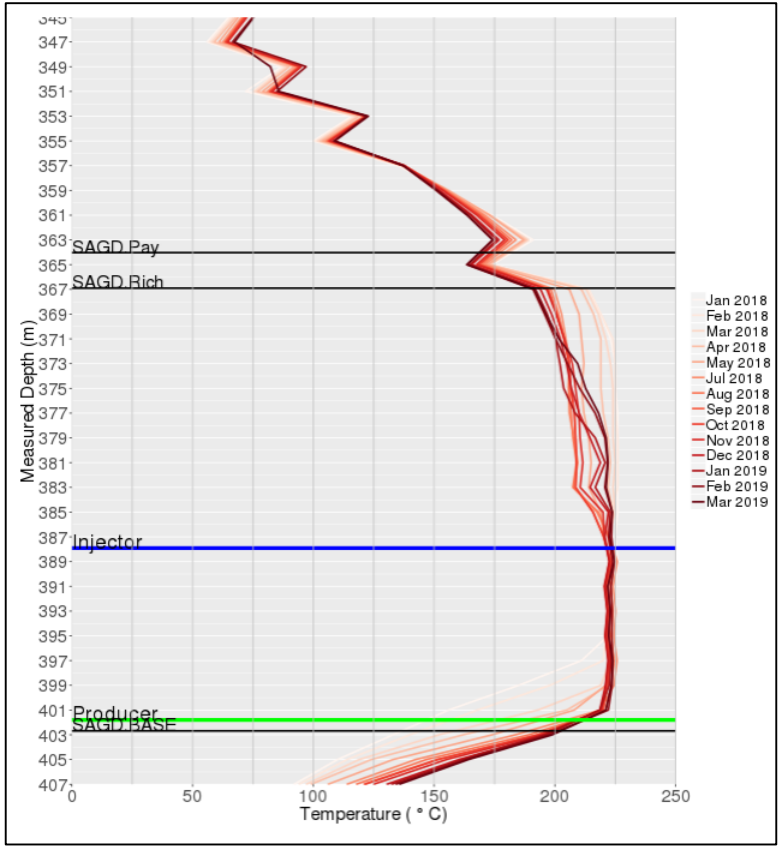
B06 Pad: CVE FCCL A6 LEISMER 6-12-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

B06 Pad: CVE FCCL 2D6 LEISMER 6-12-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

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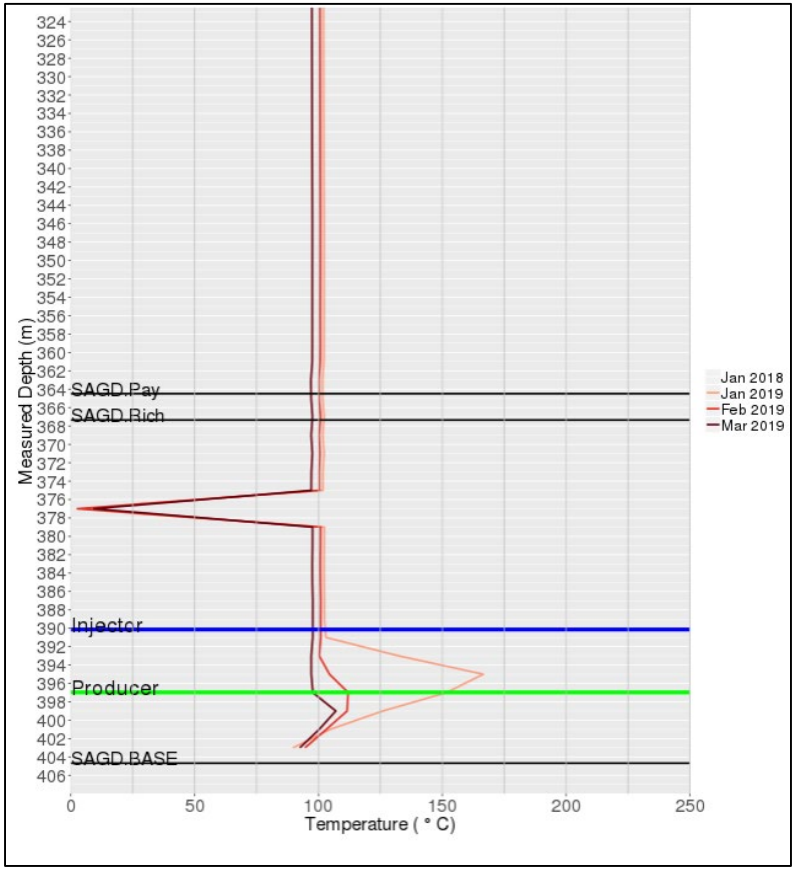
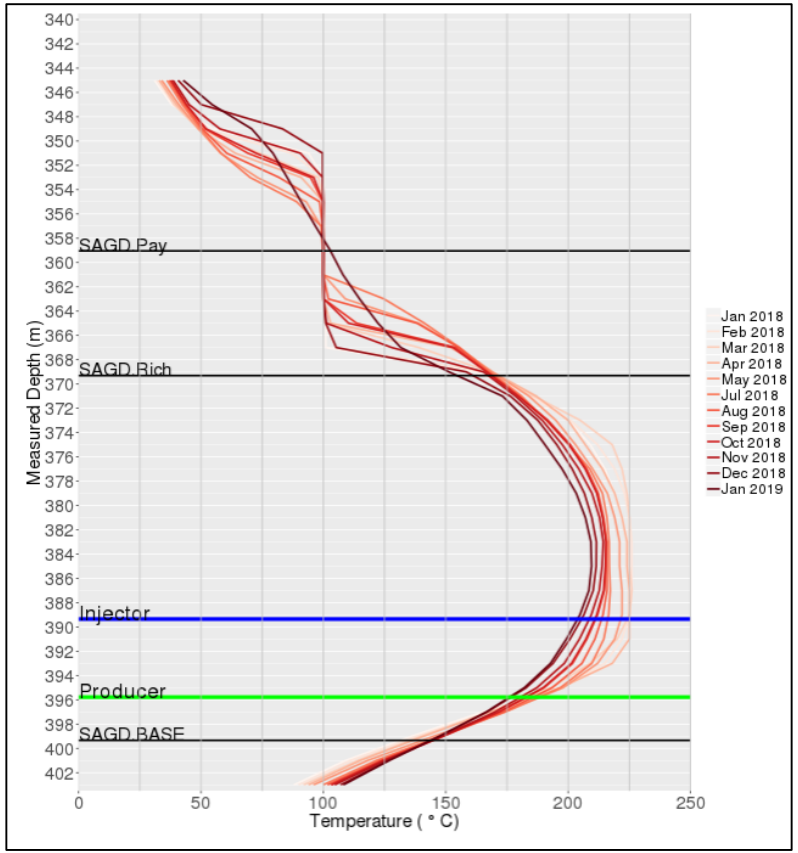


2018 Cenovus Energy Inc.

Thermocouple Data

B06 Pad: CVE FCCL B11 LEISMER 11-12-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

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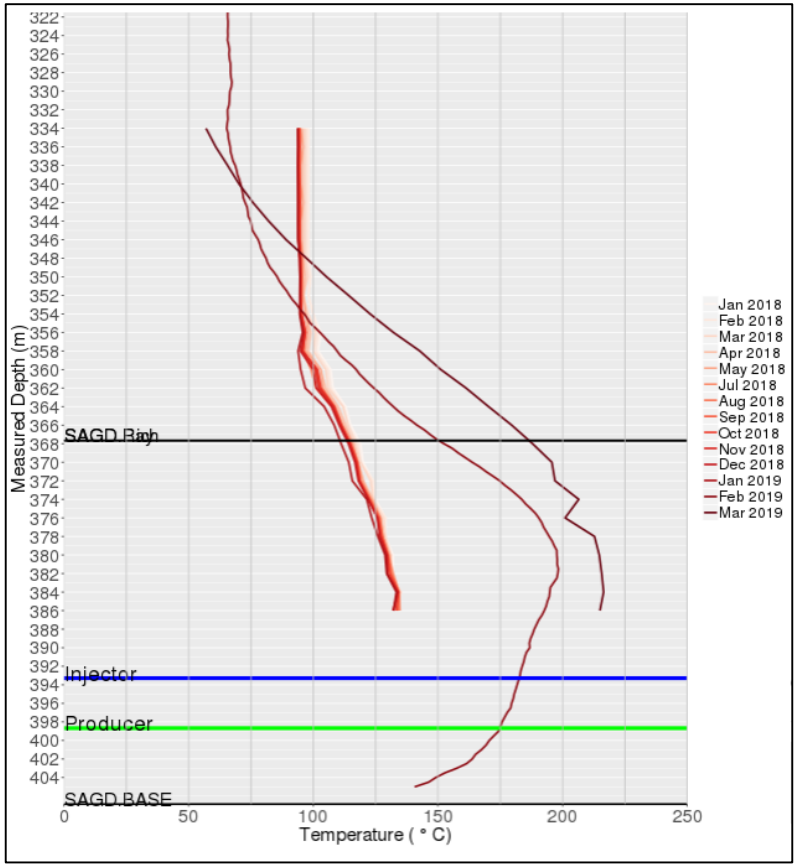
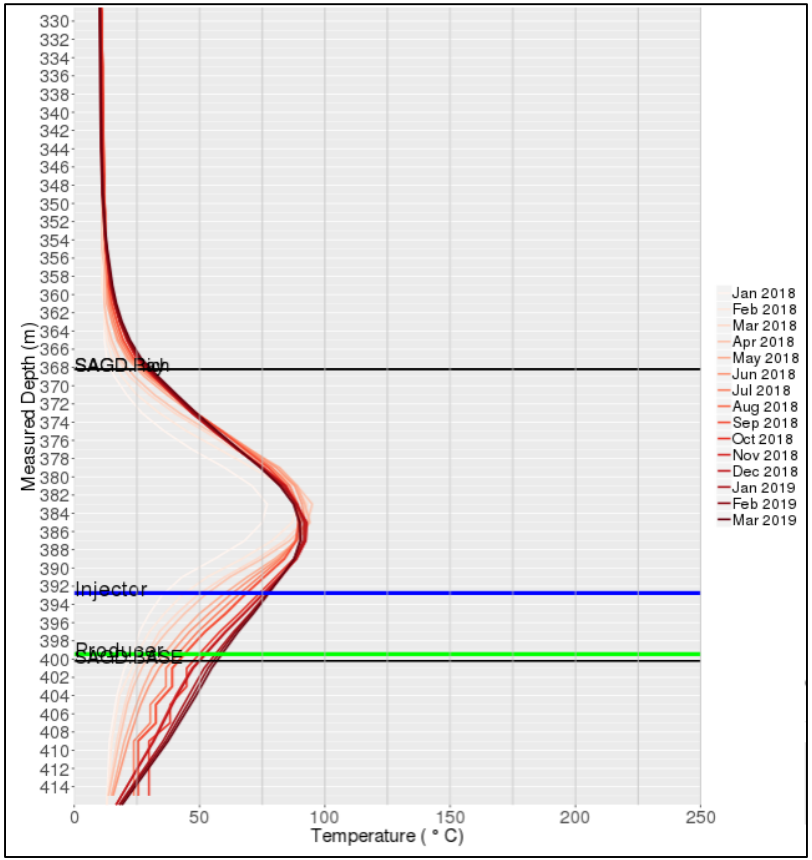


2018 Cenovus Energy Inc.

Thermocouple Data

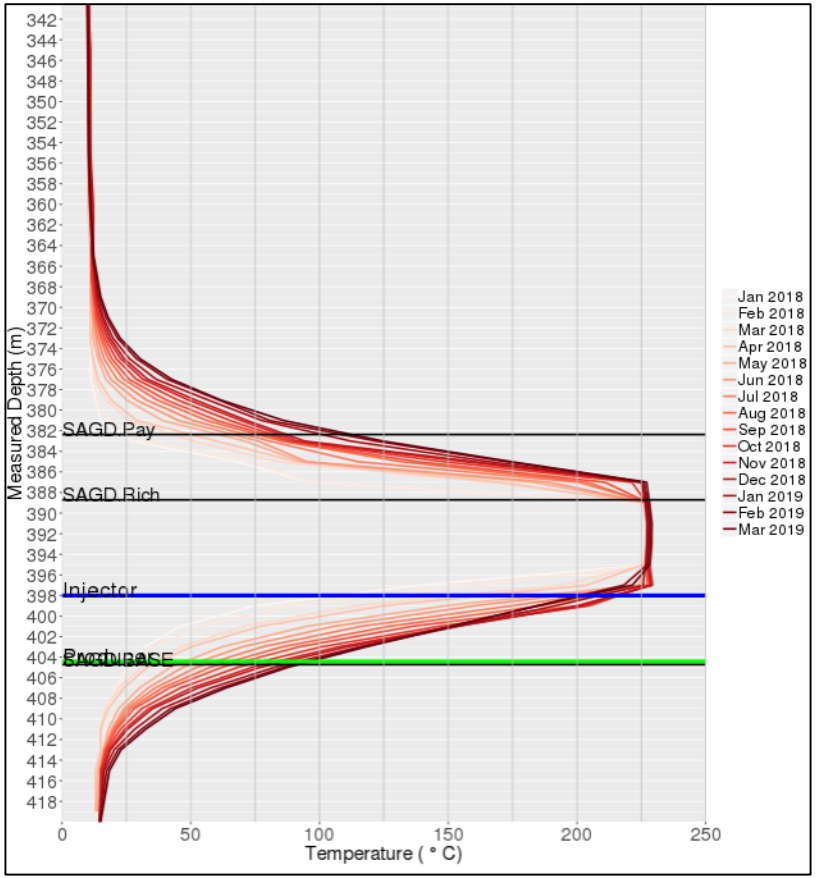
B13 Pad: CVE FCCL D7 LEISMER 7-12-76-6



2018 Cenovus Energy Inc.

Thermocouple Data

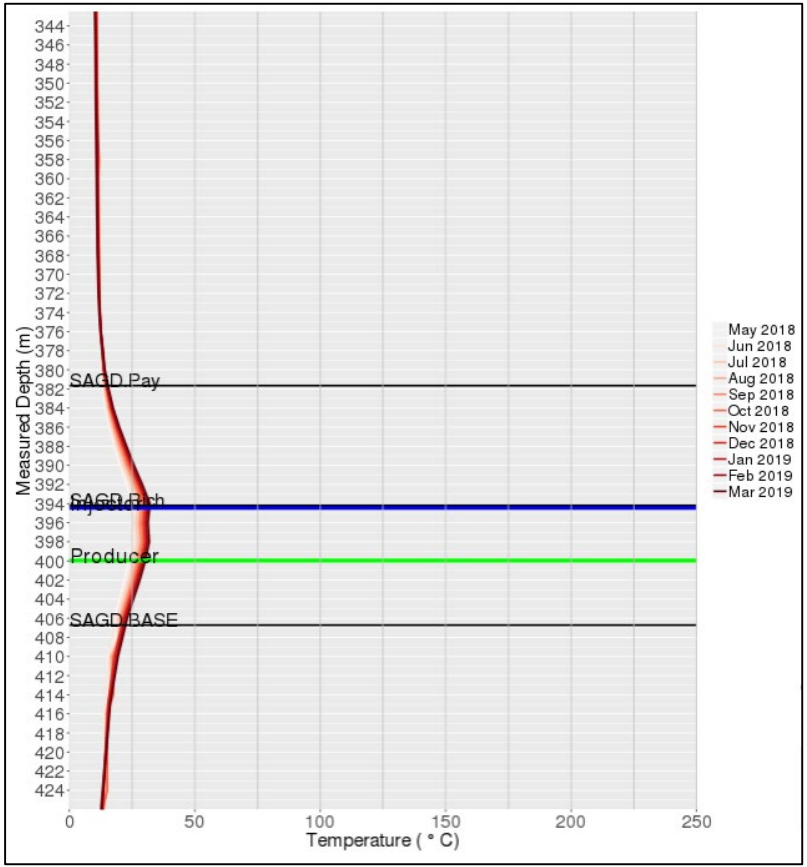
B13 Pad: CVE FCCL A7 LEISMER 7-12-76-6



2018 Cenovus Energy Inc.

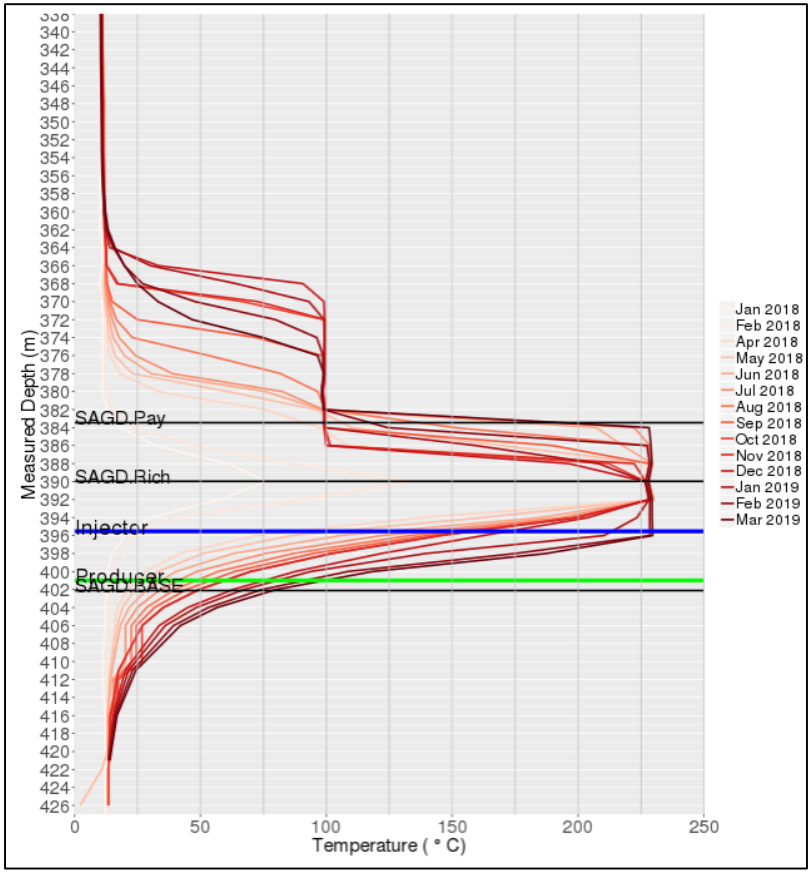
Thermocouple Data

B13 Pad: CVE FCCL D1 LEISMER 1-12-76-6



Thermocouple Data

B13 Pad: CVE FCCL B5 HARDY 5-7-76-5



2018 Cenovus Energy Inc.

Thermocouple Data

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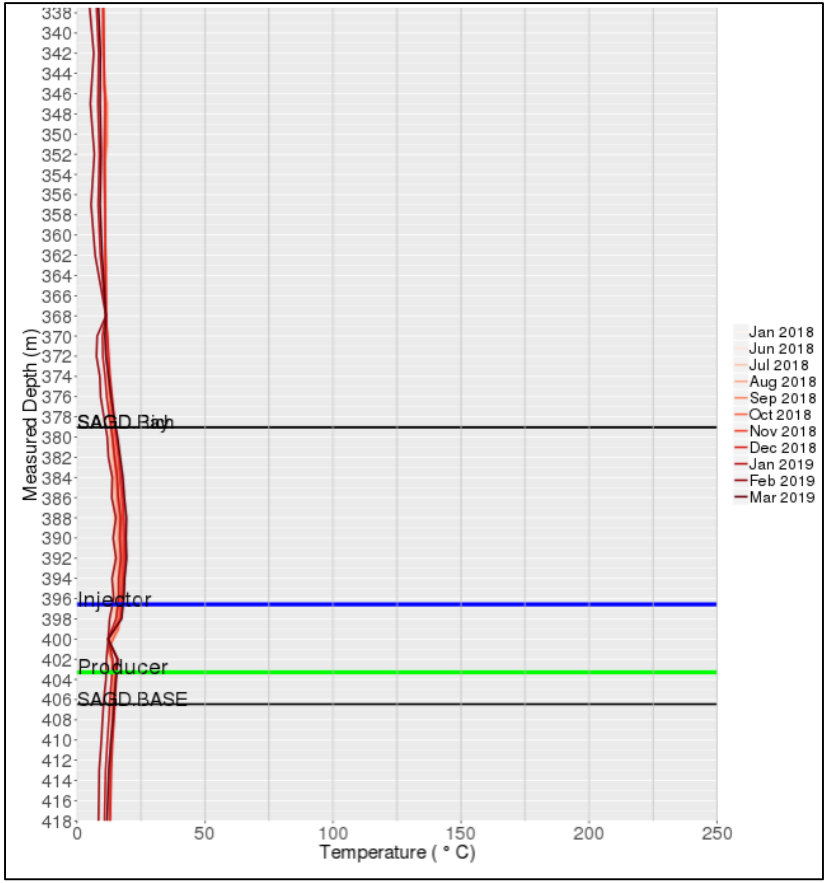

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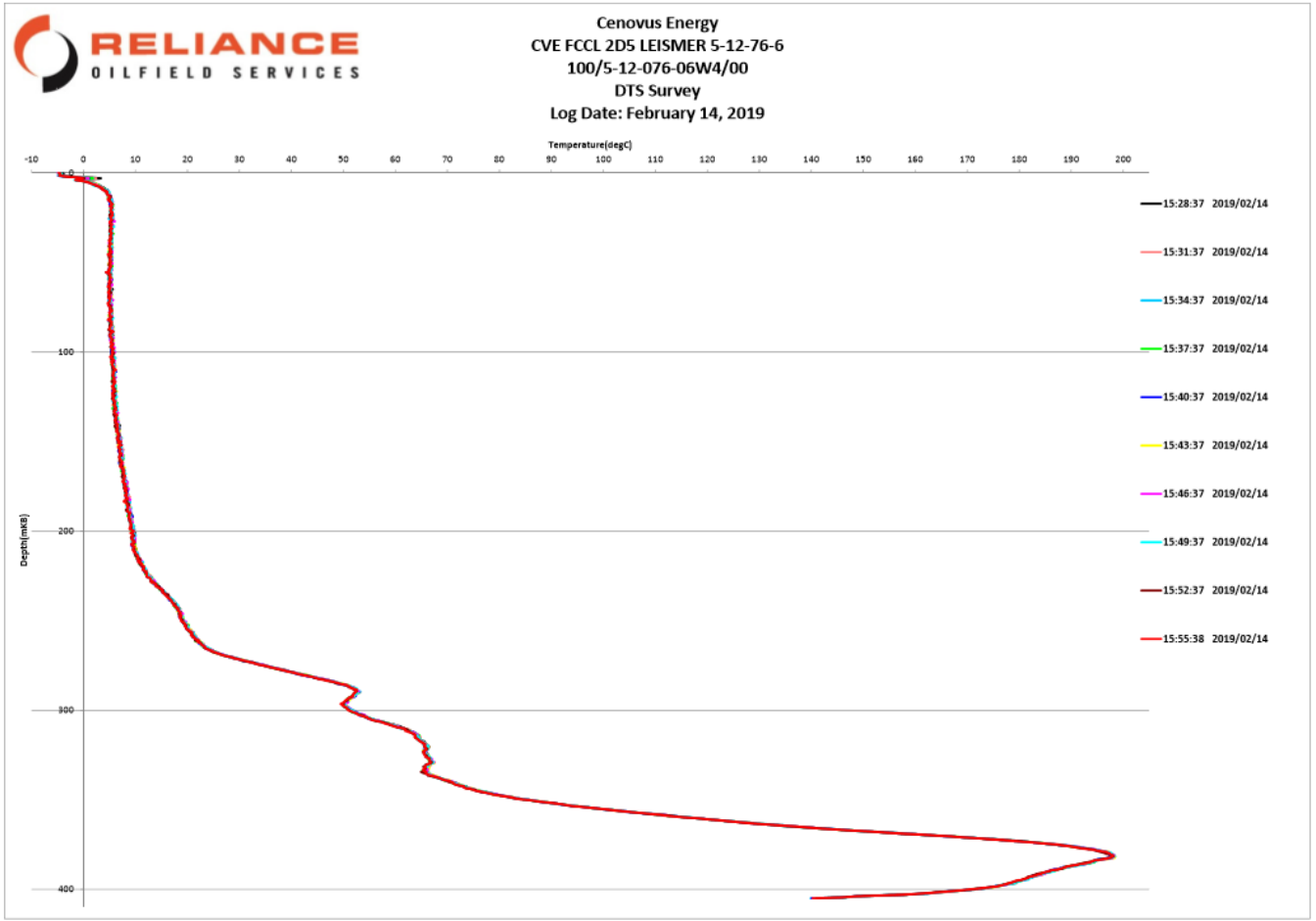
RELIANCE
OILFIELD SERVICES
Cenovus Energy
CVE FCCL 2D5 LEISMER 5-12-76-6
100/5-12-076-06W4/00
DTS Survey
Log Date: February 14, 2019
Temperature(degC)
-10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200
Depth(mKB)
0
100
200
300
400
15:28:37 2019/02/14
15:31:37 2019/02/14
15:34:37 2019/02/14
15:37:37 2019/02/14
15:40:37 2019/02/14
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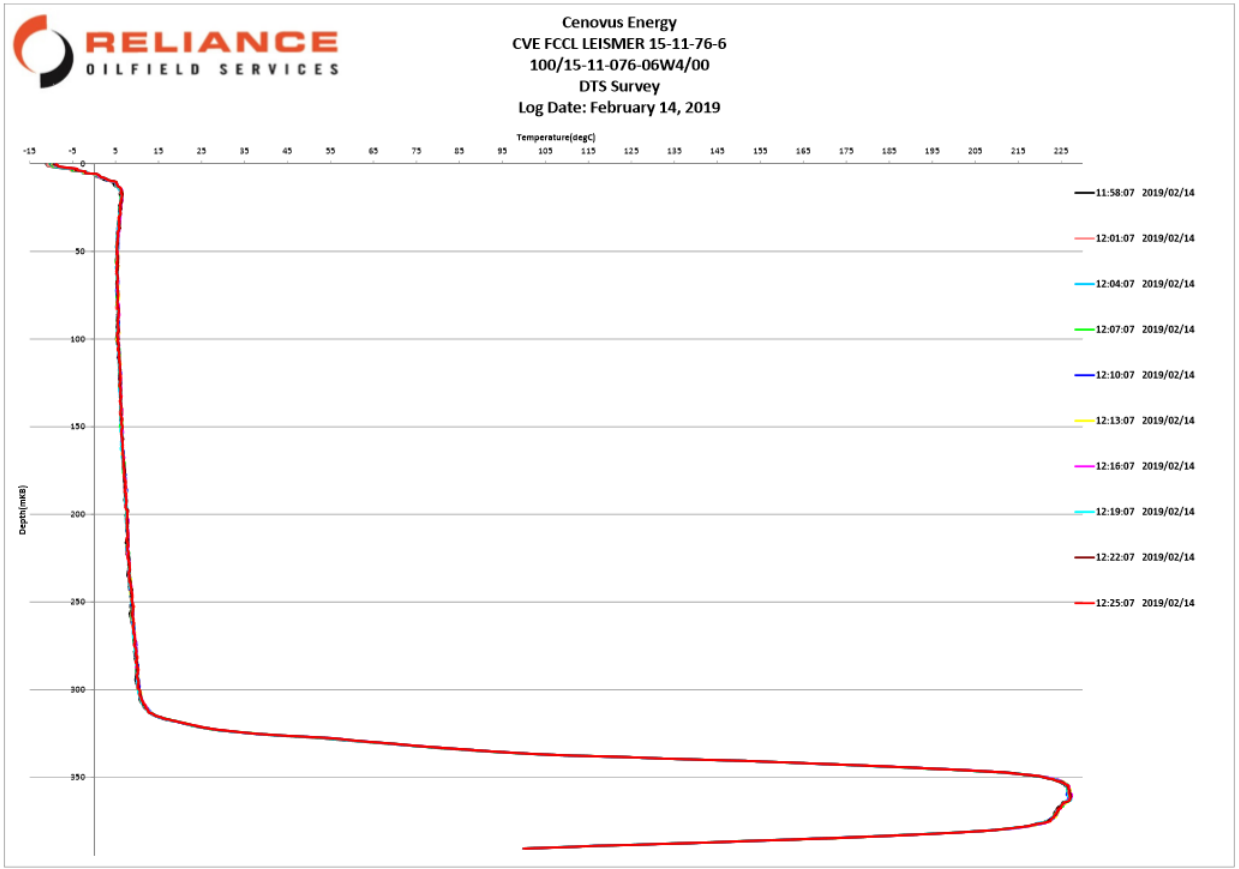
RELIANCE
OILFIELD SERVICES
Cenovus Energy
CVE FCCL LEISMER 15-11-76-6
100/15-11-076-06W4/00
DTS Survey
Log Date: February 14, 2019
Temperature(degC)
-15 -5 5 15 25 35 45 55 65 75 85 95 105 115 125 135 145 155 165 175 185 195 205 215 225
Depth(mKB)
0 50 100 150 200 250 300 350
11:58:07 2019/02/14
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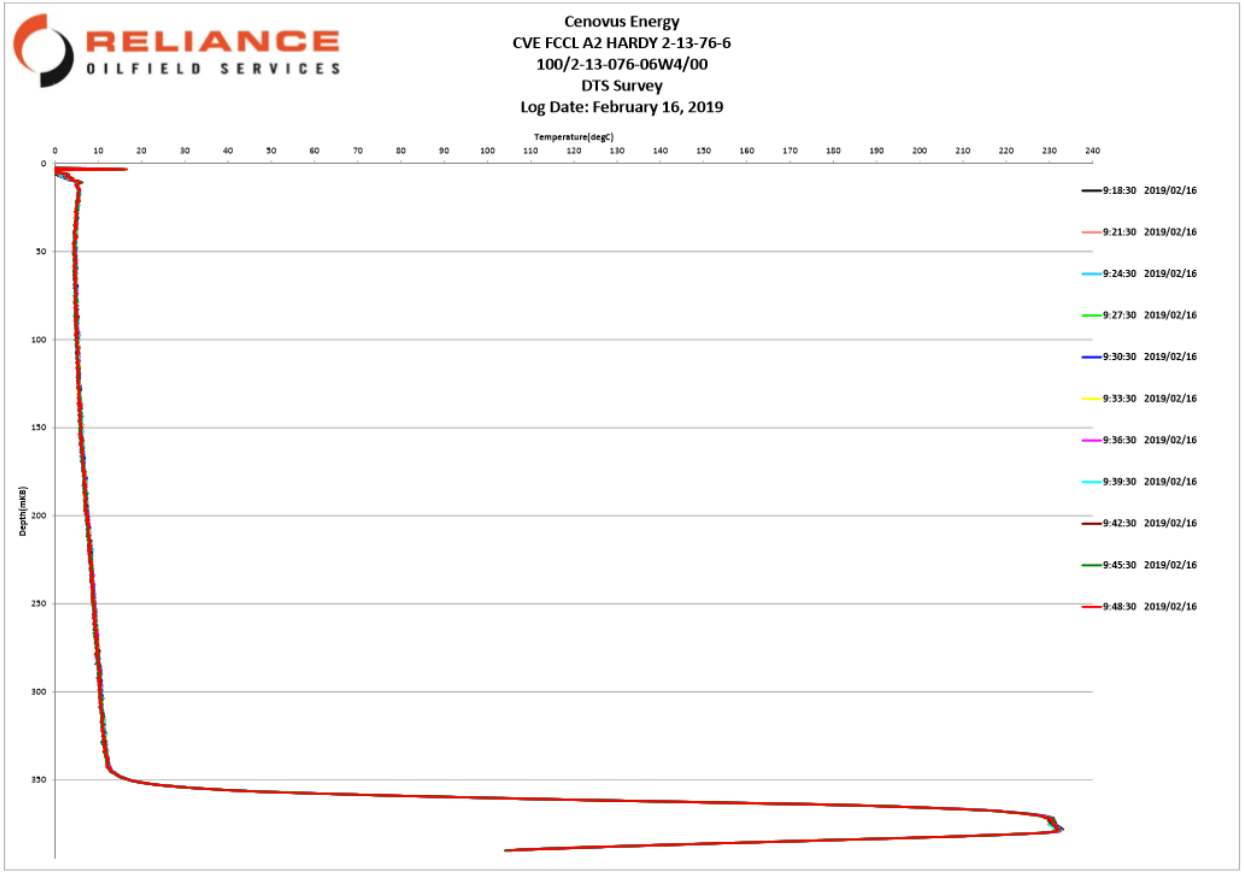

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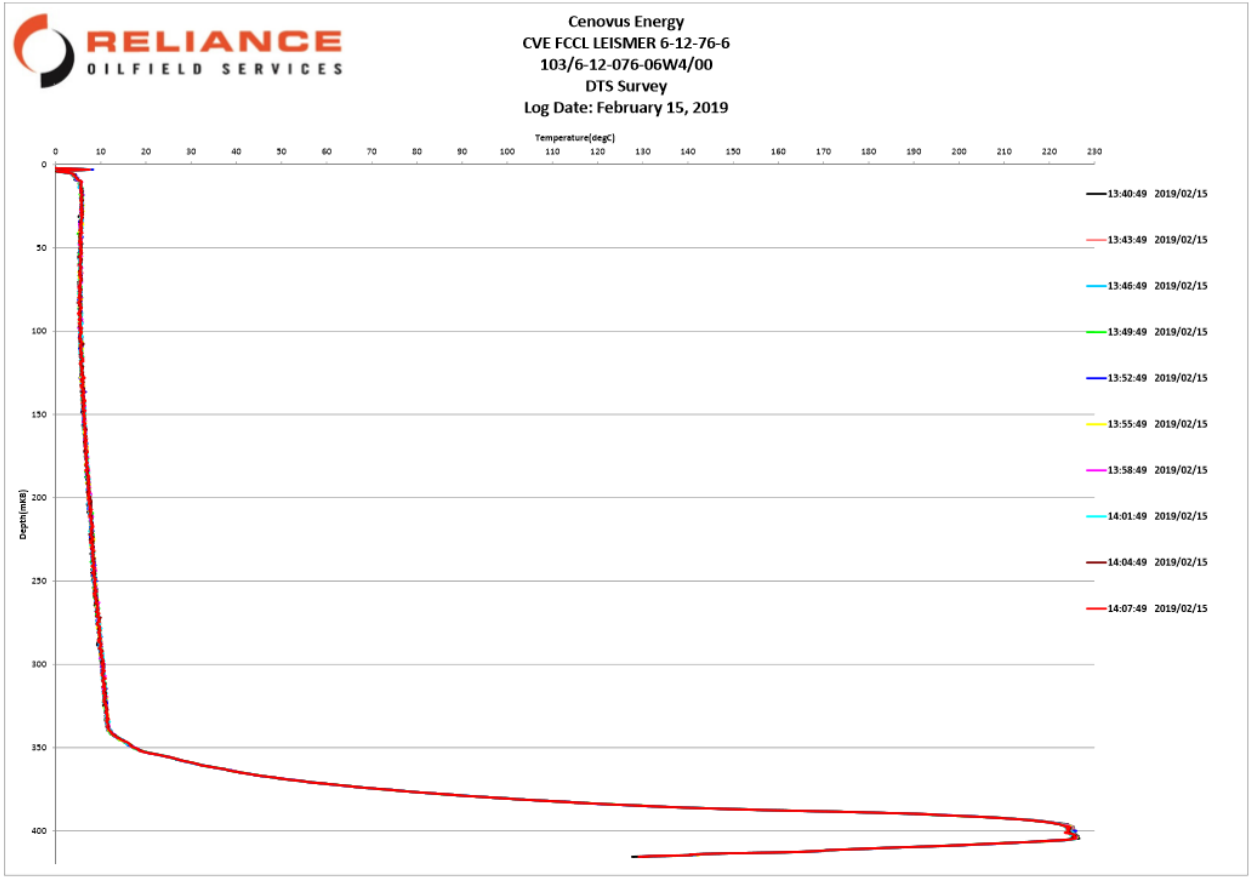
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OILFIELD SERVICES
Cenovus Energy
CVE FCCL LEISMER 6-12-76-6
103/6-12-076-06W4/00
DTS Survey
Log Date: February 15, 2019
Temperature(degC)
Depth(mKB)
13:40:49 2019/02/15
13:43:49 2019/02/15
13:46:49 2019/02/15
13:49:49 2019/02/15
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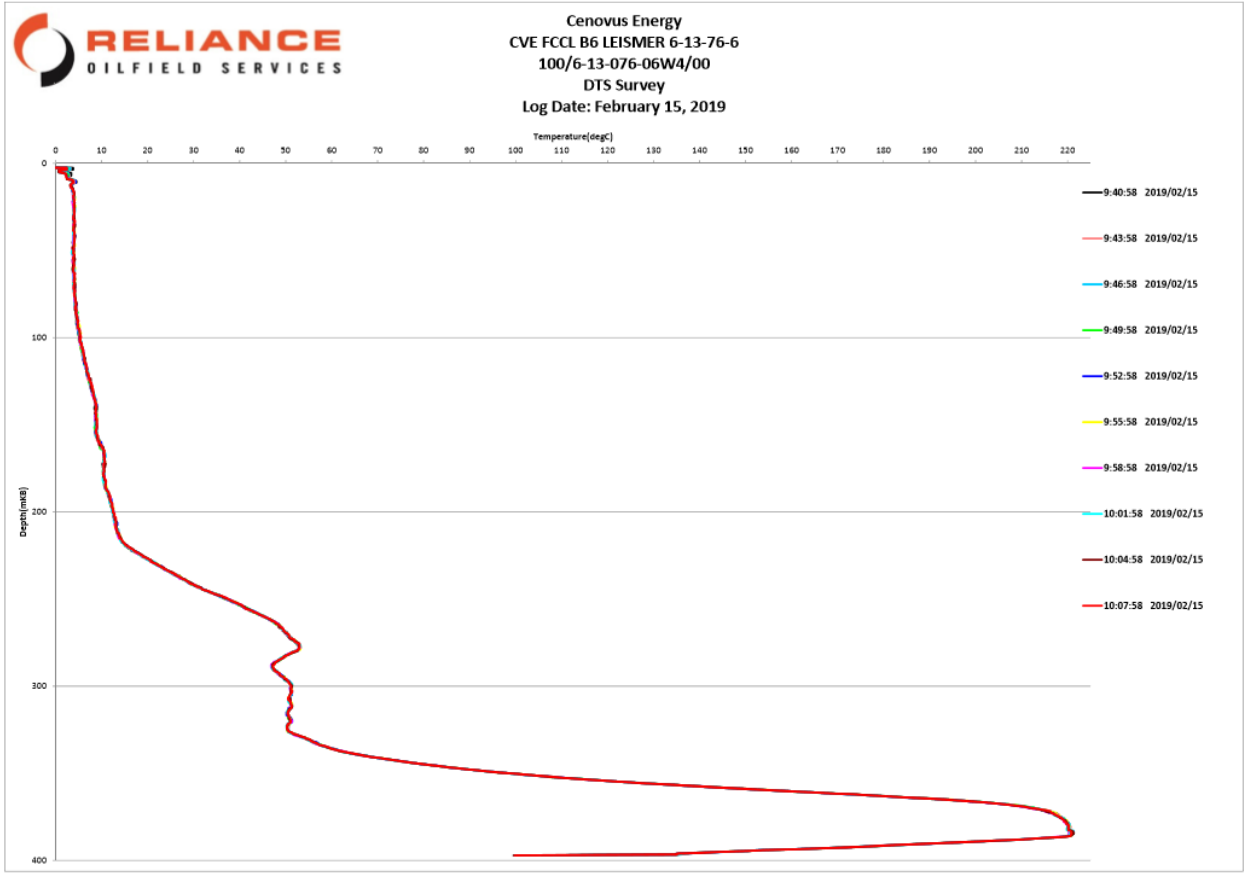

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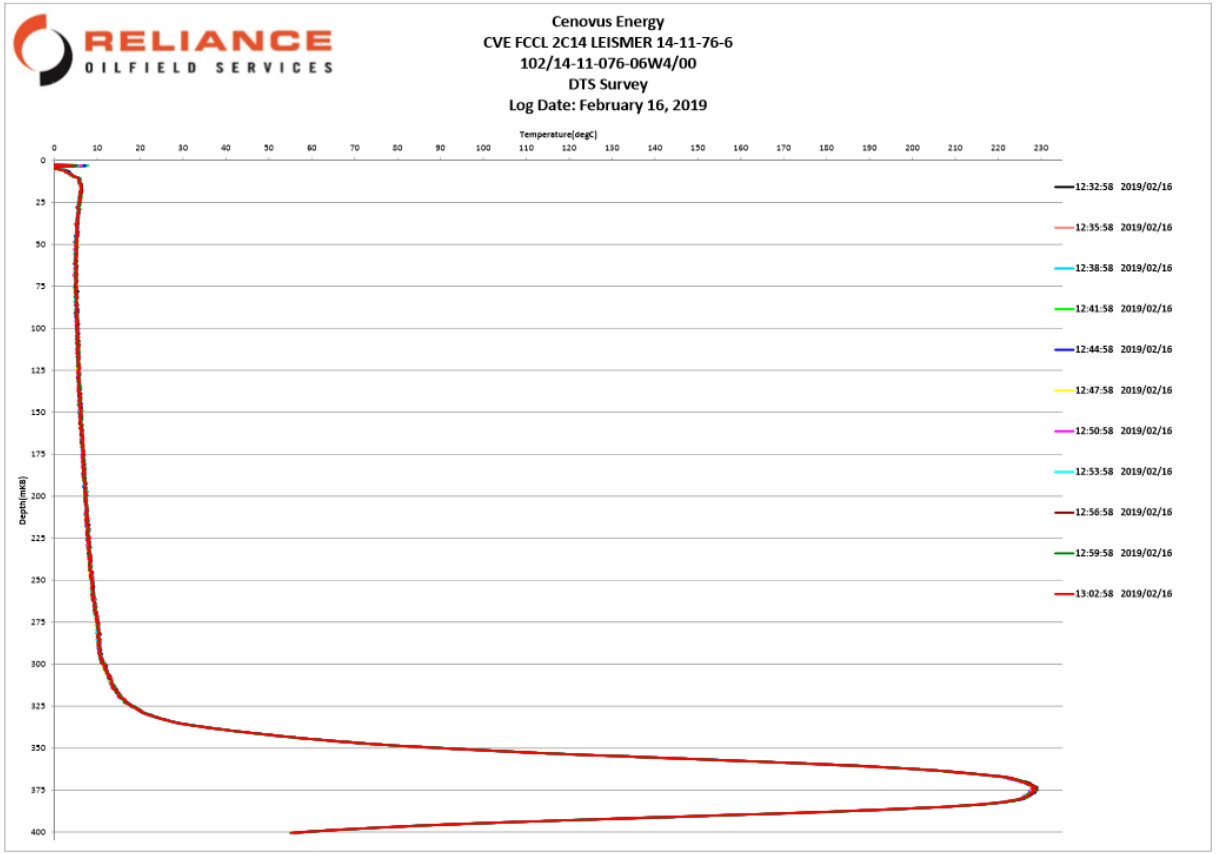
RELIANCE
OILFIELD SERVICES
Cenovus Energy
CVE FCCL 2C14 LEISMER 14-11-76-6
102/14-11-076-06W4/00
DTS Survey
Log Date: February 16, 2019
Temperature(degC)
Depth(mKB)
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12:35:58 2019/02/16
12:38:58 2019/02/16
12:41:58 2019/02/16
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12:53:58 2019/02/16
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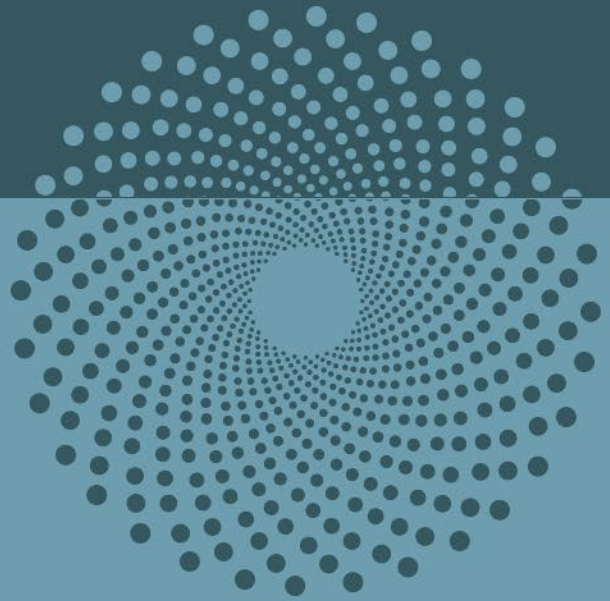
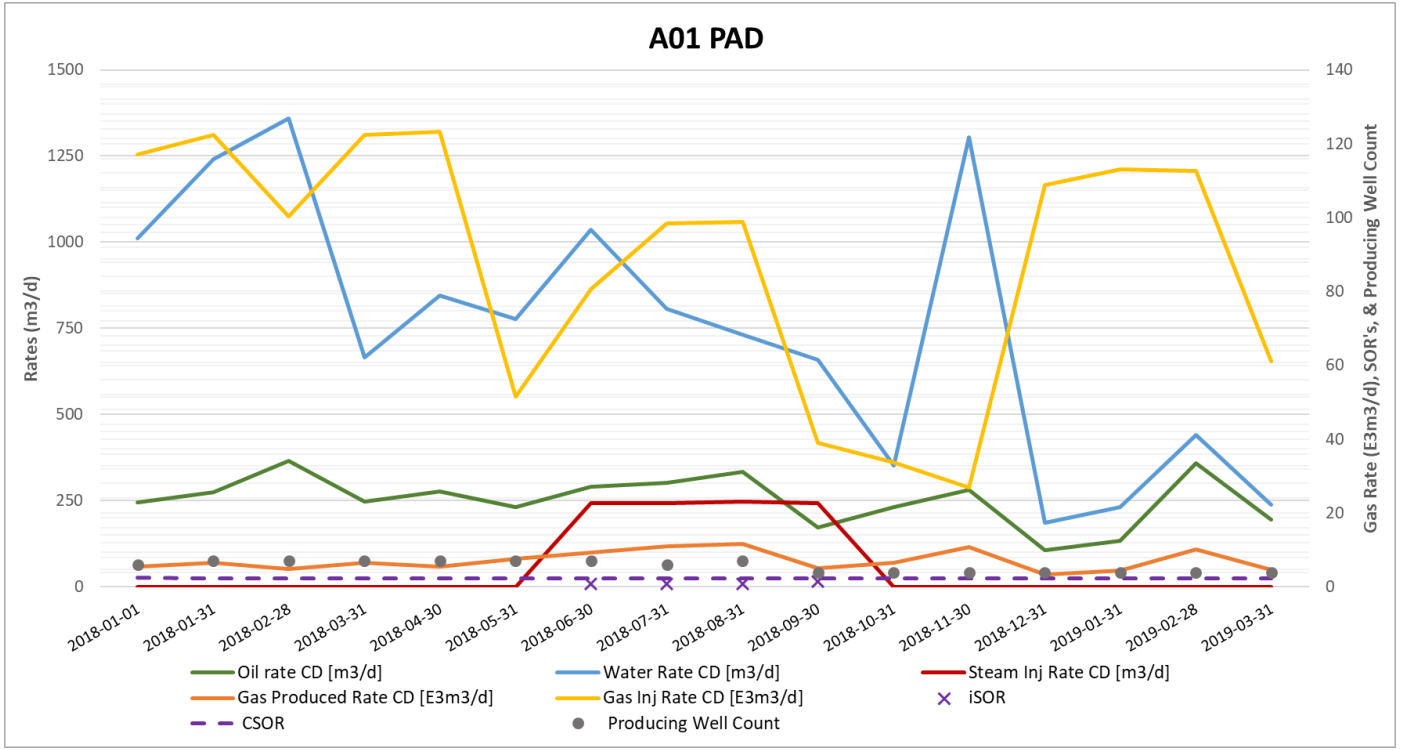
Appendix 4
Subsection 3.1.1 – 7h)

Pad Production Data



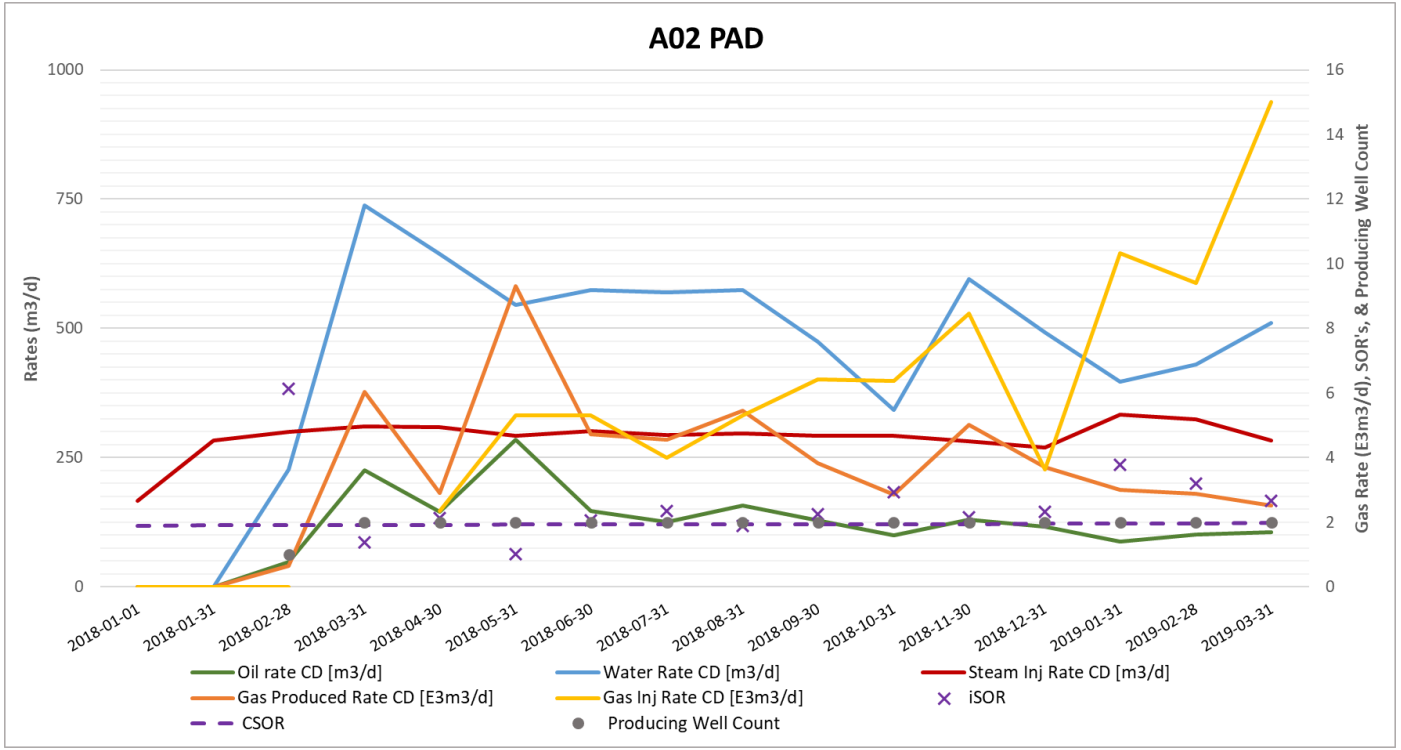
2018 Cenovus Energy Inc.

Pad Performance Plots

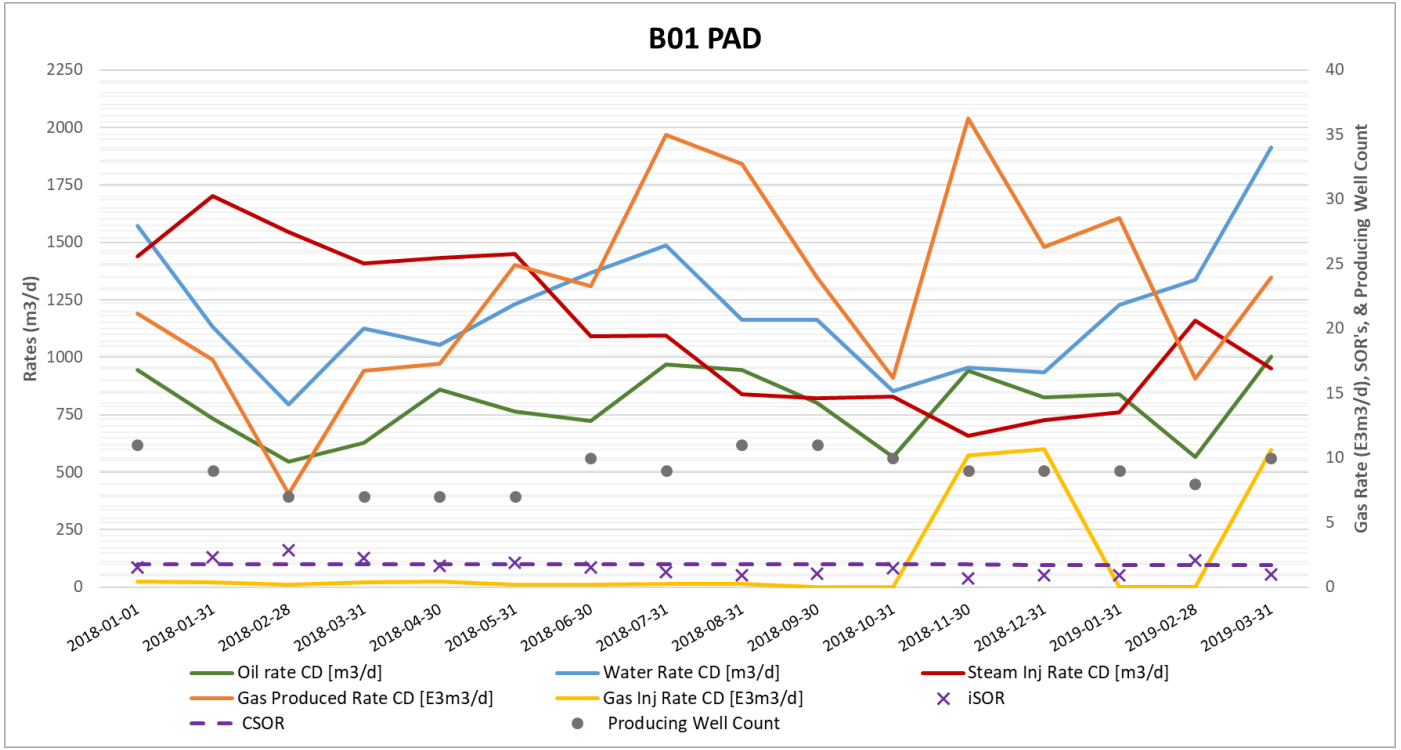


2018 Cenovus Energy Inc.

Pad Performance Plots



Pad Performance Plots



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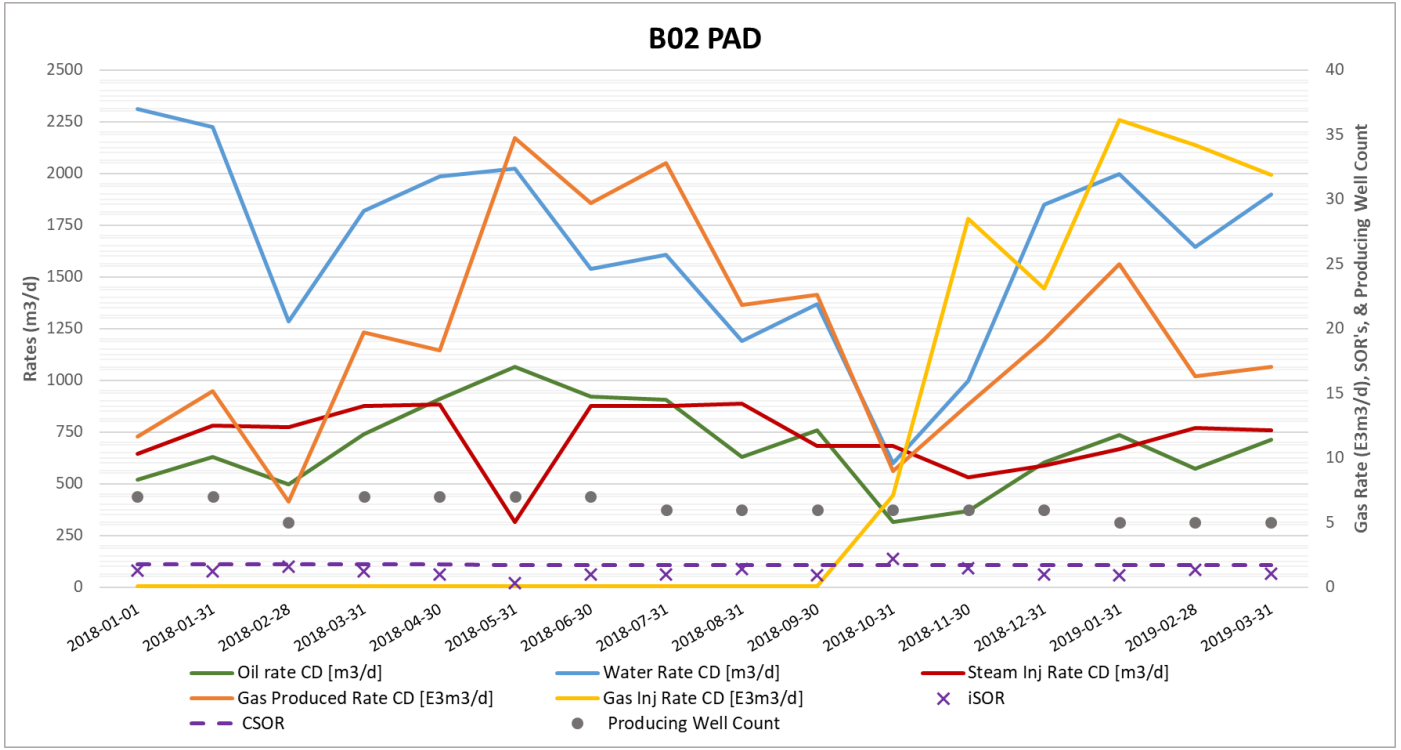

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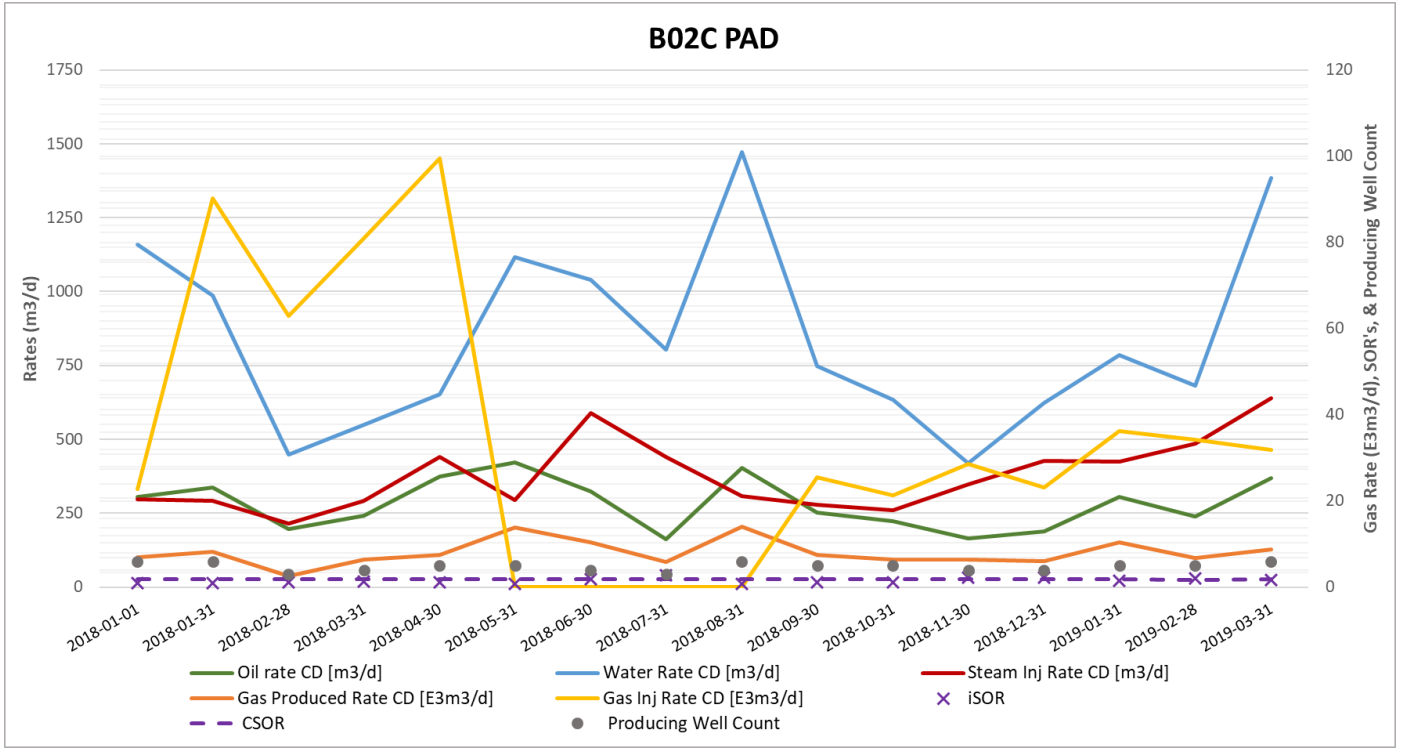

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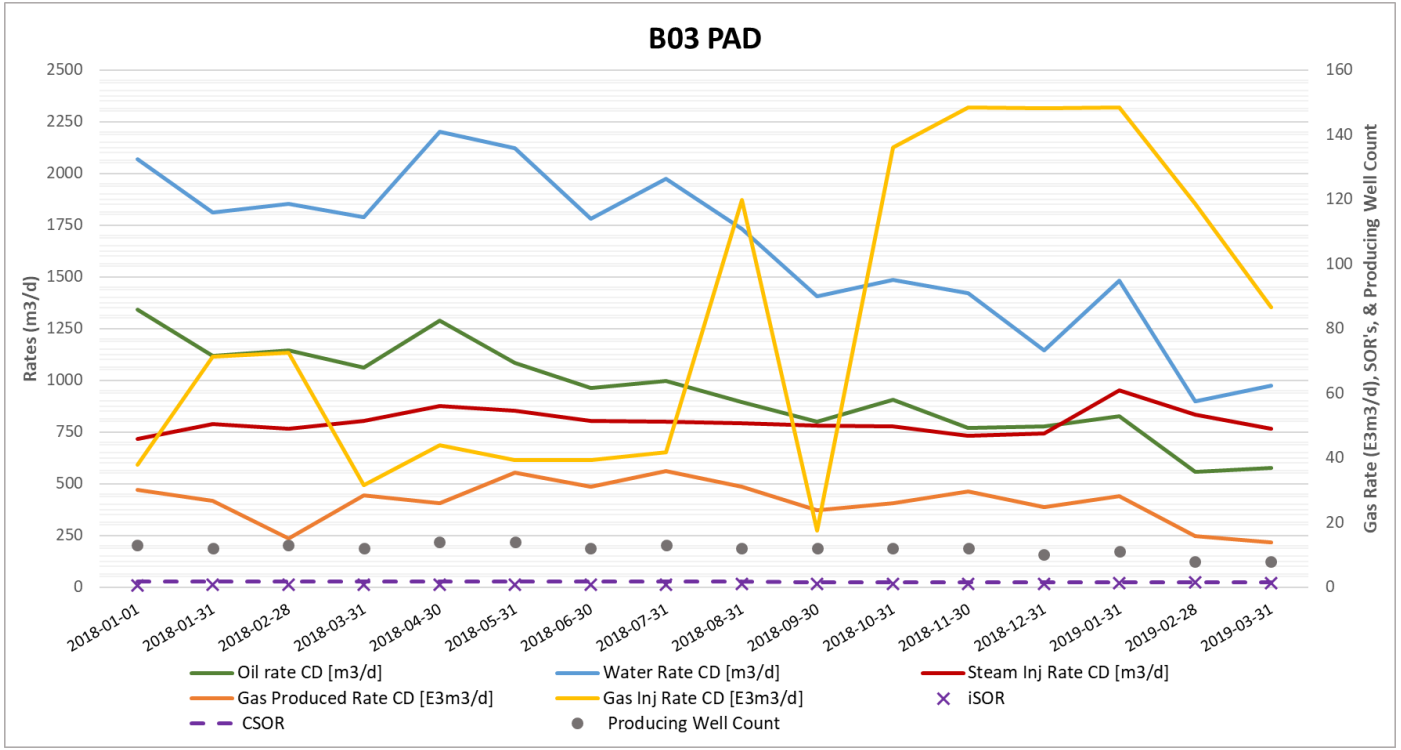

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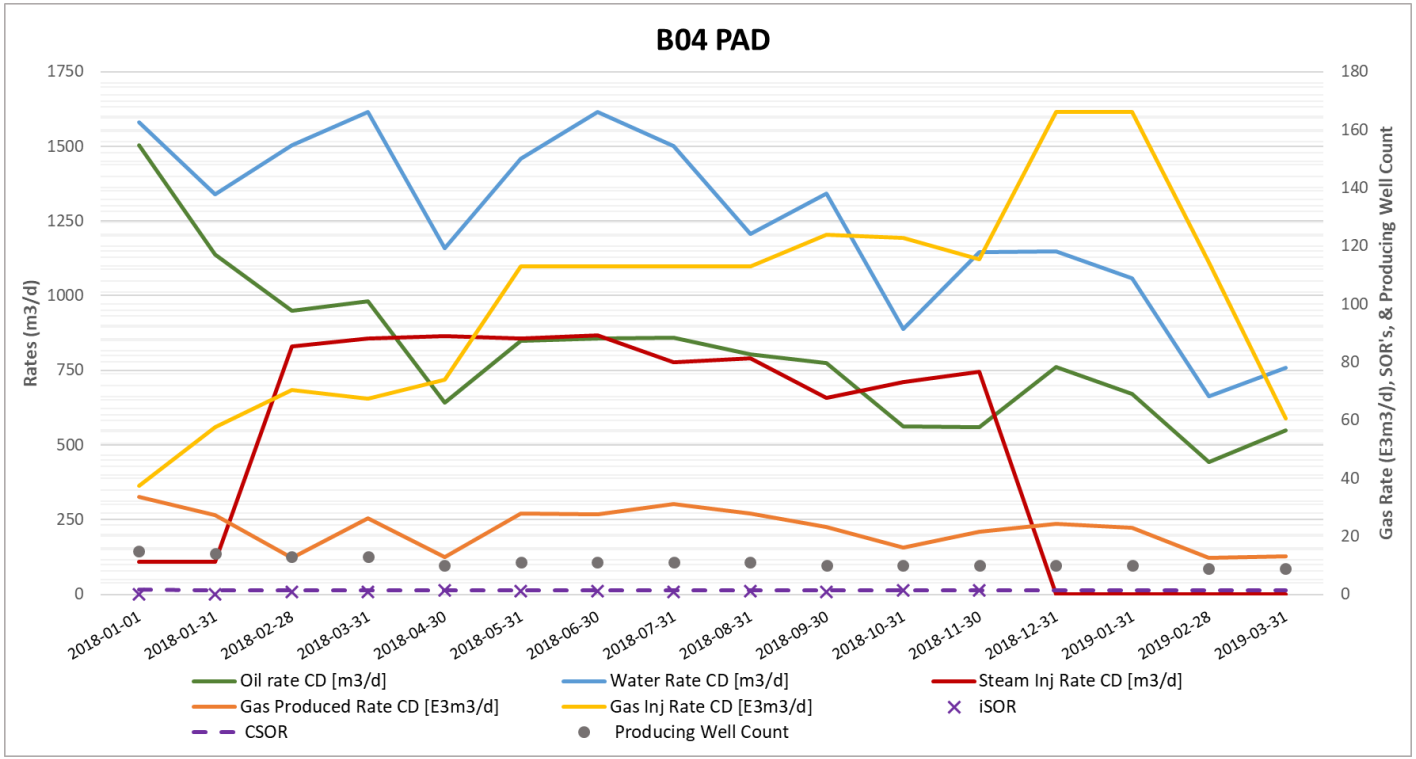
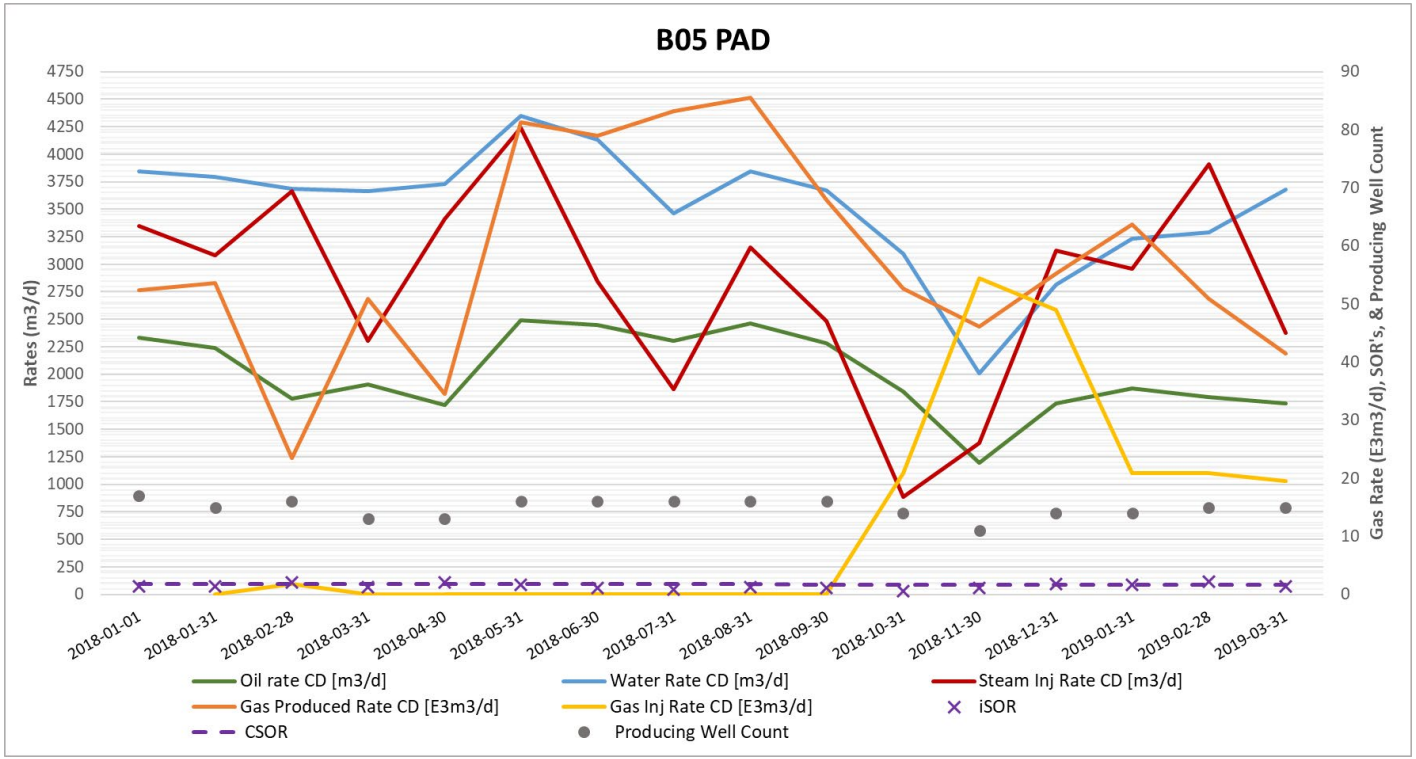


2018 Cenovus Energy Inc.

Pad Performance Plots



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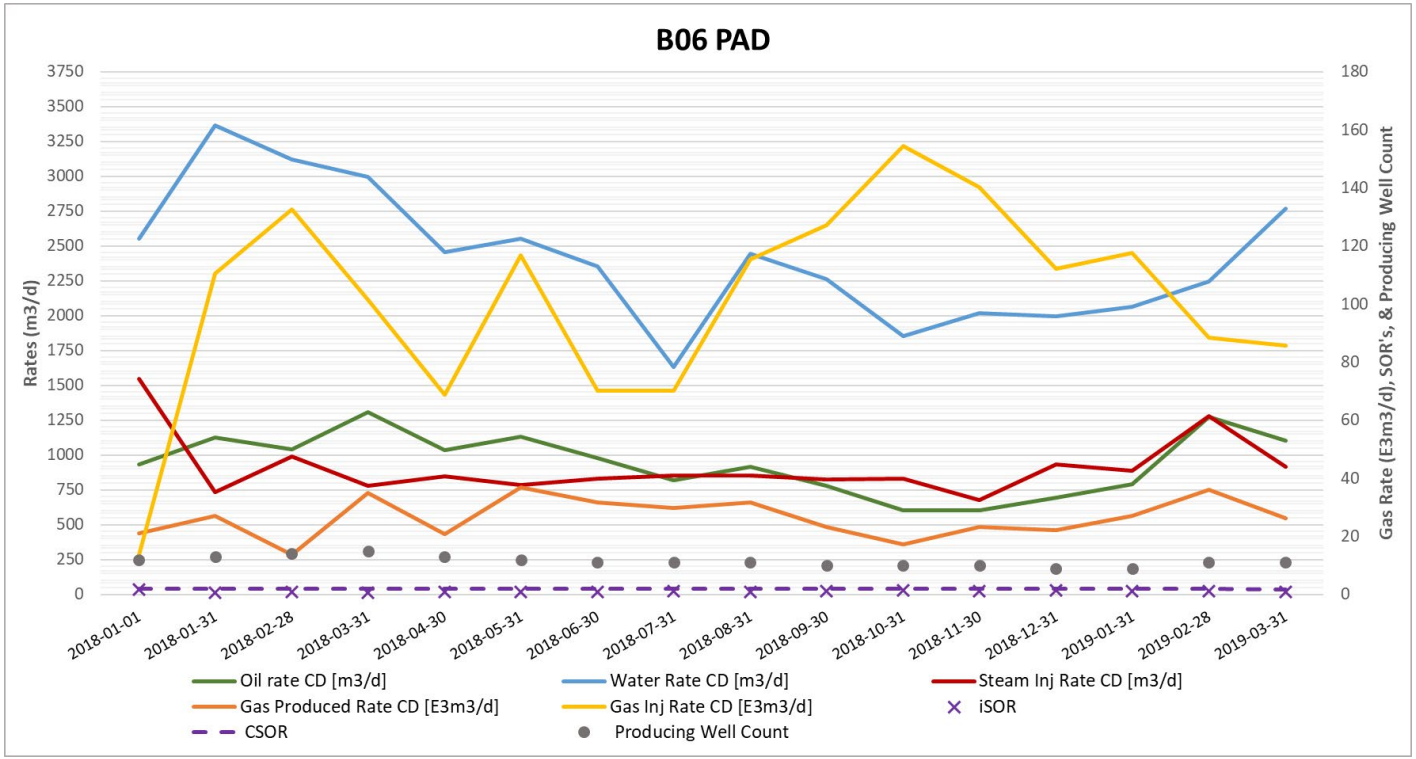
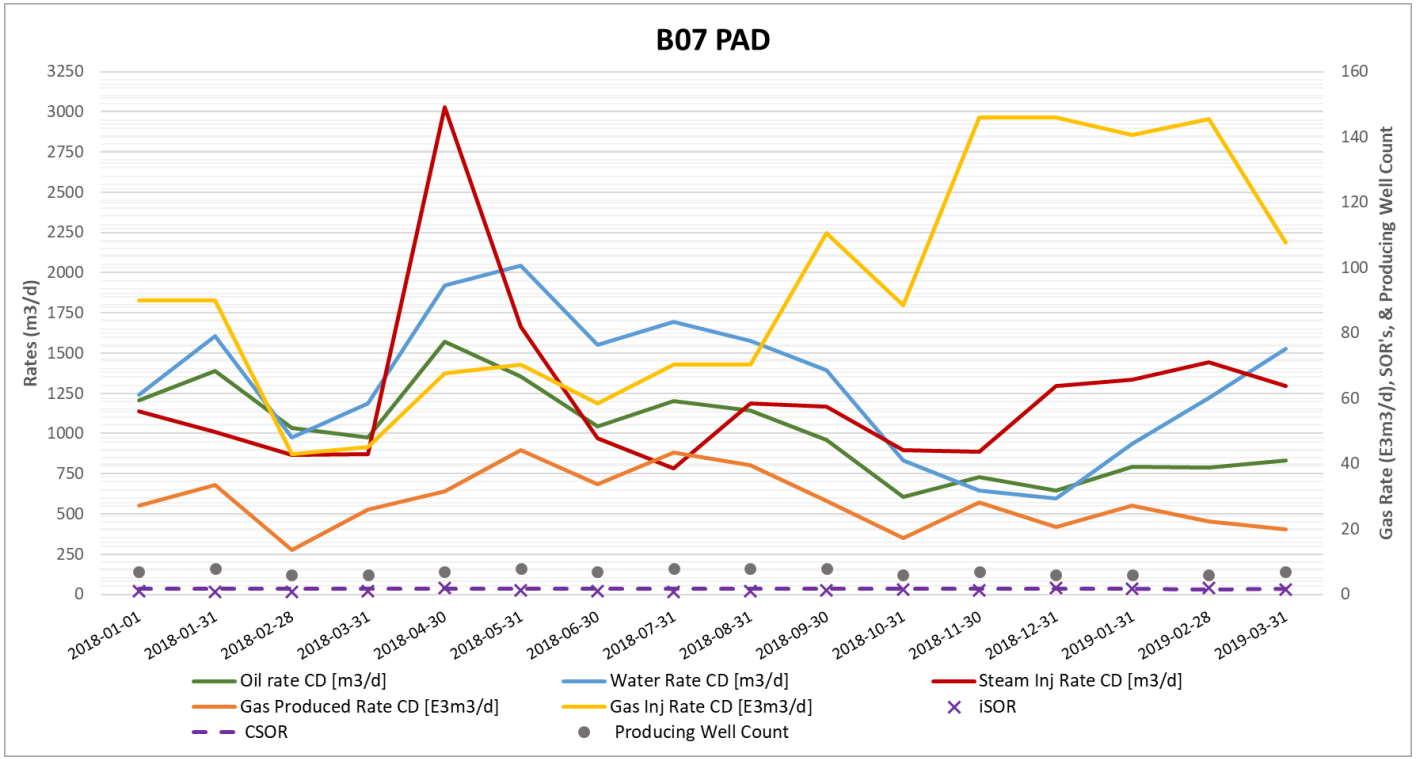
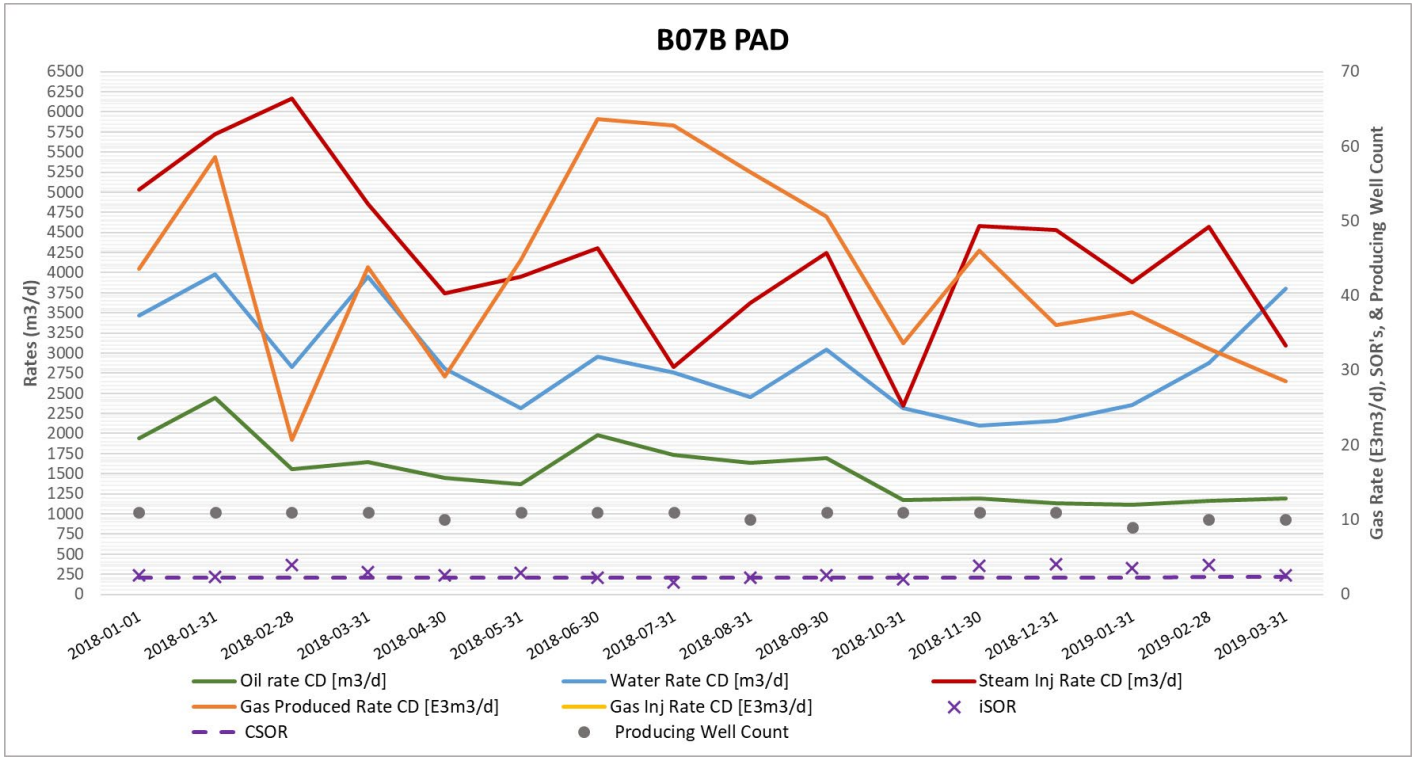


2018 Cenovus Energy Inc.

Pad Performance Plots



Pad Performance Plots



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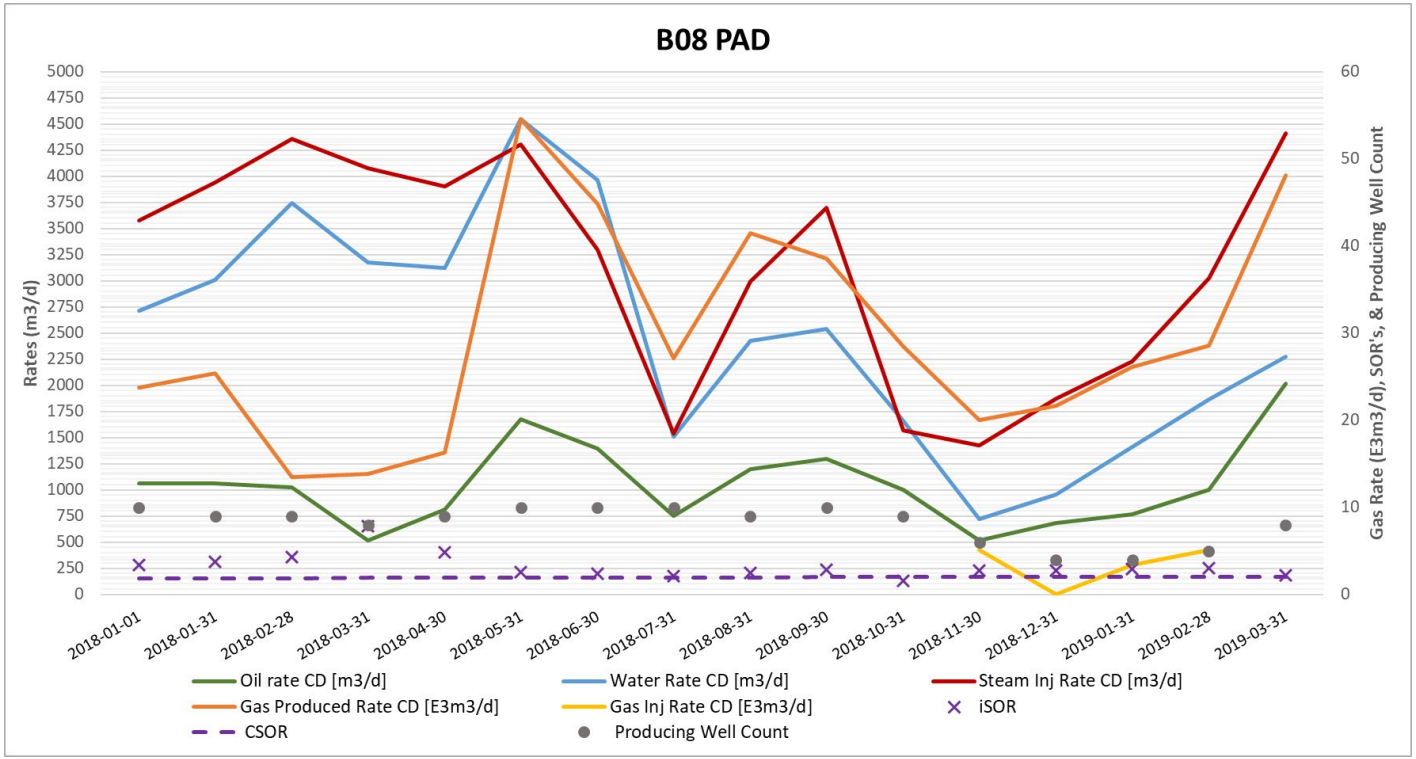
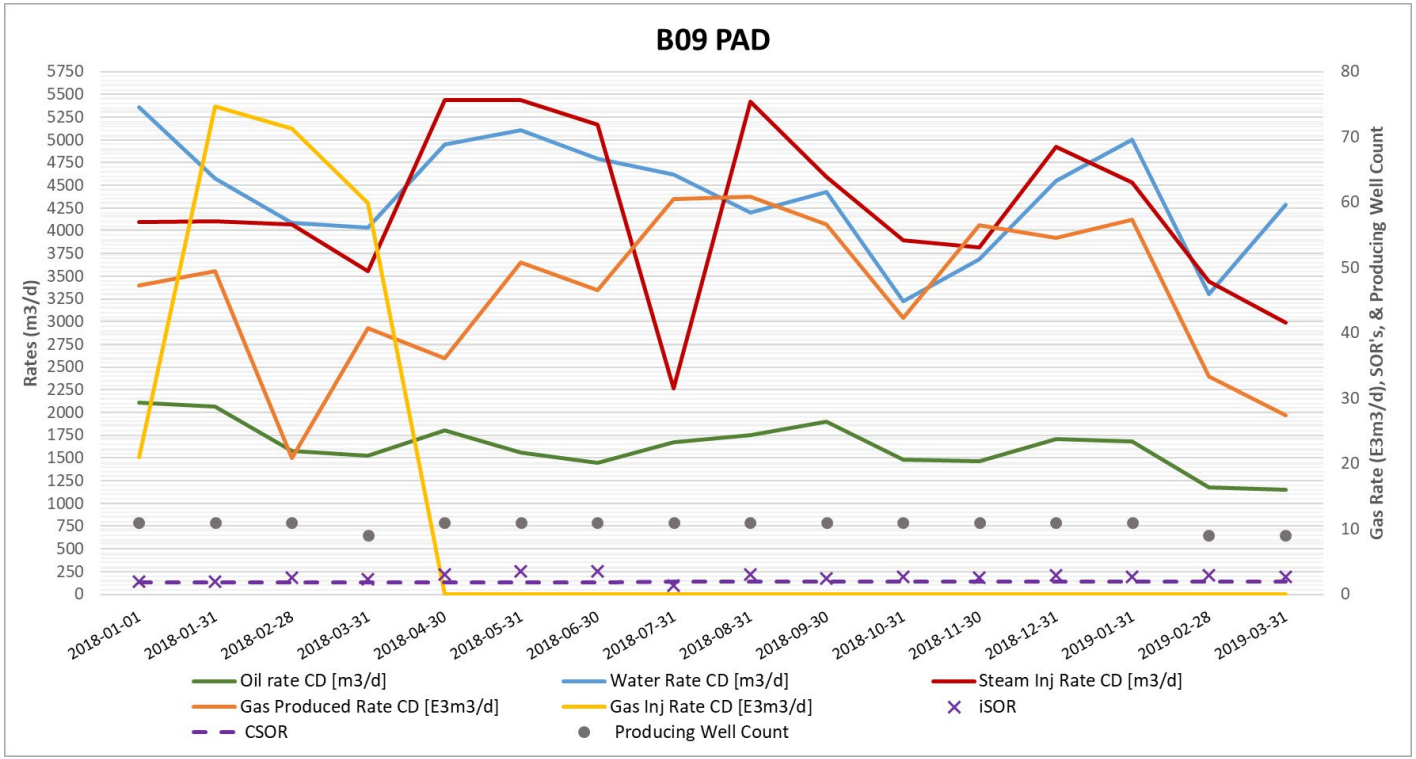


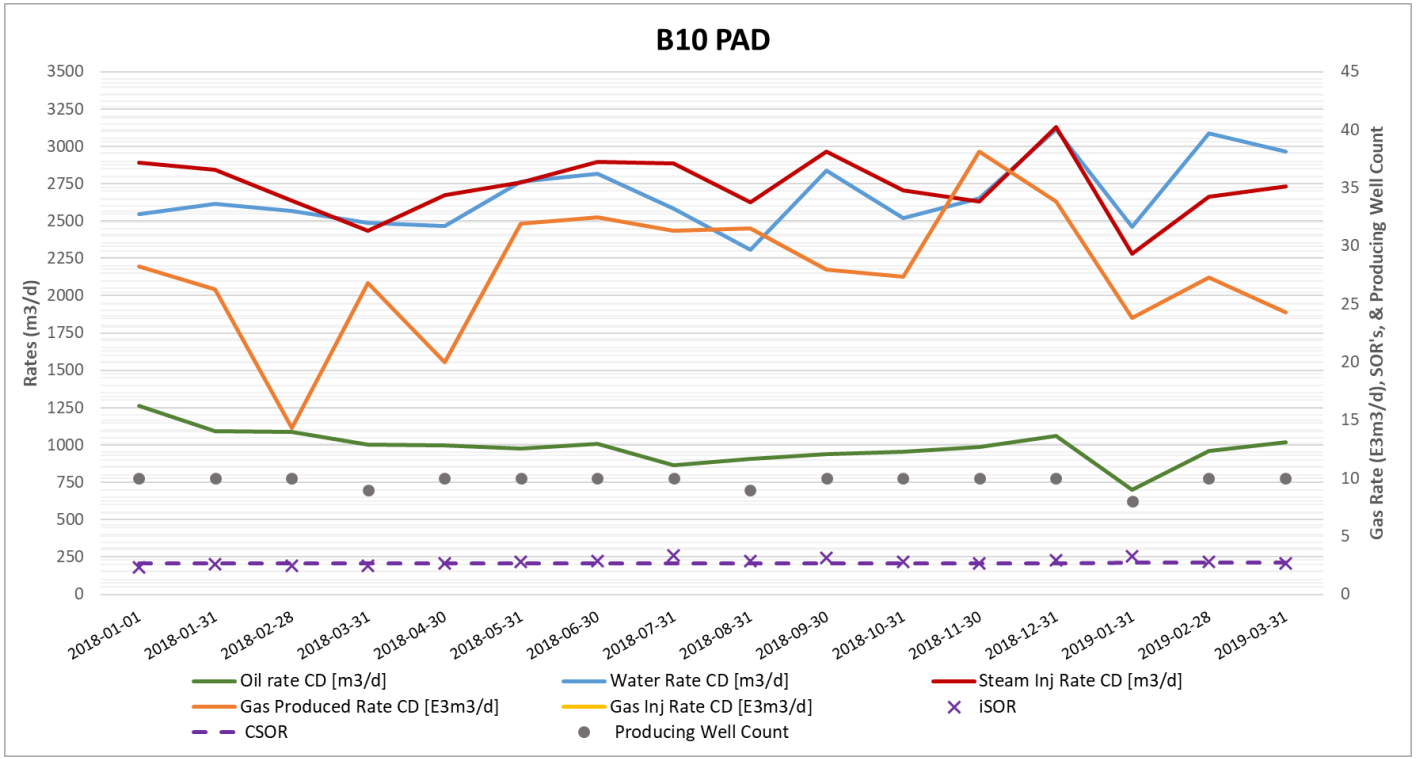
2018 Cenovus Energy Inc.

Pad Performance Plots



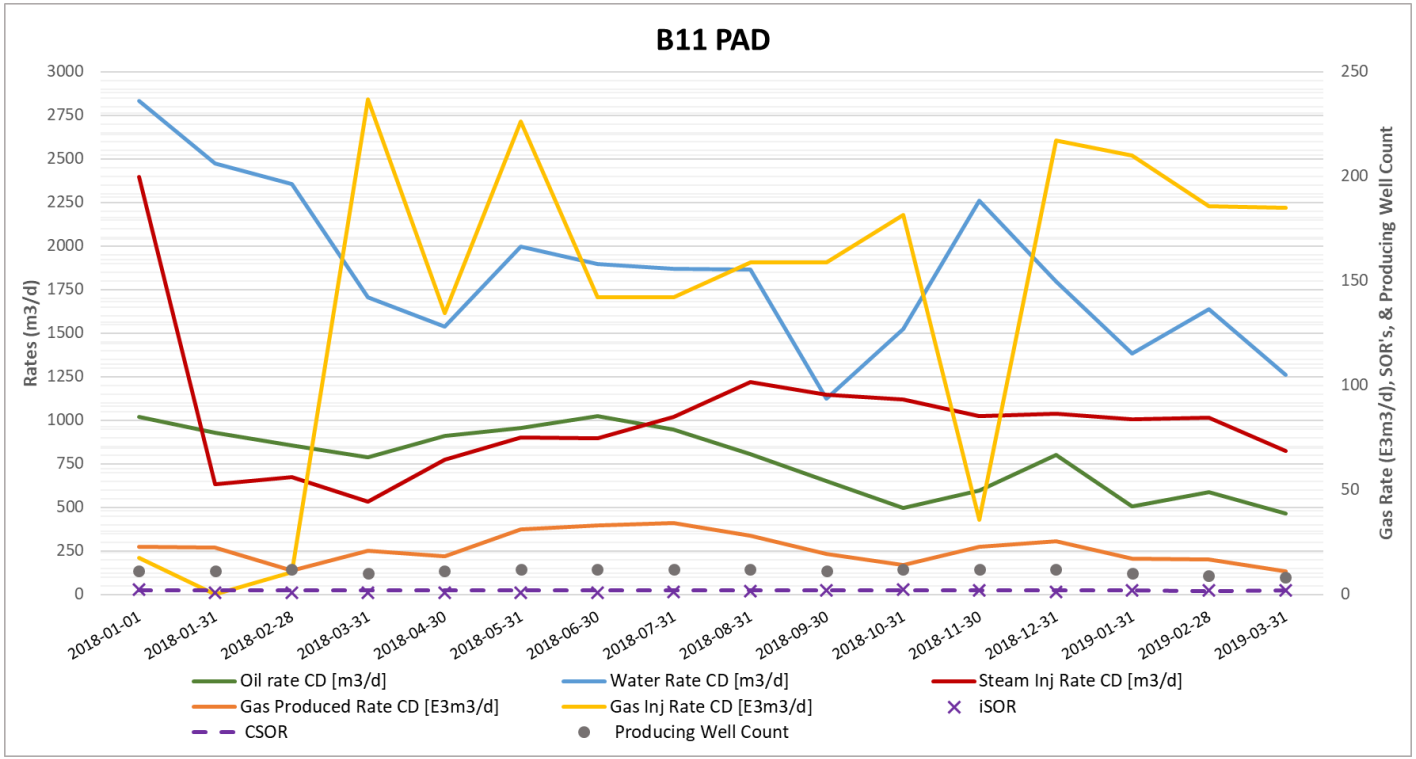
2018 Cenovus Energy Inc.

Pad Performance Plots



2018 Cenovus Energy Inc.

Pad Performance Plots



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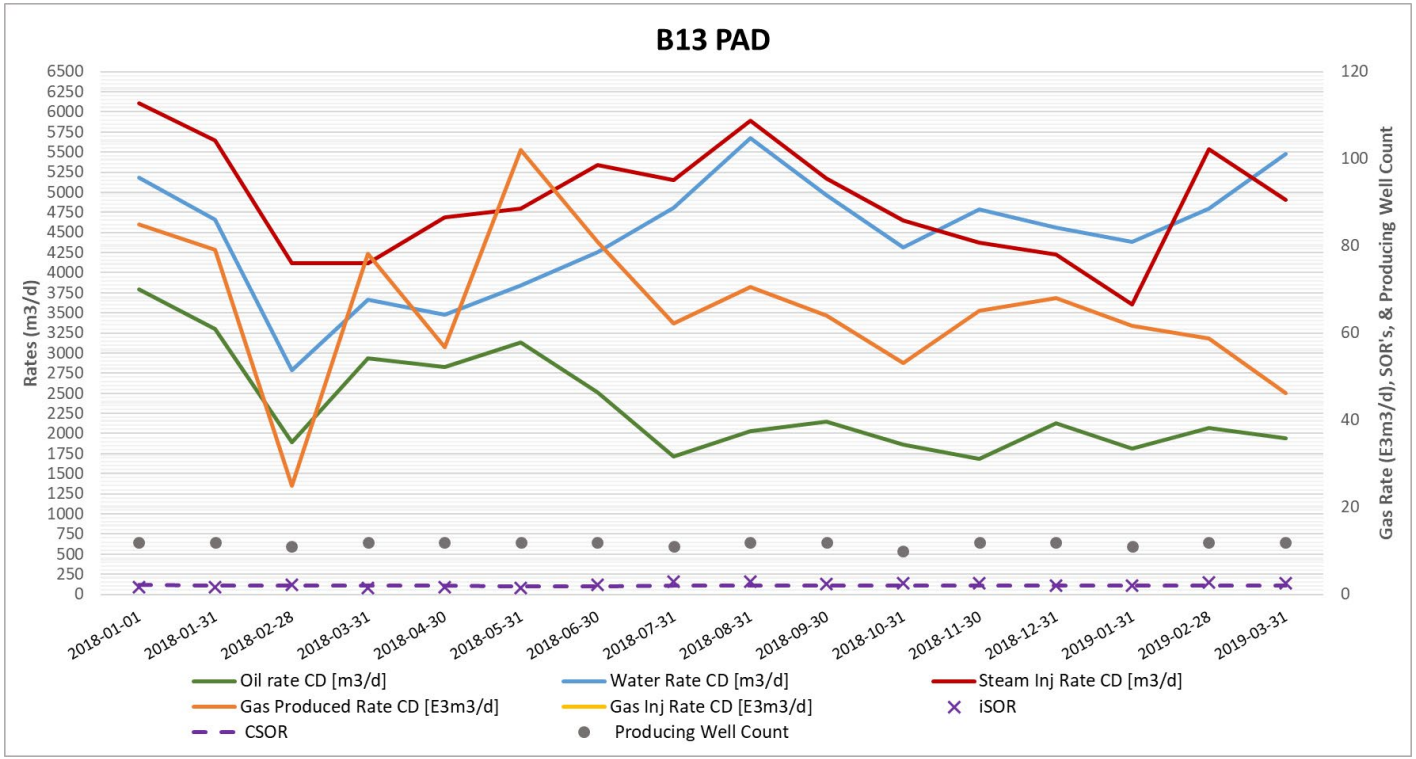

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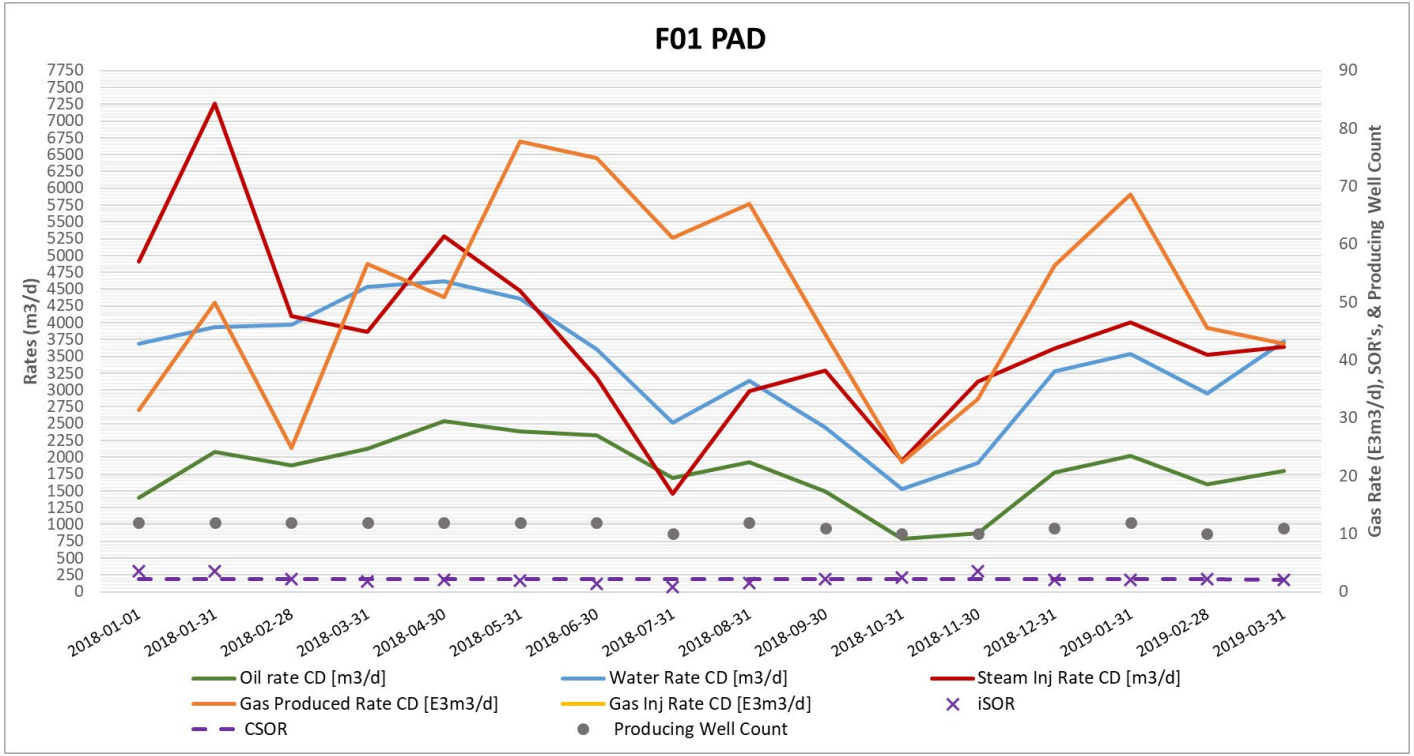

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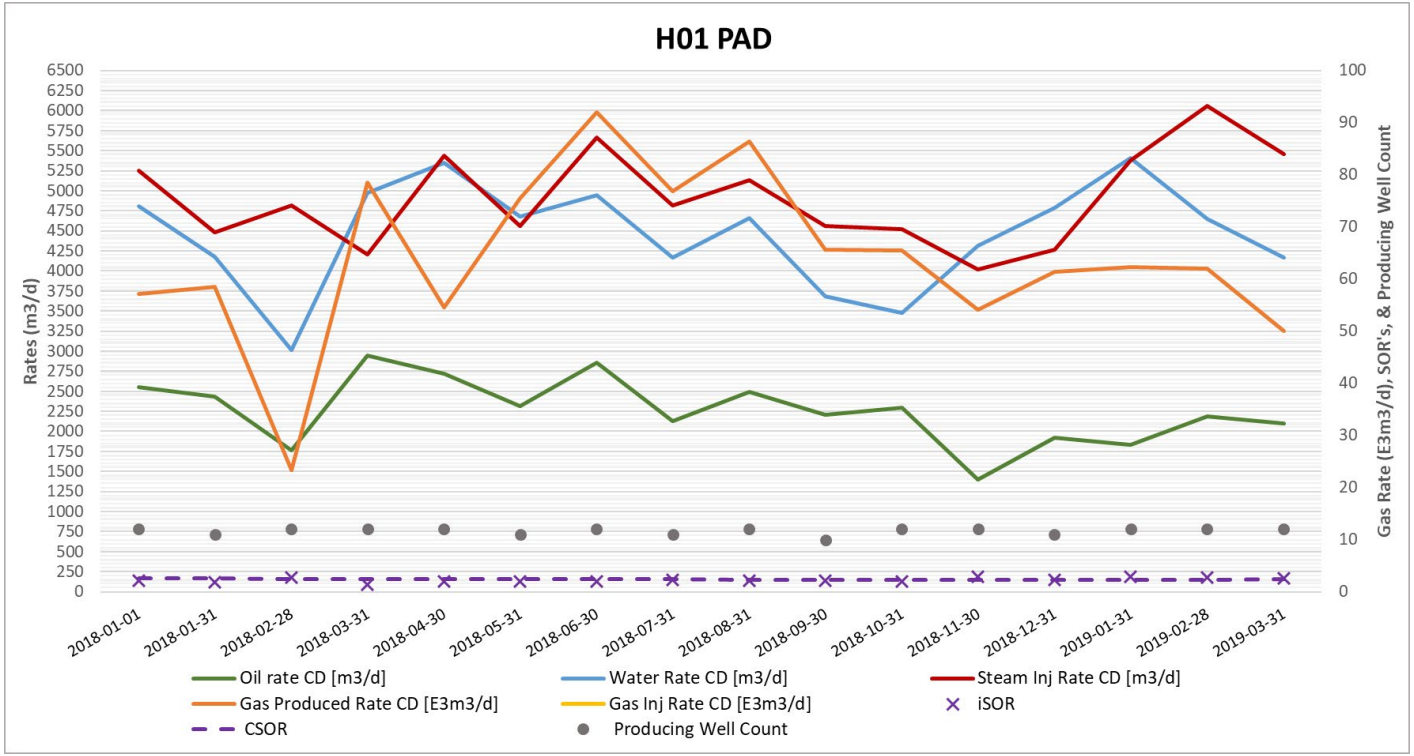
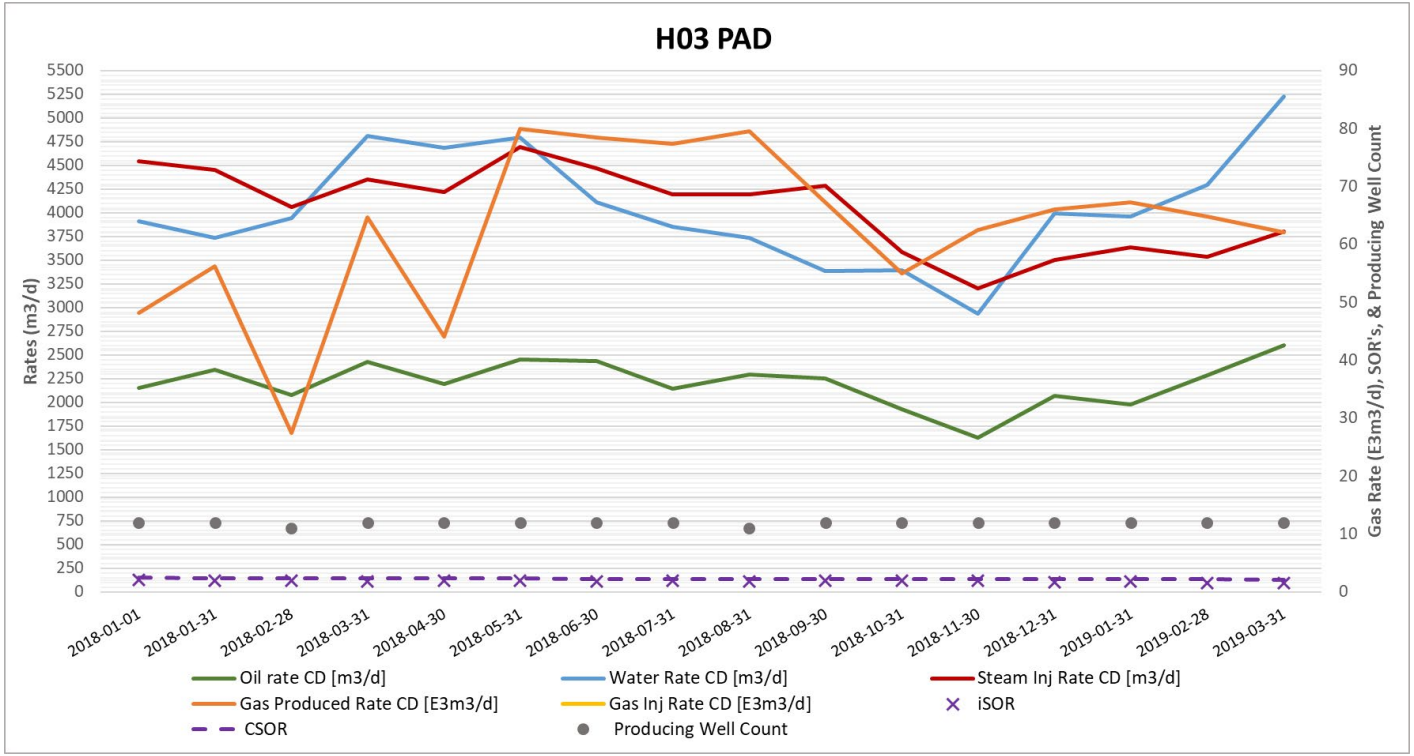
Pad Performance Plots

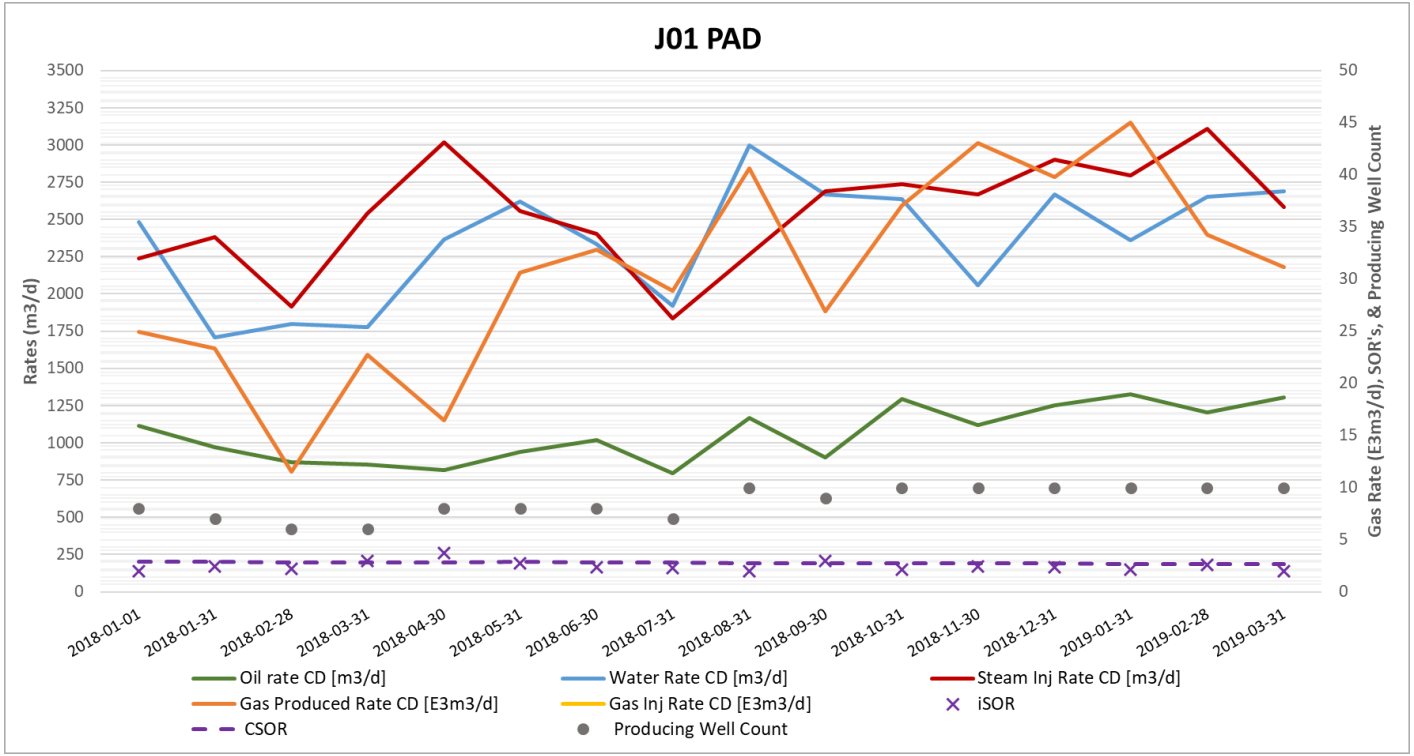


2018 Cenovus Energy Inc.

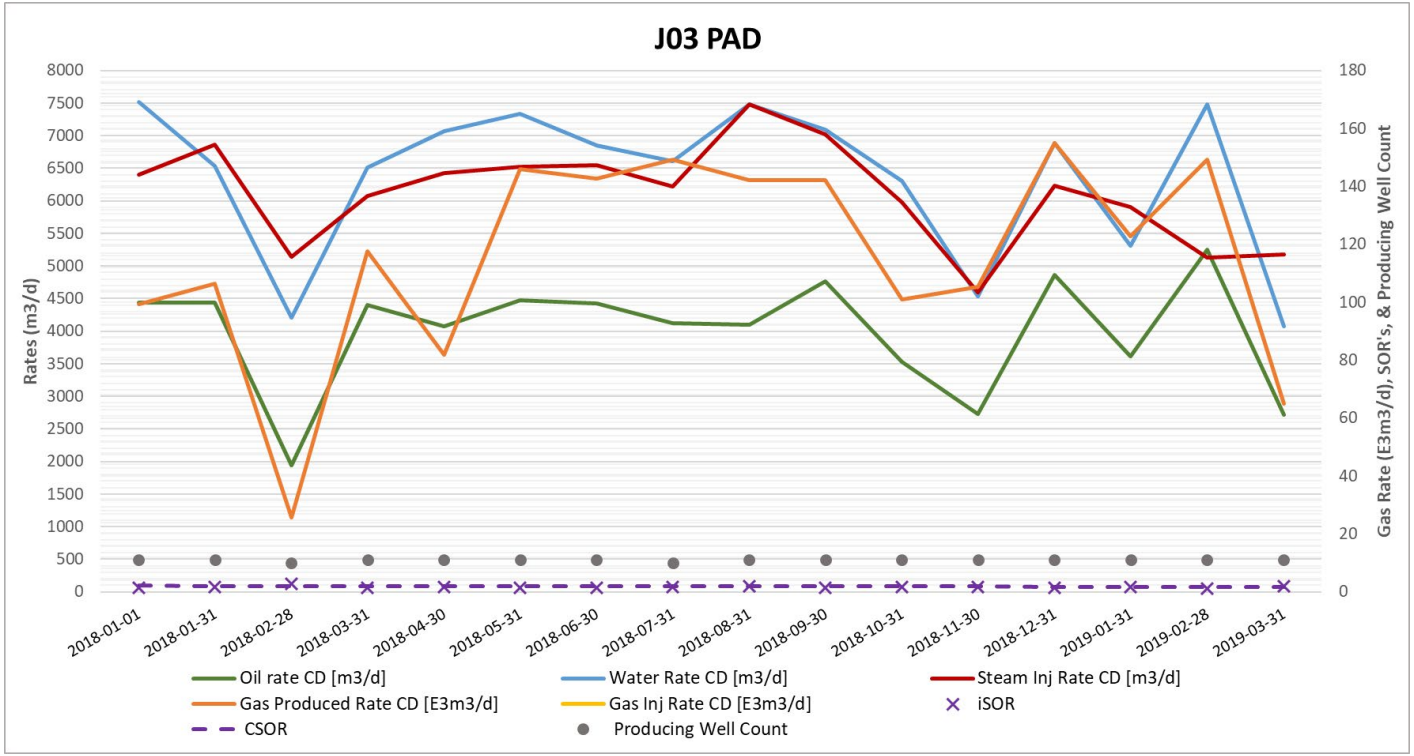
Pad Performance Plots



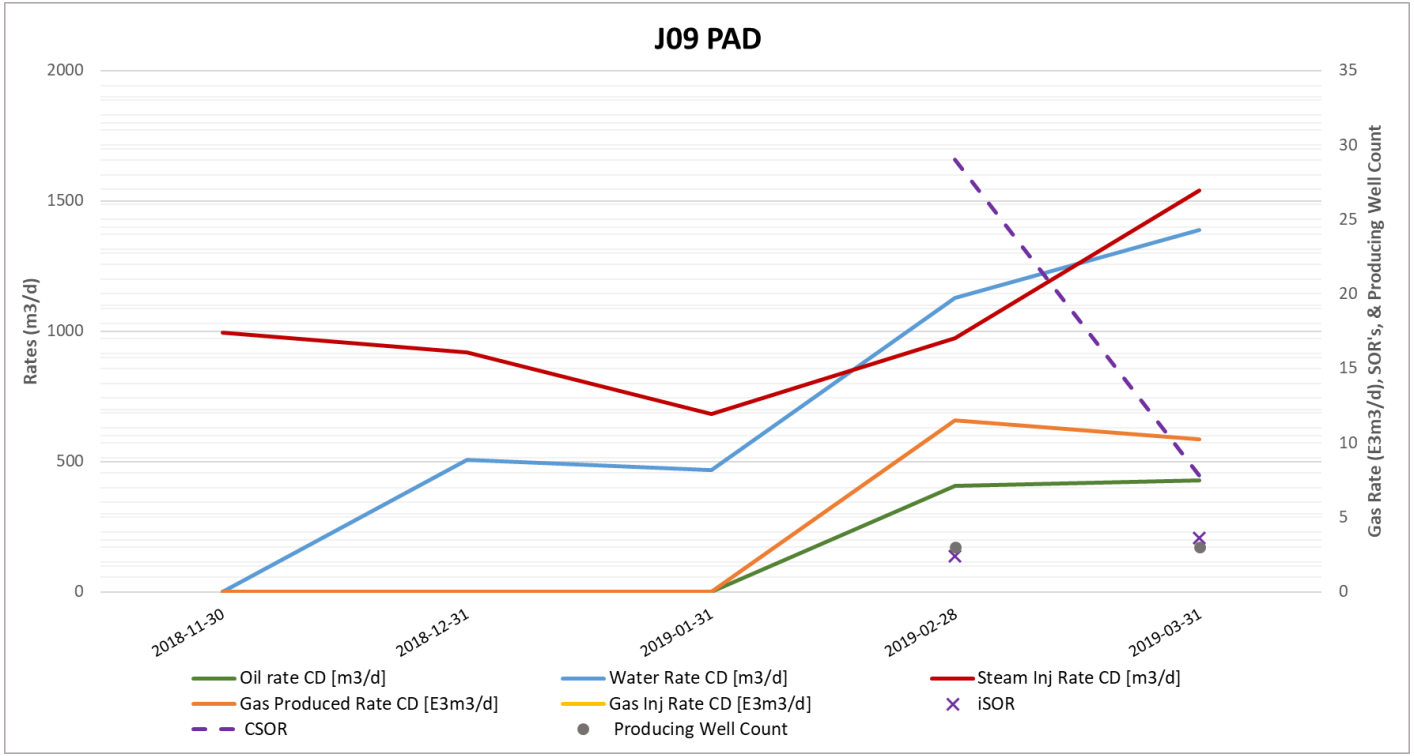
Pad Performance Plots



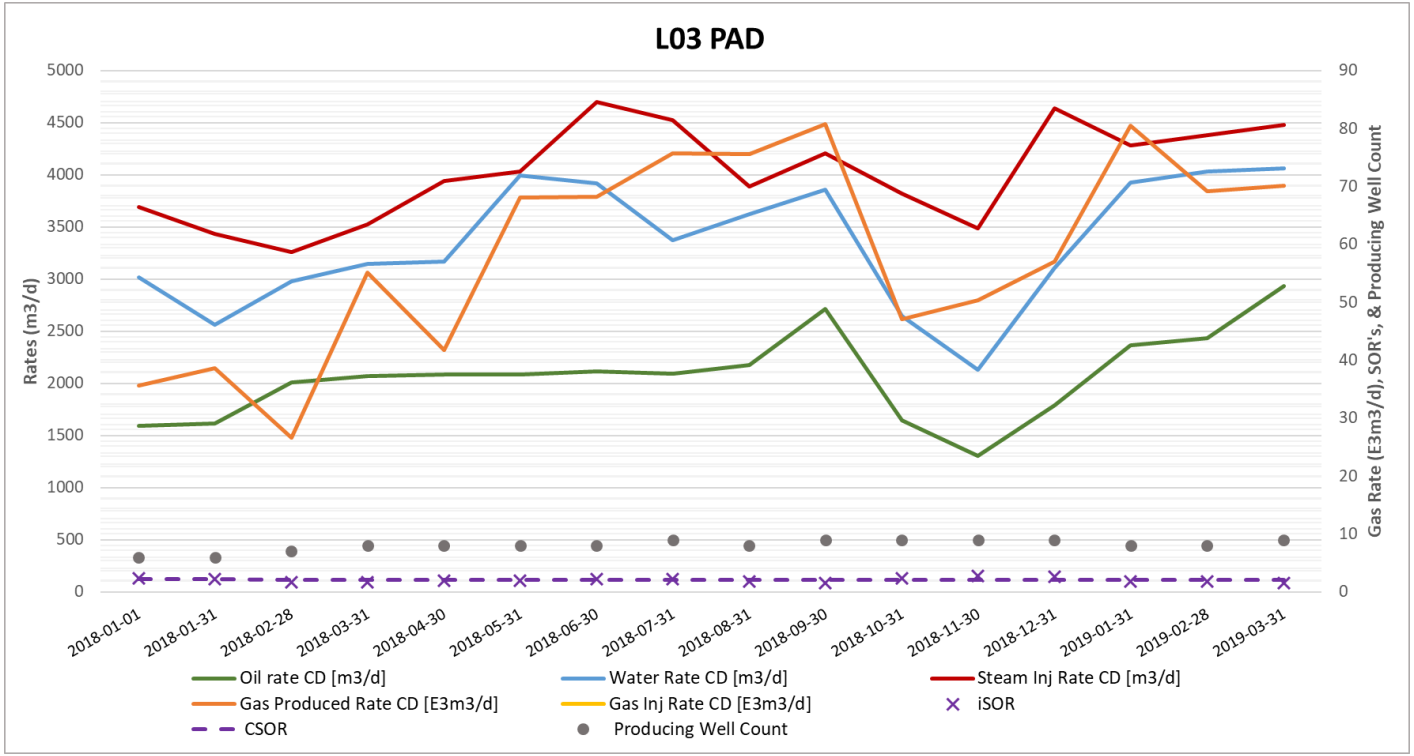
Pad Performance Plots



Pad Performance Plots



Pad Performance Plots



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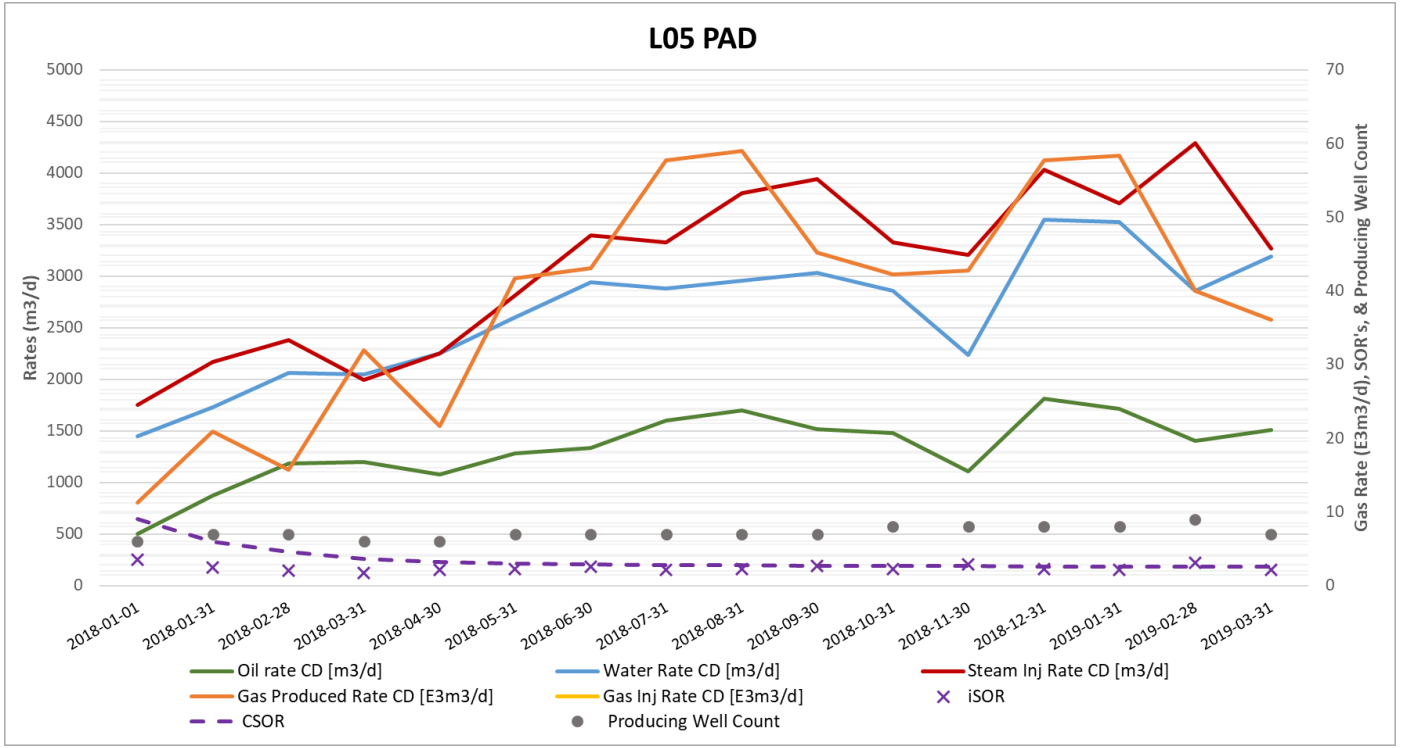
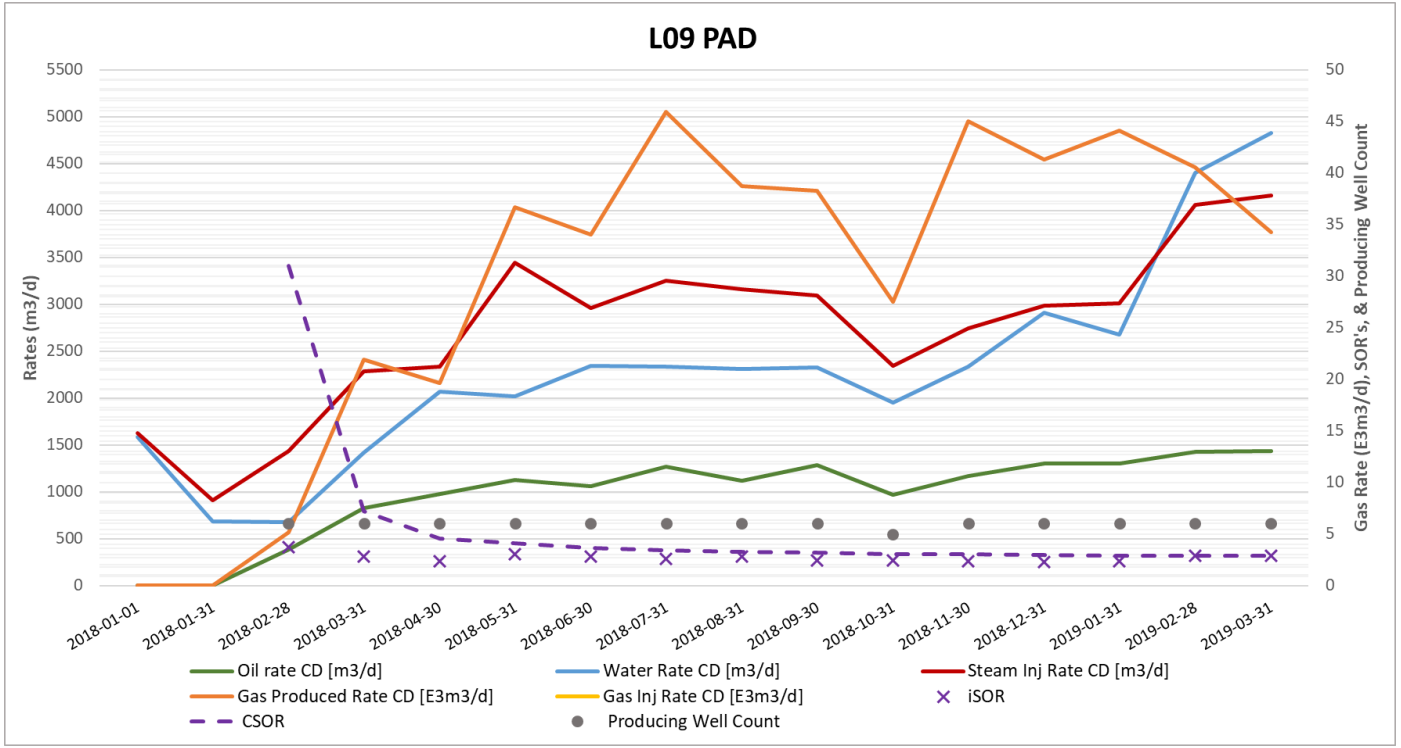


Pad Performance Plots



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