



**CULLENSWOOD WEST  
DATA PACKAGE  
CW37 – CW39**

**FEBRUARY 2018**

***Prepared for: Cornwall Coal Company***

***By: Dr. J. Bryan***

***McElroy Bryan Geological Services Pty Ltd***

|                   |            |          |
|-------------------|------------|----------|
| MINERAL RESOURCES |            |          |
| FILE NO:          | DOC REF:   |          |
| MRT210207         | 0201       |          |
| 25 MAY 2020       |            |          |
| OFFICER           | FOR ACTION | FOR INFO |
| KLAW              |            |          |
|                   |            |          |

## **CULLENSWOOD WEST DATA PACKAGE**

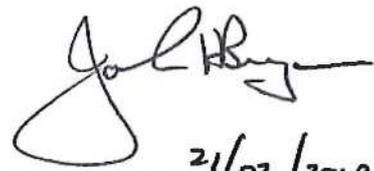
This data package includes:-

- Drill logs, graphics and core photos for CW37, CW38 and CW39
- List of coal samples for analysis at Fingal
- Analyses of coal samples undertaken by the CCC laboratory at Fingal
- Plans showing drill hole locations
- Comments on open cut potential

### COMMENT ON OPEN CUT POTENTIAL AT CULLENSWOOD WEST

On the western side of Saddle Hill two drill holes targeted the E3 seam. In CW37 two thin coal intervals (0.37 m and 0.31 m) had product yields of 79% and 73% respectively. The E3, as recognised further east in Cullenswood #2 open cut was not found in that drill hole. In CW38 the 1.04 m coal interval at 13.53 m had a yield of 75% for a 16% ash product, but the profile of the seam does not match the E3 seam. A small area of shallow coal here may comprise a coal resource.

On the east side of Saddle Hill CW39 was located between the east end of Cullenswood #2 open cut and the northern pit that was located on the side of the ridge. Down to a depth of 31.0 m that drill hole intersected some thin intervals of coaly and carbonaceous material that did not match the profile of the E3 seam. None of the sampled intervals had an acceptable yield of product coal (greater than 55% yield). The survey plan shows the location of DW39 in relation to the open cuts. Looking at the plan it seems that the floor of the E3 Seam in Block 48 is 253 m and in Block 49 to the north the seam floor is 261 m. At the bottom of the drill hole CW39 the level is 259.5 m, and I think that the E3 Seam would have been at about 257 m RL, just a few metres below the end of the drill hole. The plan shows just how narrow any proposed open cut block would be on the western side of the "Exclusion Zone". Would it be possible to extend the open cut west of Blocks 38/39/48?? to get a bit more coal, but at high ratio? It should be noted that the siltstone at the base of DW39 was unusually hard and indurated, possibly due to heating from an igneous dyke or sill. It should not be assumed that the E3 Seam is present at depth in that location. If mining was to be contemplated around the "Exclusion Zone" then drill hole DW39 should be deepened to confirm that a "normal" E3 Seam exists at about RL 257 m.

  
21/02/2013

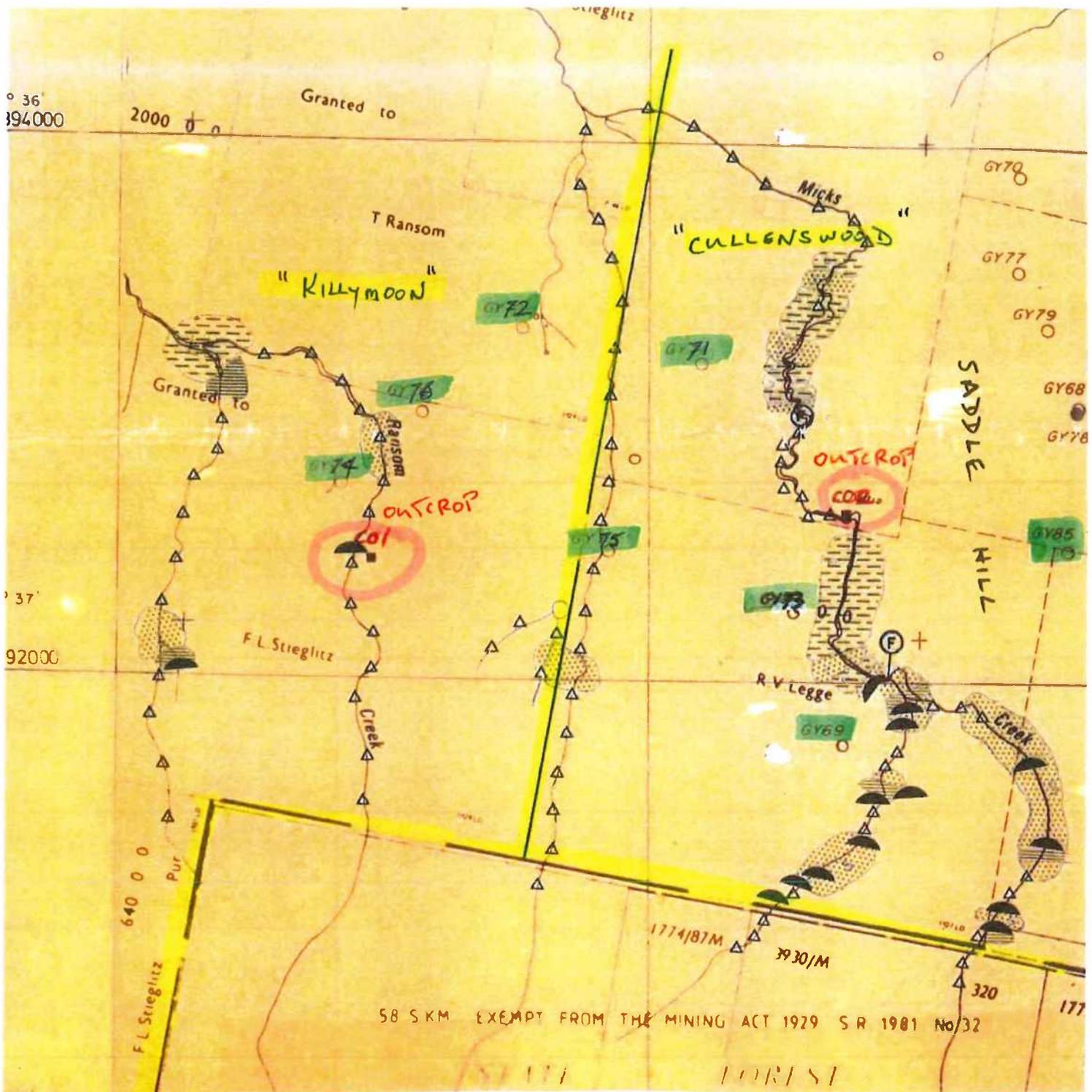
## Cullenswood West Exploration

On the eastern side of Saddle Hill the E3 Seam has been mined in Cullenswood #2 open cut . That seam is about 1.3m thick and produces a product coal at a reasonably high yield.

To the west of saddle hill there were holes drilled in the 1980's by Shell , but none of them found the E3 Seam. The accompanying plan shows the 7 Shell holes , and 2 coal outcrops found during creek traverses.

The possible existence of E2 Seam at 15.8 m in GY 73 indicated that the E3 Seam may have been just beyond the total depth of that hole at 18m. The first drill hole in December 2017 was located just to the north of GY 73 ( up dip) with the prediction that E3 Seam would be intersected at about 20m in the new hole. Drill hole CW37 did not intersect the E3 Seam , but intersected several thin coal intervals that may be remnants of the E3 Seam across a growth fault which has changed the seam profile.

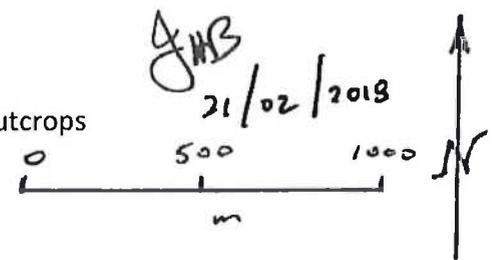
  
20/02/2018.



## Cullenswood West

Plan showing Shell "GY Series" drill holes and coal outcrops

Scale - 1: 20,000



1. GY 69 Collar at 303.6m : no coal to 42m TD
2. GY 71 Collar at 257.8m : no coal to 18m TD
3. GY 72 Collar at 252.8m : no coal to 25m TD
4. GY 73 Collar at 278.9m : Possible E2 Seam at 15.8m is 1.5m of dirty coal ; hole terminated at 18m and E3 Seam possibly a few metres below that depth.
5. GY 74 Collar at 302.5m : no coal to 16m TD
6. GY 75 Collar at 274.4m : no coal to 30m TD
7. GY 76 Collar at 271.9m : no coal to 36m TD
8. GY 85 Collar at 273.3m : E3 Seam is at 18.4m ( mined here in Cullenswood #2 open cut)

48313/1  
Timaru  
Holdings  
Pty. Ltd.

G471

592000E

5393000N

593000E

5393000N

591920E  
5393000N

135934/1  
Cullenswood  
Proprietary Limited

142934/1  
Timaru  
Holdings  
Pty. Ltd.

G475

PROPOSED  
EL10/2017  
REVISED  
EXTENTS

CW37

MICKS  
CREEK

1937P/M LEASE BOUNDARY

CW38

G473

5392000N

EL16/2010 LICENCE BOUNDARY

5392000N

591725E  
5392000N

592000E

G469

593000E



0 100 200 300 400 500  
SCALE 1:7500 (METRE)

**SURVEY  
RESOURCES**

Telephone: (03) 6331 5721  
Email:  
admin@surveyresources.com.au

Engineering  
& Mining Surveyors

PO Box 1192  
Launceston, 7250

SCALE 1:7500 AT A3

DRAWN CLP

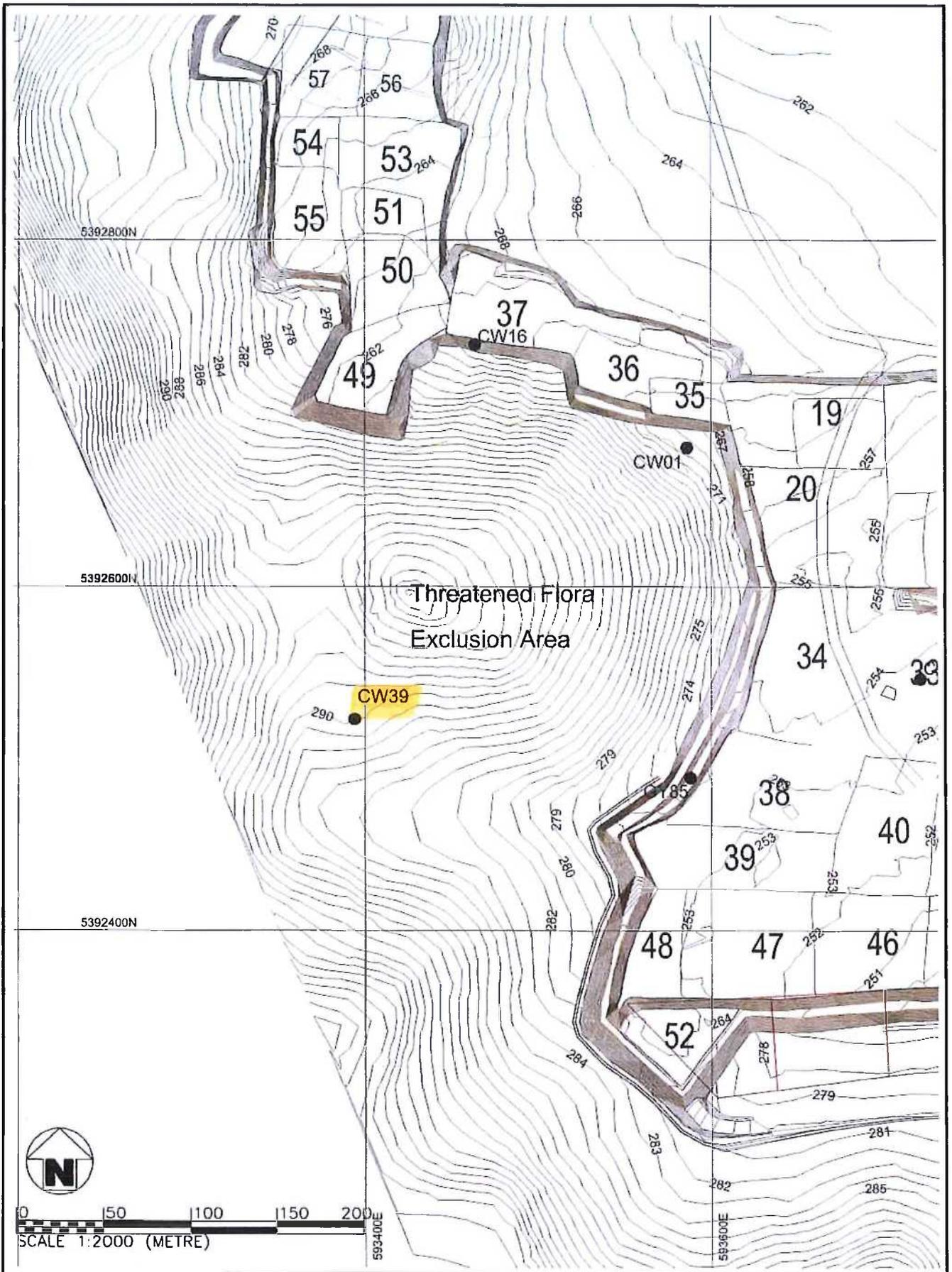
SURVEYED

DATE 1/11/2017

CORNWALL COAL  
PROPOSED EL10/2017  
PROPOSED REVISED EXTENTS

DRAWING No SR-CULL WEST-PROP EL EXTENTS-V01

SHEET 1 OF 1



DATUM: AMG (AGD66), AHD

|                                                                                                                                                                                                                                 |                                                                                                                            |            |                          |                                                               |        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------------------------------------|--------|
|  <p><b>SURVEY RESOURCES</b><br/>Engineering &amp; Mining Surveyors<br/>Telephone: (03) 6331 5721<br/>Email: admin@surveyresources.com.au</p> |  <p>PO Box 1192<br/>Launceston 7250</p> | SCALE      | 1:2000 AT A3             | <p>CORNWALL COAL<br/>CULLENSWOOD 2<br/>DRILLHOLE LOCATION</p> |        |
|                                                                                                                                                                                                                                 |                                                                                                                            | DRAWN      | CLP                      |                                                               |        |
|                                                                                                                                                                                                                                 |                                                                                                                            | SURVEYED   | CLP                      |                                                               |        |
|                                                                                                                                                                                                                                 |                                                                                                                            | DATE       | 21/2/2016                |                                                               |        |
|                                                                                                                                                                                                                                 |                                                                                                                            | DRAWING No | SR-DEC 2017-DRILLING-V01 | SHEET                                                         | 1 OF 1 |

**CORNWALL COAL  
CULLENSWOOD DRILLING, DECEMBER 2017  
COLLAR LOCATIONS**

| <b>DATUM: AMG (AGD66), AHD</b> |           |            |        |
|--------------------------------|-----------|------------|--------|
| CW37                           | 592547.03 | 5392346.79 | 277.83 |
| CW38                           | 592466.54 | 5392142.70 | 278.54 |
| CW39                           | 593393.99 | 5392523.09 | 290.54 |

| <b>DATUM: MGA (GDA94), AHD</b> |           |            |        |
|--------------------------------|-----------|------------|--------|
| CW37                           | 592659.28 | 5392529.75 | 277.83 |
| CW38                           | 592578.79 | 5392325.66 | 278.54 |
| CW39                           | 593506.23 | 5392706.05 | 290.54 |

**John Bryan**

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**From:** Chris Pedersen <cpedersen@surveyresources.com.au>  
**Sent:** Wednesday, 21 February 2018 11:02 AM  
**To:** John Bryan  
**Cc:** 'Scott Gray'  
**Subject:** Drilling locations  
**Attachments:** DECEMBER 2017-CULLENSWOOD DRILLING-COLLARS.pdf

John,

Locations of the three drillholes attached, in both AMG and MGA coordinates.

Not sure of the hole numbers, I have called the one closest to Cullenswood 2 CW39, the one in amongst the trees CW38, and the one in the paddock CW37.

Still working on those other plans, apologies for the delay, my wife's in surgery today unfortunately so dodging between office and hospital.

Kind regards,

**Chris Pedersen**  
B.Geom, MSSSI  
**Managing Director**

**Survey Resources**  
**Engineering & Mining Surveyors**

PO Box 1192  
Launceston, TAS 7250  
Ph: (03) 6331 5721  
Mob: 0408 604490

## John Bryan

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**From:** John Bryan  
**Sent:** Wednesday, 27 December 2017 8:18 AM  
**To:** 'Scott Gray'  
**Subject:** Coal Samples for analysis

Scott,  
Good morning and I hope you had an enjoyable Xmas.

Samples for Mark to analyse are:

CW37/01 21.71m to 22.08m (0.37m)

CW37/02 22.41m to 22.72m (0.31m)

CW37/03 25.80m to 26.58m (0.78m)

CW38/01 13.53m to 14.57m (1.04m)

CW38/02 22.62m to 23.17m (0.55m)

It would be good if Mark can test these samples to see what recovery and ash they have at 1.55. While the CW38/01 sample might be E3 Seam the coal was very stony mostly, and only 0.13m was "normal" dull coal with bright bands that is typical of E3 Seam elsewhere. The results will tell us whether there is any potential at all for the Cullenswood West area.

I will be in the office most days this week for some hours in the morning ,so you could email me any progress report on the new drill hole.

Regards,

**John Bryan**

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e: [john.bryan@mbgs.com.au](mailto:john.bryan@mbgs.com.au) • w: [www.mbgs.com.au](http://www.mbgs.com.au)



*This communication is confidential and may be privileged. If you have received it in error, please destroy it and advise the sender by return email or phone +61 2 8440 7800.*

## John Bryan

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**From:** John Bryan  
**Sent:** Monday, 22 January 2018 2:19 PM  
**To:** 'Scott Gray'  
**Subject:** Samples for analysis

Scott,

From CW39 the following are the sample intervals:

CW39/01 – 12.55m to 13.30m (0.75m)

CW39/02 – 18.85m to 19.30m ( 0.45m)

CW39/03 – 21.08m to 21.85m (0.77m)

CW39/04 – 26.10m to 26.65m (0.55m)

CW39/05 – 26.83m to 27.48m (0.65m)

CW39/06 – 27.70m to 28.20m (0.50m)

The coaly intervals are mostly high ash and I expect the yields to be low when Mark does the float/sink tests.

**John Bryan**

### **McElroy Bryan Geological Services**

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*This communication is confidential and may be privileged. If you have received it in error, please destroy it and advise the sender by return email or phone +61 2 8440 7800.*

CULLENSWOOD BORE HOLE SAMPLES DECEMBER 2017 DENSITY 1.55

| CORE HOLE No.                                             | FLOATS      |                            | SINKS       |                            |
|-----------------------------------------------------------|-------------|----------------------------|-------------|----------------------------|
| CW 37/02<br>(0.37 m)<br>21.71 m to 22.08 m<br>ASH: 17.99% | G<br>T<br>N | 5.4355<br>4.4630<br>0.9725 | G<br>T<br>N | 4.3300<br>4.4815<br>2.2485 |
|                                                           | Rec.        | 79.64%                     | Rec.        | 20.36%                     |
| CW 37/02<br>(0.31 m)<br>22.41 m to 22.72 m<br>ASH: 21.45% | G<br>T<br>N | 5.9215<br>4.8660<br>1.0555 | G<br>T<br>N | 5.1270<br>4.7350<br>0.3920 |
|                                                           | Rec.        | 72.91%                     | Rec.        | 27.09%                     |
| CW 37/03<br>(0.78 m)<br>25.80 m to 26.58 m<br>ASH: 22.85% | G<br>T<br>N | 5.0975<br>4.7635<br>0.3340 | G<br>T<br>N | 7.5080<br>4.6480<br>2.8600 |
|                                                           | Rec.        | 10.46%                     | Rec.        | 89.54%                     |
| CW 38/01<br>(1.04 m)<br>13.53 m to 14.57 m<br>ASH: 15.99% | G<br>T<br>N | 7.6370<br>5.0730<br>2.5640 | G<br>T<br>N | 5.2000<br>4.2190<br>0.9810 |
|                                                           | Rec.        | 72.32%                     | Rec.        | 27.68%                     |
| CW 38/02<br>(0.55 m)<br>22.62 m to 23.17 m<br>ASH: 22.92% | G<br>T<br>N | 6.3390<br>5.0510<br>1.2880 | G<br>T<br>N | 6.0965<br>5.0675<br>1.0290 |
|                                                           | Rec.        | 55.58%                     | Rec.        | 44.42%                     |
| CW 39/01<br>0.75 m<br>12.55 m to 13.30 m<br>ASH: 20.44%   | G<br>T<br>N | 5.6365<br>4.2210<br>1.4155 | G<br>T<br>N | 6.4305<br>5.0740<br>1.3565 |
|                                                           | Rec.        | 51.06%                     | Rec.        | 48.94%                     |

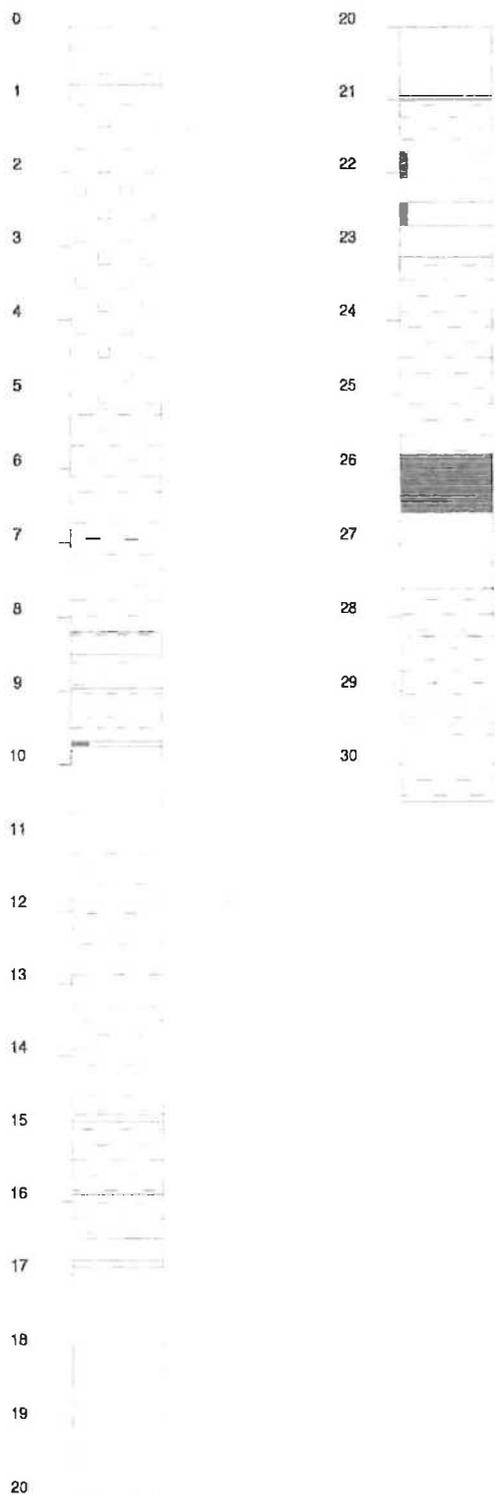
LULLENSWOOD BORE HOLE SAMPLES DECEMBER 2017 DENSITY 1.55

| CORE HOLE No.                                          | FLOTS |        | SINKS |        |
|--------------------------------------------------------|-------|--------|-------|--------|
| CW 39/02<br>(0.45m)<br>18.85m to 19.30m<br>Ash. 22.60% | G     | 5.4775 | G     | 6.8825 |
|                                                        | T     | 5.0800 | T     | 5.2490 |
|                                                        | N     | 0.3975 | N     | 1.6335 |
|                                                        | Rec   | 19.58% | Rec   | 80.42% |
| CW 39/03<br>(0.77m)<br>21.08m to 21.85m<br>Ash. 20.85% | G     | 5.3165 | G     | 8.9430 |
|                                                        | T     | 5.0540 | T     | 5.0710 |
|                                                        | N     | 0.2625 | N     | 3.8720 |
|                                                        | Rec   | 6.35%  | Rec   | 93.65% |
| CW 39/04<br>(0.55m)<br>26.10m to 26.65m<br>Ash. 26.03% | G     | 4.5895 | G     | 6.9895 |
|                                                        | T     | 4.4670 | T     | 4.4895 |
|                                                        | N     | 0.1225 | N     | 2.5000 |
|                                                        | Rec   | 4.60%  | Rec   | 95.40% |
| CW 39/05<br>(0.65m)<br>26.83m to 27.48m<br>Ash. 22.37% | G     | 5.0795 | G     | 6.8340 |
|                                                        | T     | 4.6515 | T     | 4.7690 |
|                                                        | N     | 0.4280 | N     | 2.0650 |
|                                                        | Rec   | 17.17% | Rec   | 82.83% |
| CW 39/06<br>(0.50m)<br>27.70m to 28.20m<br>Ash. 24.70% | G     | 4.7930 | G     | 7.0210 |
|                                                        | T     | 4.7400 | T     | 4.8720 |
|                                                        | N     | 0.0530 | N     | 2.1490 |
|                                                        | Rec   | 2.4%   | Rec   | 97.60% |

Project CULLENSWOOD WEST  
BoreName CW37  
Total Depth 30.5m  
Site B  
Locality  
Collar Level 277.83m  
Datum AHD  
Easting 592,659.28 MGA (GDA94)  
Northing 5,392,529.75

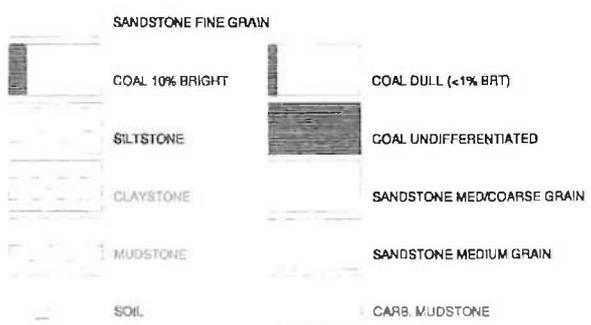
Date Commenced 18.12.17  
Date Completed 19.12.17  
Commissioned by  
Contractor MCELROY BRYAN GEOLOGICAL SERVICES  
Driller STACPOOLE  
Logged By JOHN BRYAN  
District  
Distribution  
Comments

| DEPTH  | THICKNESS | RECOVERED | GEOLOGICAL DESCRIPTION OF STRATA |                                                                 | SEAM | COMMENTS                 |
|--------|-----------|-----------|----------------------------------|-----------------------------------------------------------------|------|--------------------------|
| 0.800  | 0.800     | 0.800     | SOIL                             | GREY.                                                           |      |                          |
| 5.200  | 4.400     | 4.400     | SOIL                             | WITH SMALL DOLERITE FRAGMENTS.                                  |      |                          |
| 8.200  | 3.000     | 3.000     | MUDSTONE                         | BROKEN CORE, BROWN, SLIGHTLY WEATHERED TO MODERATELY WEATHERED. |      |                          |
| 8.500  | 0.300     | 0.300     | CLAYSTONE                        | COALY, EXTREMELY WEATHERED, SOFT.                               |      |                          |
| 8.960  | 0.460     | 0.460     | SILTSTONE                        | DARK, GREY TO LIGHT GREY, SLIGHTLY WEATHERED, LAMINATED <1mm.   |      |                          |
| 9.660  | 0.700     | 0.700     | CLAYSTONE                        | COALY, BLACK, SLIGHTLY WEATHERED.                               |      |                          |
| 9.680  | 0.020     | 0.020     | CLAYSTONE                        | TUFFACEOUS, BROWN, MODERATELY WEATHERED.                        |      |                          |
| 9.750  | 0.070     | 0.070     | COAL                             | 10% BRIGHT, MODERATELY WEATHERED.                               |      | DULL WITH BRIGHT BANDS   |
| 10.900 | 1.150     | 1.150     | SANDSTONE FINE GRAIN             | GREY, SLIGHTLY WEATHERED.                                       |      |                          |
| 14.800 | 3.900     | 3.900     | MUDSTONE                         | GREY, SLIGHTLY WEATHERED, LAMINATED <1mm.                       |      |                          |
| 14.900 | 0.100     | 0.100     | CARB. MUDSTONE                   | BLACK, FRESH.                                                   |      |                          |
| 15.900 | 1.000     | 1.000     | MUDSTONE                         | DARK, GREY, FRESH.                                              |      |                          |
| 16.500 | 0.600     | 0.600     | MUDSTONE                         | GREY, FRESH, LAMINATED <1mm.                                    |      |                          |
| 16.800 | 0.300     | 0.300     | SANDSTONE MEDIUM GRAIN           | GREY.                                                           |      |                          |
| 16.900 | 0.100     | 0.100     | MUDSTONE                         | DARK, GREY, HARD.                                               |      |                          |
| 20.950 | 4.050     | 4.050     | SANDSTONE MED/COARSE LIGHT GRAIN | GREY, MASSIVE >1m.                                              |      |                          |
| 20.990 | 0.040     | 0.040     | CLAYSTONE                        | COALY, BLACK.                                                   |      |                          |
| 21.010 | 0.020     | 0.020     | COAL                             | UNDIFFERENTIATED, STONY COAL.                                   |      |                          |
| 21.710 | 0.700     | 0.700     | SILTSTONE                        | GREY, MASSIVE >1m.                                              |      | WITH MUDSTONE INTERBEDS  |
| 22.080 | 0.370     | 0.370     | COAL                             | DULL (<1% BRT), 37/01, MINOR BRIGHT COAL BANDS.                 |      |                          |
| 22.410 | 0.330     | 0.330     | CARB. MUDSTONE                   | DARK, GREY.                                                     |      |                          |
| 22.720 | 0.310     | 0.310     | COAL                             | DULL (<1% BRT), 37/02.                                          |      | DULL TO STONY            |
| 23.150 | 0.430     | 0.430     | CARB. MUDSTONE                   | DARK, GREY.                                                     |      |                          |
| 25.800 | 2.650     | 2.650     | MUDSTONE                         | DARK, GREY TO BLACK.                                            |      |                          |
| 26.580 | 0.780     | 0.780     | COAL                             | UNDIFFERENTIATED, STONY.                                        |      |                          |
| 27.620 | 1.040     | 1.040     | CARB. MUDSTONE                   | BLACK.                                                          |      |                          |
| 28.250 | 0.630     | 0.630     | MUDSTONE                         | GREY.                                                           |      |                          |
| 29.450 | 1.200     | 1.200     | SILTSTONE                        | GREY, LAMINATED <1mm.                                           |      |                          |
| 30.500 | 1.050     | 1.050     | MUDSTONE                         | DARK, GREY, HARD.                                               |      | BASE OF HOLE. T.D. 30.5M |



CW 37 Coal Analyses

| From          | To | CF1.55 Yield | CF1.55 Ash |
|---------------|----|--------------|------------|
| 21.71 - 22.08 |    | 79.64%       | 17.99%     |
| 22.41 - 22.72 |    | 72.91%       | 21.45%     |
| 25.80 - 26.58 |    | 10.46%       | 22.85%     |



BOREHOLE NO: CW37

PROJECT: CULLENSWOOD WEST

CORNWALL COAL COMPANY

DATE DRILLED: 19.12.17

LOGGED BY: JOHN BRYAN

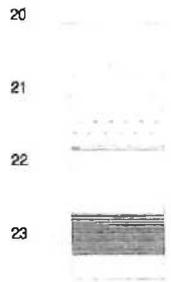
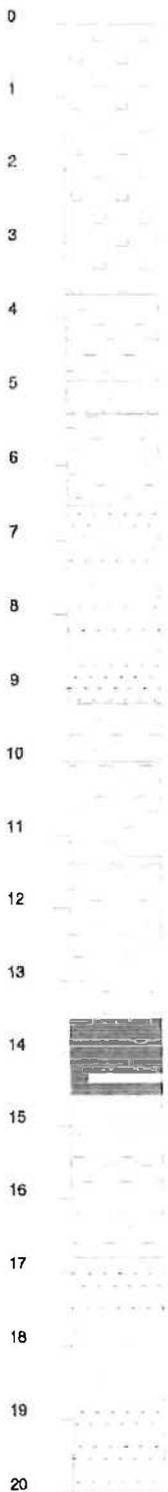
SCALE: 1:100

PLAN NO:

Project CULLENSWOOD WEST  
BoreName CW38  
Total Depth 23.5m  
Site  
Locality  
Collar Level 278.54m  
Datum AHD  
Easting 592,578.79 MGA(GDA94)  
Northing 5,392,325.66

Date Commenced 20.12.17  
Date Completed 20.12.17  
Commissioned by  
Contractor  
Driller STACPOOLE  
Logged By JOHN BRYAN  
District  
Distribution  
Comments

| DEPTH  | THICKNESS | RECOVERED | GEOLOGICAL DESCRIPTION OF STRATA |                                                       | SEAM | COMMENTS                  |
|--------|-----------|-----------|----------------------------------|-------------------------------------------------------|------|---------------------------|
| 3.700  | 3.700     | 3.700     | SCIL                             |                                                       |      | SAND, SCREE               |
| 4.850  | 1.150     | 1.150     | MUDSTONE                         | BROWN, SLIGHTLY WEATHERED TO EXTREMELY WEATHERED.     |      |                           |
| 5.300  | 0.450     | 0.450     | SANDSTONE                        | BROWN, SLIGHTLY WEATHERED.                            |      |                           |
| 6.530  | 1.230     | 1.230     | SILTSTONE                        | EXTREMELY WEATHERED.                                  |      | WITH CLAYSTONE INTERBEDS  |
| 9.200  | 2.670     | 2.670     | SANDSTONE                        | QUARTZ/LITHIC, GREY, SLIGHTLY WEATHERED, MASSIVE >1m. |      |                           |
| 10.000 | 0.800     | 0.800     | MUDSTONE                         | DARK, GREY, SLIGHTLY WEATHERED, LAMINATED <1mm.       |      |                           |
| 11.300 | 1.300     | 1.300     | MUDSTONE                         | GREY, SLIGHTLY WEATHERED, LAMINATED <1mm.             |      |                           |
| 11.450 | 0.150     | 0.150     | MUDSTONE                         | BROWN, SLIGHTLY WEATHERED.                            |      |                           |
| 13.530 | 2.080     | 2.080     | SILTSTONE                        | GREY, FRESH, MASSIVE >1m.                             |      |                           |
| 13.890 | 0.360     | 0.360     | COAL                             | UNDIFFERENTIATED, 38/01, DULL TO STONY, FRESH.        |      |                           |
| 13.910 | 0.020     | 0.020     | CLAYSTONE                        | 38/01, BROWN.                                         |      | ?TUFF                     |
| 14.280 | 0.370     | 0.370     | COAL                             | UNDIFFERENTIATED, 38/01, DULL TO STONY.               |      |                           |
| 14.410 | 0.130     | 0.130     | COAL                             | 10% BRIGHT, 38/01.                                    |      |                           |
| 14.570 | 0.160     | 0.160     | COAL                             | UNDIFFERENTIATED, 38/01, STONY.                       |      |                           |
| 14.980 | 0.410     | 0.410     | CARB. MUDSTONE                   | DARK, GREY, LAMINATED <1mm.                           |      |                           |
| 15.500 | 0.520     | 0.520     | SILTSTONE                        | LIGHT, GREY, LAMINATED <1mm.                          |      |                           |
| 16.800 | 1.300     | 1.300     | MUDSTONE                         | GREY, LAMINATED <1mm.                                 |      |                           |
| 21.700 | 4.900     | 4.900     | SANDSTONE                        | QUARTZ/LITHIC, GREY, MASSIVE >1m.                     |      |                           |
| 21.740 | 0.040     | 0.040     | COAL                             | DULL (<1% BRT).                                       |      |                           |
| 22.620 | 0.880     | 0.880     | CARB. MUDSTONE                   | DARK, GREY, LAMINATED <1mm.                           |      |                           |
| 23.170 | 0.550     | 0.550     | COAL                             | UNDIFFERENTIATED, STONY.                              |      |                           |
| 23.500 | 0.330     | 0.330     | CARB. MUDSTONE                   | MEDIUM TO DARK, GREY.                                 |      | BASE OF HOLE. T.D. 23.50M |



22.62 – 23.17 55.58% 22.92%

CW 38 Coal Analyses

13.53 – 14.57 72.32% 15.99%

-  CLAYSTONE
-  COAL UNDIFFERENTIATED
-  SILTSTONE
-  SANDSTONE
-  MUDSTONE
-  SOIL

-  COAL DULL (<1% BRT)
-  CARB MUDSTONE
-  COAL 10% BRIGHT

BOREHOLE NO: CW38

PROJECT: CULLENSWOOD WEST

CORNWALL COAL COMPANY

DATE DRILLED: 20.12.17

LOGGED BY: JOHN BRYAN

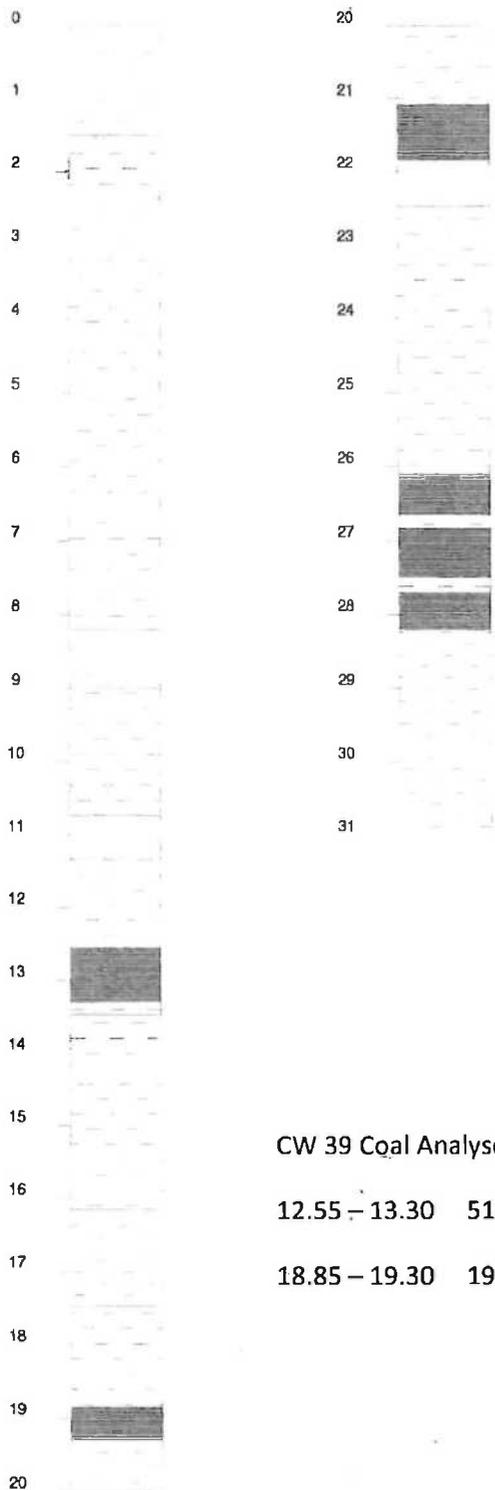
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PLAN NO:

Project CULLENSWOOD WEST  
BoreName CW39  
Total Depth 31.0m  
Site  
Locality  
Collar Level 290.54m  
Datum AHD  
Easting 593,506.23 MGA (GDA94)  
Northing 5,392,706.05

Date Commenced 21.12.17  
Date Completed 28.12.17  
Commissioned by  
Contractor  
Driller STACPOOLE  
Logged By JOHN BRYAN  
District  
Distribution  
Comments

| DEPTH  | THICKNESS | RECOVERED | GEOLOGICAL DESCRIPTION OF STRATA |                                                              | SEAM | COMMENTS                 |
|--------|-----------|-----------|----------------------------------|--------------------------------------------------------------|------|--------------------------|
| 1.500  | 1.500     | 1.500     | SOIL                             |                                                              |      | SAND AND FINE SCREE      |
| 8.200  | 6.700     | 6.700     | MUDSTONE                         | BROWN, MODERATELY WEATHERED.                                 |      |                          |
| 9.000  | 0.800     | 0.800     | SANDSTONE                        | BROWN, SLIGHTLY WEATHERED.                                   |      |                          |
| 10.740 | 1.740     | 1.740     | MUDSTONE                         | GREY, FRESH, LAMINATED <1mm.                                 |      |                          |
| 11.320 | 0.580     | 0.580     | CARB. MUDSTONE                   | DARK, GREY/BLACK, FRESH.                                     |      |                          |
| 12.550 | 1.230     | 1.230     | MUDSTONE                         | GREY, FRESH, LAMINATED <1mm.                                 |      |                          |
| 13.300 | 0.750     | 0.750     | COAL                             | UNDIFFERENTIATED, CW39/01, STONY.                            |      |                          |
| 13.450 | 0.150     | 0.150     | MUDSTONE                         | GREY.                                                        |      |                          |
| 13.480 | 0.030     | 0.030     | MUDSTONE                         | DARK, GREY/BLACK.                                            |      |                          |
| 16.150 | 2.670     | 2.670     | MUDSTONE                         | GREY, LAMINATED <1mm.                                        |      |                          |
| 17.480 | 1.330     | 1.330     | SILTSTONE                        | GREY, HARD, MASSIVE >1m.                                     |      |                          |
| 18.850 | 1.370     | 1.370     | MUDSTONE                         | GREY, LAMINATED <1mm.                                        |      |                          |
| 19.300 | 0.450     | 0.450     | COAL                             | UNDIFFERENTIATED, CW39/02, STONY.                            |      |                          |
| 21.080 | 1.780     | 1.780     | MUDSTONE                         | GREY, HARD.                                                  |      |                          |
| 21.850 | 0.770     | 0.770     | COAL                             | UNDIFFERENTIATED, CW39/03, DULL TO STONY,<br>CALCITE, VEINS. |      |                          |
| 22.480 | 0.630     | 0.630     | CARB. MUDSTONE                   | DARK, GREY.                                                  |      |                          |
| 26.100 | 3.620     | 3.620     | MUDSTONE                         | GREY, LAMINATED <1mm.                                        |      |                          |
| 26.650 | 0.550     | 0.550     | COAL                             | UNDIFFERENTIATED, CW39/04, DULL AND VERY STONY.              |      |                          |
| 26.830 | 0.180     | 0.180     | SILTSTONE                        | GREY, LAMINATED <1mm.                                        |      |                          |
| 27.480 | 0.650     | 0.650     | COAL                             | UNDIFFERENTIATED, CW39/05, STONY.                            |      |                          |
| 27.700 | 0.220     | 0.220     | MUDSTONE                         | ?TUFFACEOUS, BROWN.                                          |      |                          |
| 28.200 | 0.500     | 0.500     | COAL                             | UNDIFFERENTIATED, CW39/06, VERY STONY.                       |      |                          |
| 31.000 | 2.800     | 2.800     | SILTSTONE                        | GREY, HARD.                                                  |      | ?INDURATED               |
| 31.000 | 0.000     | 0.000     |                                  |                                                              |      | BASE OF HOLE. T.D. 31.0M |



**CW 39 Coal Analyses**

|               |         |        |
|---------------|---------|--------|
| 21.08 – 21.85 | 6.35%   | 20.85% |
| 26.10 – 26.65 | 4.60%   | 26.03% |
| 26.83 – 27.48 | 17.17 % | 22.37% |
| 27.70 – 28.20 | 2.4%    | 24.70% |
| 12.55 – 13.30 | 51.06%  | 20.44% |
| 18.85 – 19.30 | 19.58%  | 22.60% |

-  SILTSTONE
-  COAL UNDIFFERENTIATED
-  CARB MUDSTONE
-  SANDSTONE
-  MUDSTONE
-  SOIL

BOREHOLE NO: CW39

PROJECT: CULLENSWOOD WEST

**CORNWALL COAL COMPANY**

DATE DRILLED: 28.12.17

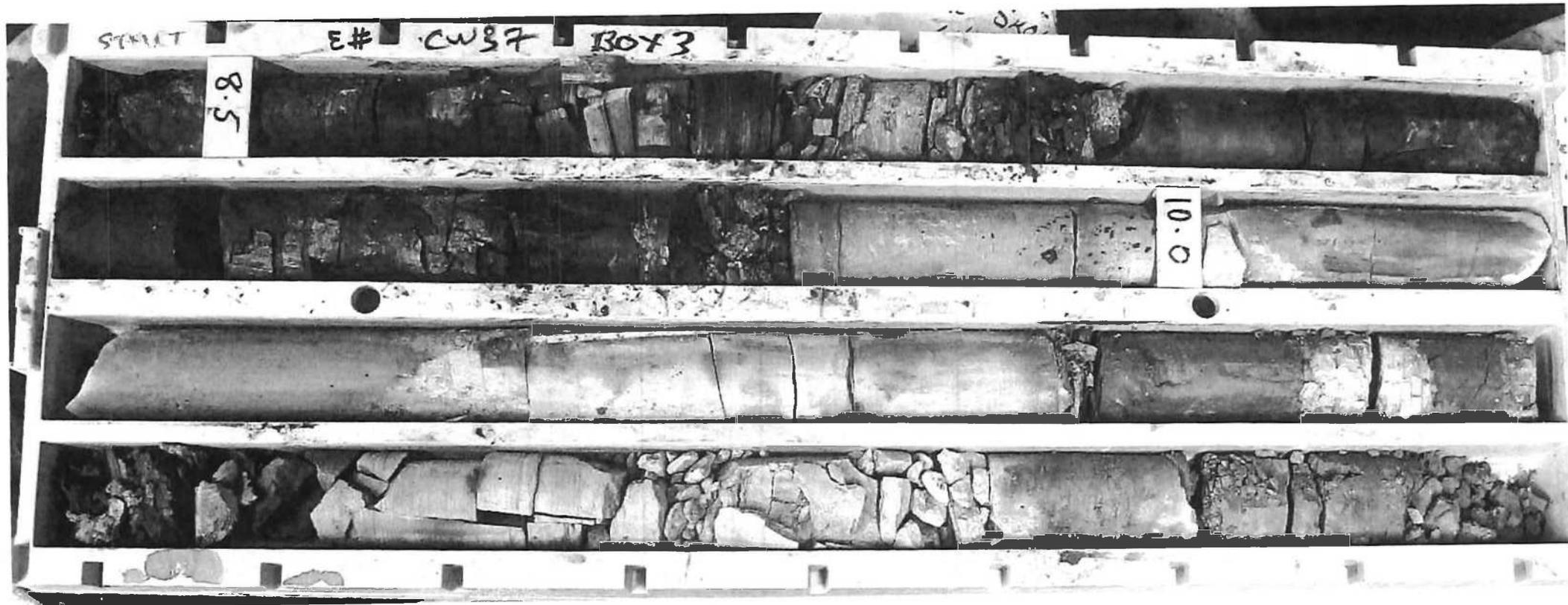
LOGGED BY: JOHN BRYAN

SCALE: 1:100 PLAN NO:



Cullenswood West

CW37 core photos : boxes 2 to 8 . TD 30.5m



STREET

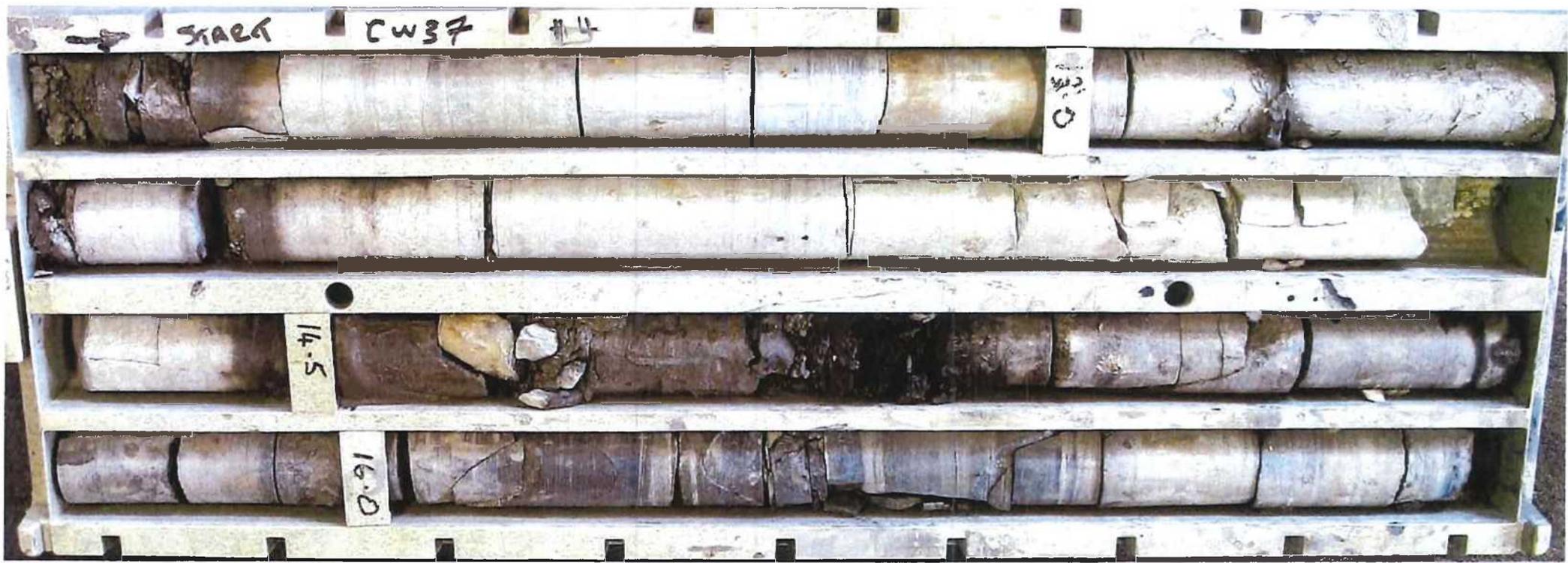
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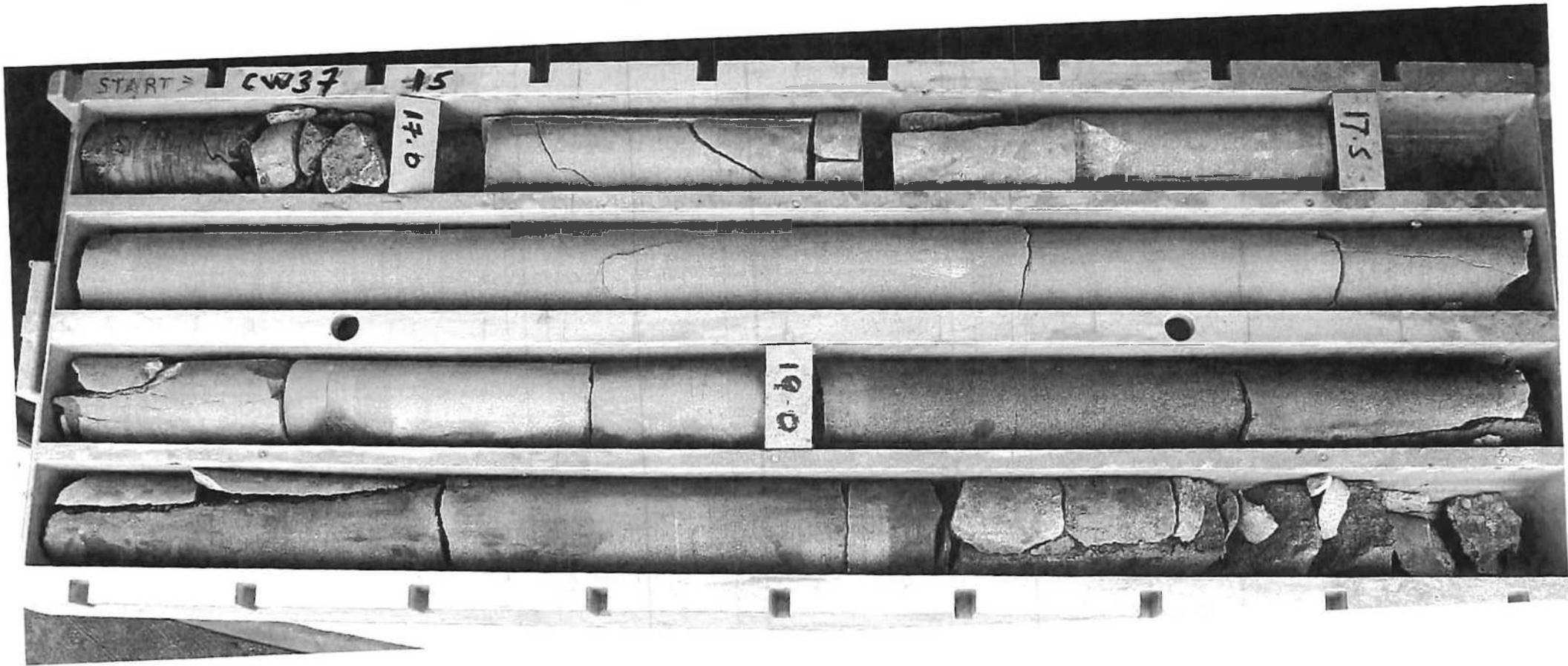
CW 87

BOX 3

8.5

10.0





START =

CW37

15

13.6

17.5

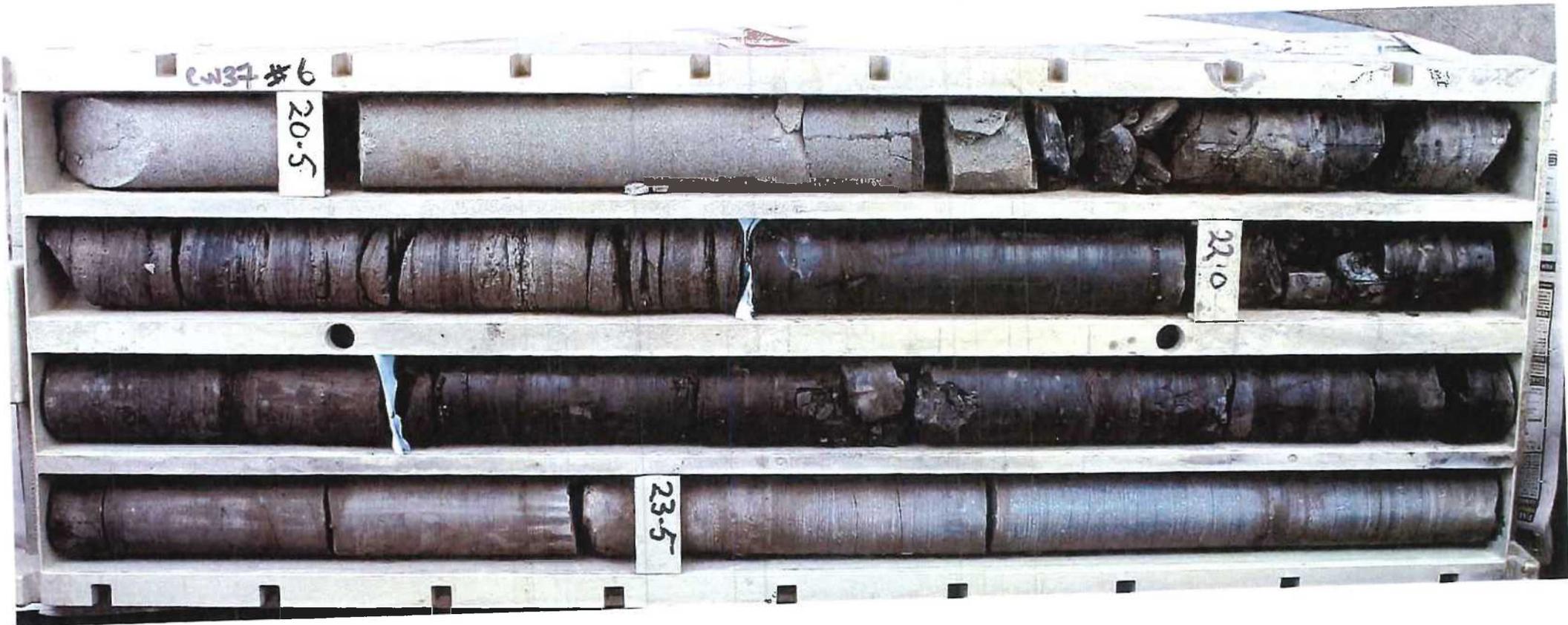
19.0

CW37 #6

20-5

22-0

23-5



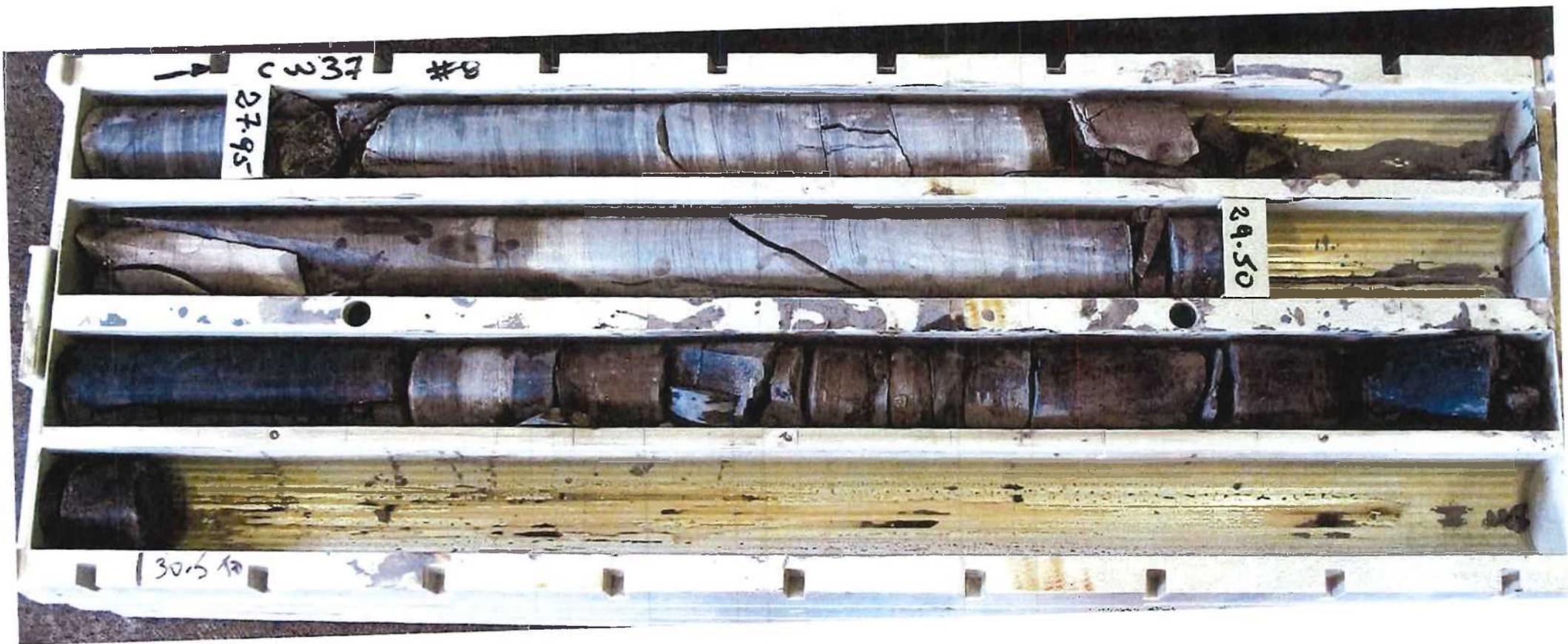


24.75

26.35

26.92

#11



CW37 #8

27.95

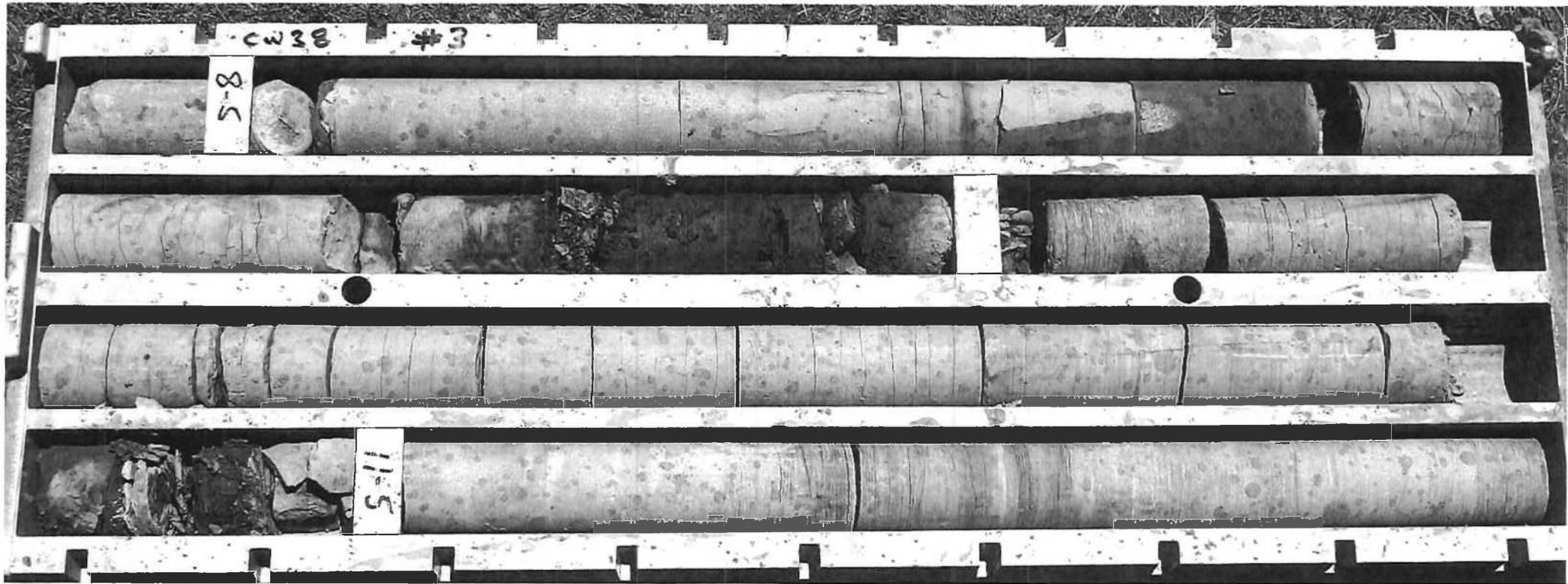
24.50

30.5 10



Cullenswood West

CW38 core photos : boxes 2 to 6. TD 23.5m

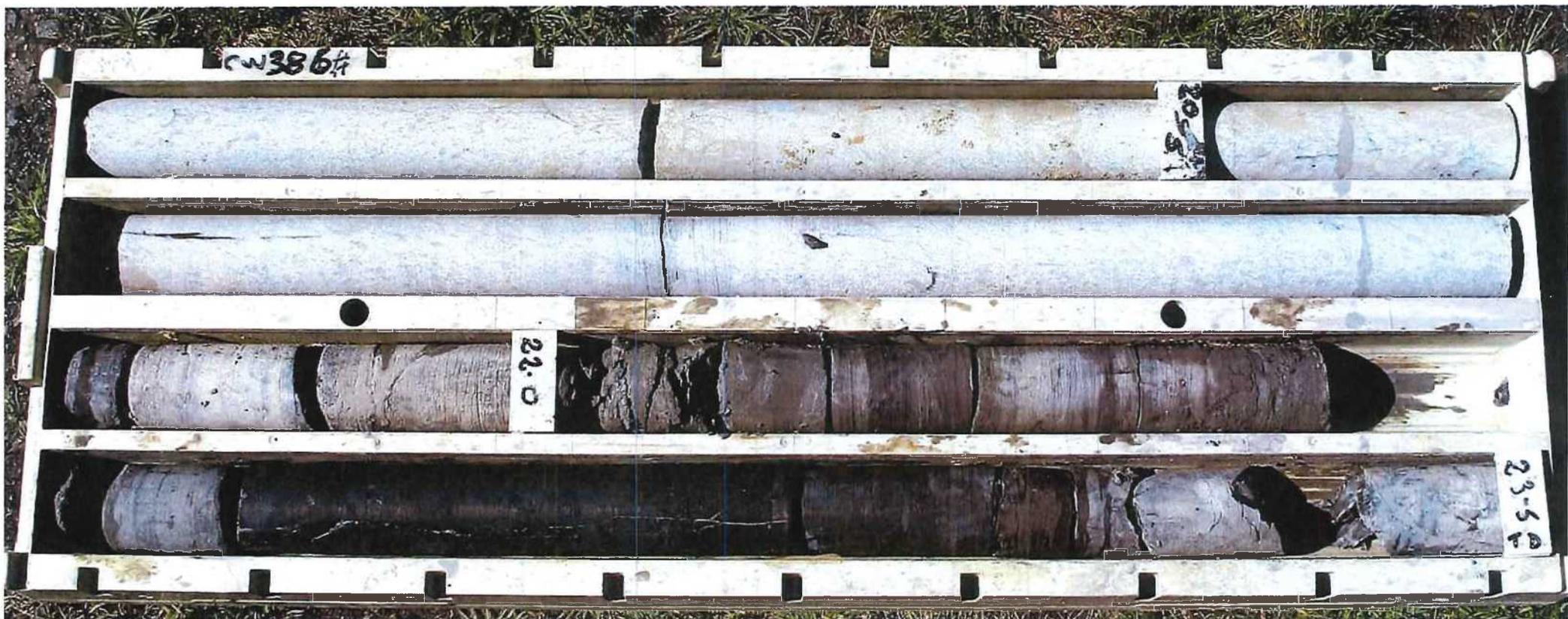






17.5

19.0



CW386

20.5

22.0

23.5

Box 1

2.5 M

4m

CW39 Boxes 1 & 2

Box 2

3.5

7.0

16/01/2





Box 3

8-5

10-0

11-5

CW39 Boxes 3 & 4

Box 4

13-0

14-5

16/01

BOX 5

16.0

17.5

19.0

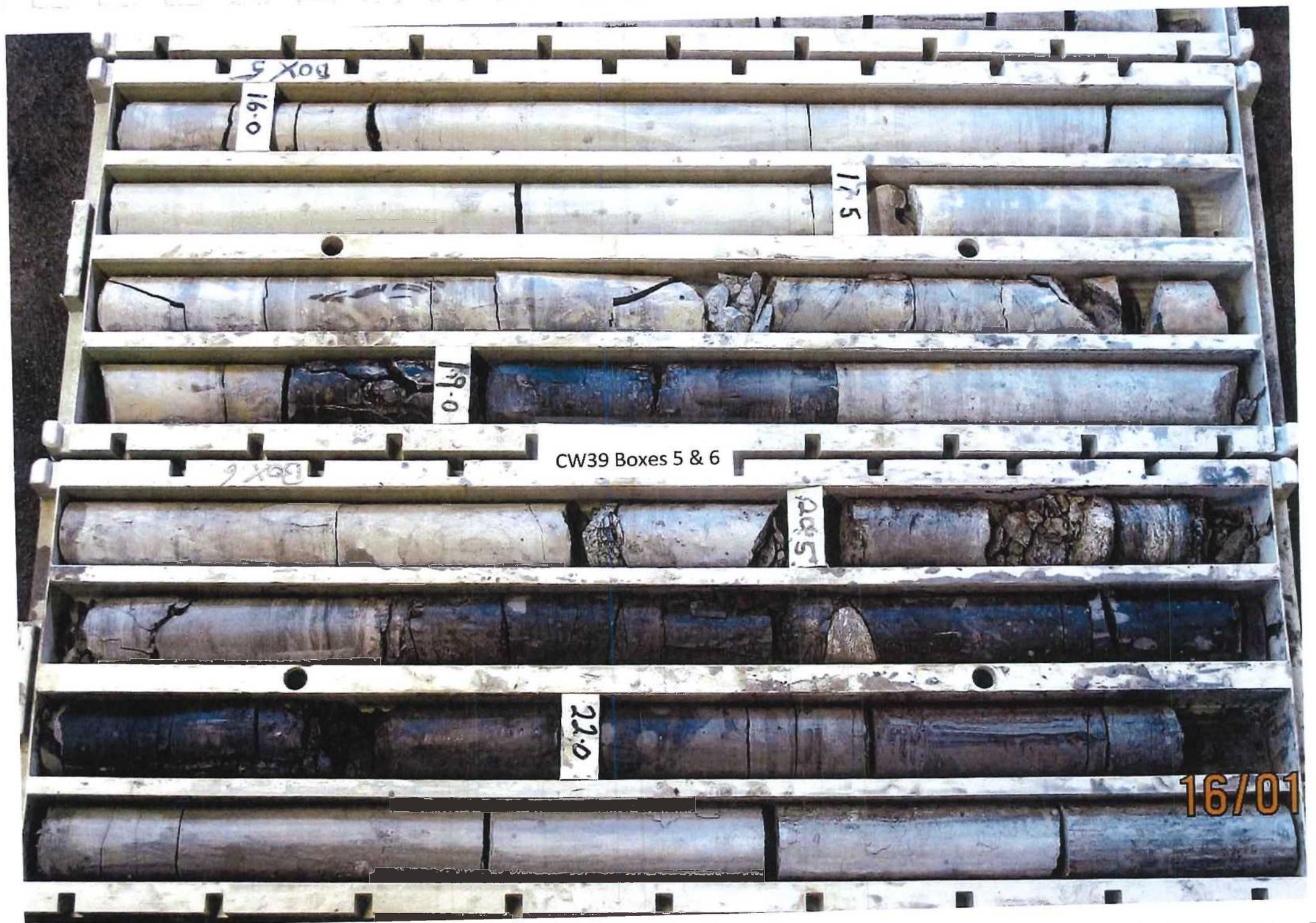
CW39 Boxes 5 & 6

BOX 6

20.5

22.0

16/01



Box 7  
23.5

25.0

26.5

Box 8

CW39 Boxes 7 & 8

28.0

29.5

16/01/20

FOR SIM