

## Survey Information

|                                                                                                                                            |                     |                                   |                |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------|----------------|
| Cave:<br>Horsethief                                                                                                                        |                     | Area in Cave:<br>Entrance line    |                |
| Date:<br>17 Jul 2022                                                                                                                       |                     | Location of Cave:<br>Bighorns, MT |                |
| Personnel                                                                                                                                  |                     | Surveys                           |                |
| Sketch / Book:<br> Alex Fischer-Plan<br>Kalyn Dyn-Profile | Survey Stations:    | Tie-in:                           |                |
|                                                                                                                                            | E27-E46             | E26                               |                |
| Fore Sight:<br> Demetri<br>Staumbos                       |                     |                                   |                |
| Point / Back Sight:<br> Will Boekel                       |                     |                                   |                |
| Other (Inventory, Photography, Rigging):                                                                                                   |                     |                                   |                |
| Trip Information                                                                                                                           |                     | Notes                             |                |
| Time In:<br>9:00am                                                                                                                         | Time Out:<br>2:30pm |                                   |                |
| Instruments                                                                                                                                |                     |                                   |                |
| Tape / Disto:<br>Disto X2                                                                                                                  |                     |                                   |                |
| Fore Sight Instruments:<br>8013                                                                                                            |                     |                                   |                |
| Back Sight Instruments:<br>4275                                                                                                            |                     |                                   |                |
|                                                                                                                                            |                     | Survey Distance                   | # Survey Shots |
|                                                                                                                                            |                     | New                               |                |
|                                                                                                                                            |                     | Resurvey                          | 307.12 20      |
|                                                                                                                                            |                     | Total                             | 307.12 20      |

| Station<br>△   | Cave Survey of<br><del>ATC</del> |                           |                  | L<br>← | R<br>→ | U<br>↑         | D<br>↓ | Notes |
|----------------|----------------------------------|---------------------------|------------------|--------|--------|----------------|--------|-------|
|                | Distance<br>↔                    | Azimuth<br>↗              | Inclination<br>↘ |        |        |                |        |       |
| E26            | 4.30                             | FS 114.5                  | FS -16.1         | 0      | 2.6    | <del>2.1</del> | 1.1    |       |
| E27            | 4.32                             | BS 113.1                  | BS -16.5         | 2      | 0      | .6             | .6     |       |
|                | 8.94                             | FS 38.7                   | FS 17.5          |        |        |                |        |       |
| E28            | 8.98                             | BS 37.9                   | BS 17.2          | 3      | 3      | 6              | 2      |       |
|                | 12.29                            | FS 69.8                   | FS -8.5          |        |        |                |        |       |
| E29            | 12.27                            | BS 69.2                   | BS -9.0          | 2      | 3      | 0              | 2      |       |
|                | 9.28                             | FS 136.6                  | FS -16.1         |        |        |                |        |       |
| E30            | 9.26                             | BS 135.4                  | BS -16.1         | 4      | 1      | 2              | 2      |       |
|                | 23.84                            | FS 121.1                  | FS -7.9          |        |        |                |        |       |
| E31            | 23.80                            | BS 120.2                  | BS -8.0          | 13     | 35     | 34             | 1      |       |
|                | 8.38                             | FS 11.7                   | FS 8.1           | P      | P      |                |        |       |
| E32            | 8.46                             | BS 10.5                   | BS 8.1           | 1      | 3      | 30             | 1      |       |
|                | 16.81                            | FS 73.7                   | FS 2.4           |        |        |                |        |       |
| E33            | 16.82                            | BS 73.1                   | BS 3.7           | 3      | 0      | 3              | 2      |       |
|                | 12.71                            | FS 65.6                   | FS -1.0          |        |        |                |        |       |
| E34            | 12.65                            | BS 65.4                   | BS -0.9          | 0      | 4      | 1              | 1      |       |
|                | 34.90                            | FS 115.3                  | FS 2.8           |        |        | 5              |        |       |
| E35            | 35.01                            | BS 115.0                  | BS 3.5           | 5      | 0      | 2              | 1      |       |
|                |                                  | FS                        | FS               |        |        |                |        |       |
| <del>E36</del> |                                  | BS                        | BS               |        |        |                |        |       |
|                | 131.45                           | Total survey on this page |                  |        |        |                |        |       |

Date: 17 Jul '22

Cave: Horsethief

Sketcher: Alex Fischer



Trip 33

Scale: 1" =

20'



Magnetic  
North Arrow

☒ Plan  
☐ Profile

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E35+

E34+ C' - C - C' - C'

E33+

T33-5

T33-4

E31+ E32+

E31

T33-3

E31 - B' x-sect E30+

dig, T33-2

E29+

E28+

A' A' A'

E27+

E26+

gate

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Trip 33

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| Station<br>△ | Cave Survey of<br>HTC |                           |                  | L<br>← | R<br>→ | U<br>↑        | D<br>↓ | Notes |
|--------------|-----------------------|---------------------------|------------------|--------|--------|---------------|--------|-------|
|              | Distance<br>↔         | Azimuth<br>N<br>↘         | Inclination<br>↙ |        |        |               |        |       |
| E35          | 16.18                 | FS 86.6                   | FS 4.8           | 5      | 0      | 2             | 1      |       |
|              |                       | BS                        | BS               |        |        |               |        |       |
| E36          | 16.23                 | 86.1                      | 5.2              | 5      | 0      | 1             | 0      |       |
|              | 13.90                 | FS 59.2                   | FS 1.3           |        | 6      |               |        |       |
| E37          | 13.87                 | BS 58.5                   | BS 1.0           | 0      | 5      | <del>13</del> |        |       |
|              | 7.29                  | FS 128.6                  | FS 6.4           |        |        | 0.6           | 0.6    |       |
| E38          | 7.21                  | BS 128.4                  | BS 7.0           | 2      | 1      | 2             | 1      |       |
|              | 20.03                 | FS 57.1                   | FS 6.7           |        |        |               |        |       |
| E39          | 19.92                 | BS 56.6                   | BS 6.2           | 0      | 3      | 12            | 1      |       |
|              | 12.30                 | FS 92.2                   | FS -13.0         |        |        |               |        |       |
| E40          | 12.40                 | BS 91.4                   | BS -11.7         | 2      | 3      | .8            | .8     |       |
|              | 17.85                 | FS 30.3                   | FS 8.6           |        |        |               |        |       |
| E41          | 17.83                 | BS 28.6                   | BS 8.2           | 0      | 10     | 2             | 3      |       |
|              | 17.77                 | FS 91.0                   | FS -3.2          |        |        |               |        |       |
| E42          | 17.73                 | BS 90.0                   | BS -3.1          | 0      | 5      | 3             | 1      |       |
|              | 10.56                 | FS 124.5                  | FS 29.4          |        |        |               |        |       |
| E43          | 10.54                 | BS 124.1                  | BS 29.7          | 2      | 5      | 0             | 3      |       |
|              | 10.43                 | FS 26.6                   | FS 35.9          |        |        |               |        |       |
| E44          | 10.45                 | BS 25.7                   | BS 35.8          | 6      | 13     | 12            | 6      |       |
|              | 22.04                 | FS 92.2                   | FS 3.5           |        |        |               |        |       |
| E45          | 22.03                 | BS 91.6                   | BS 3.9           | 9      | 16     | 3             | 4      |       |
|              | 148.35                | Total survey on this page |                  |        |        |               |        |       |

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E45

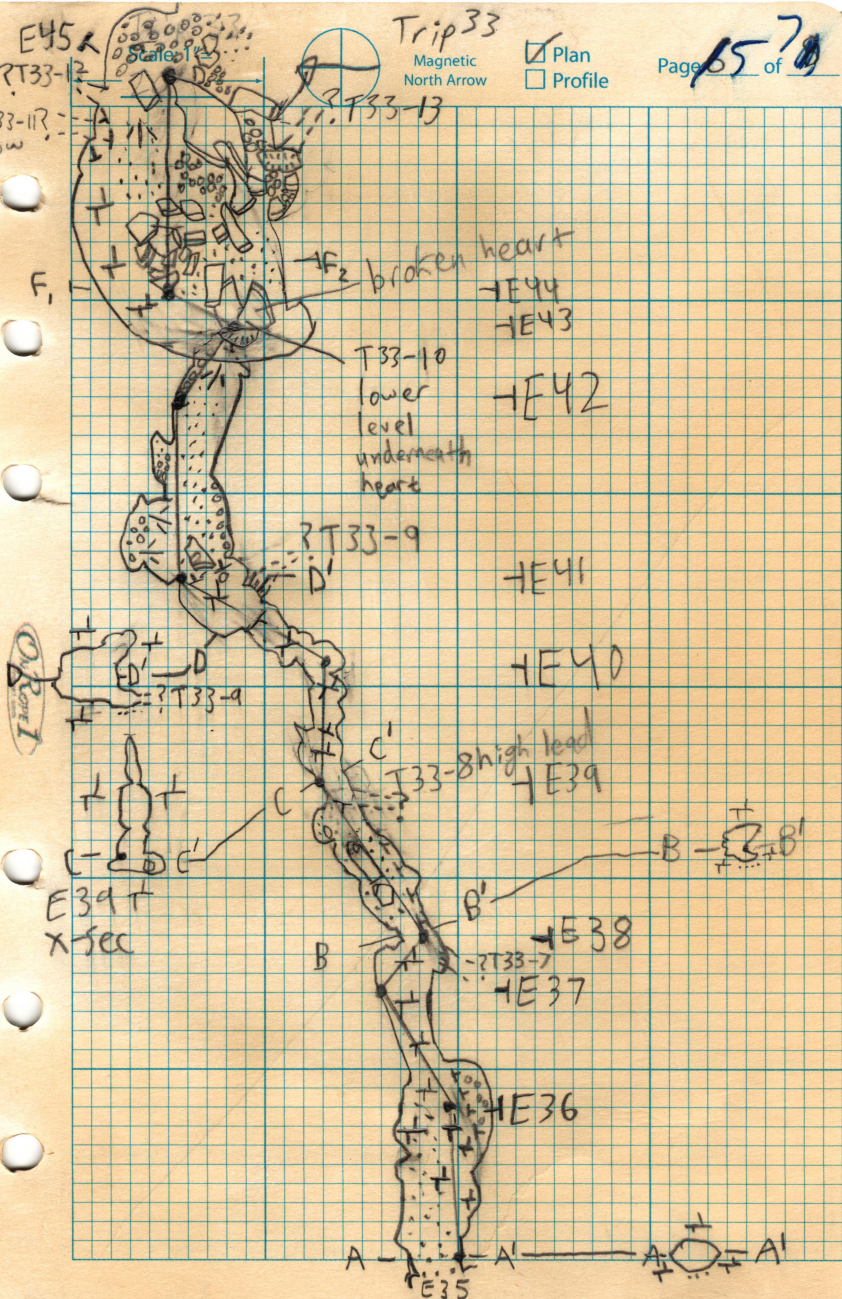
T33-12

T33-11R  
low

Trip 33

Magnetic  
North Arrow☒ Plan  
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Date: 17 Jul '22

Cave: Harseghief

Sketcher: Alex Fischer

Trip 33

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| Station<br>△ | Cave Survey of<br>HTC |                           |             | L  | R  | U | D | Notes |
|--------------|-----------------------|---------------------------|-------------|----|----|---|---|-------|
|              | Distance              | Azimuth                   | Inclination | ←  | →  | ↑ | ↓ |       |
|              | ↔                     | $\overset{N}{\searrow}$   | $\swarrow$  |    |    |   |   |       |
| E45          | 27.32                 | 125.9                     | 7.7         | 9  | 16 | 3 | 4 |       |
| E46          | 27.35                 | 126.1                     | 6.9         | 16 | 13 | 0 | 5 |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              |                       |                           |             |    |    |   |   |       |
|              | 27.32                 | Total survey on this page |             |    |    |   |   |       |

Date: 17 Jul

Cave: HTC

Sketcher: Alex Fischer



Trip 33

Scale: 1" =

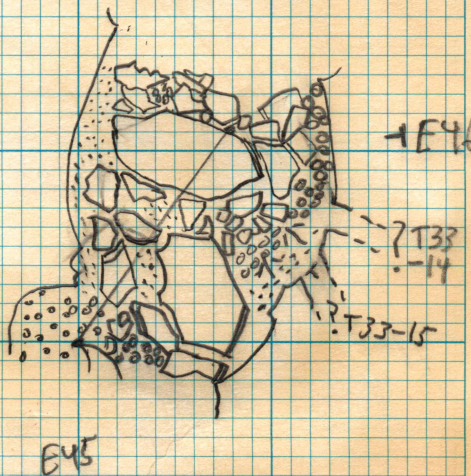
20'



Magnetic  
North Arrow

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Date: 7/17/22

Cave: HTC

Sketcher: Alex Fischer