

EGS COLLAB PROJECT CORE LOG, SURF 4850' LEVEL

HOLE: Er-6B DATE: 4 October 2017 LOGGER: Wmk
 RUN: 10-5' SCRIBED (Y/N): HEAD DRILLER:

DEPTH	CORE SKETCH	NOTES
0.1		
0.2		
0.3		Small pieces Carbonate
0.4		graphitic Phyllite
0.5		micaceous
0.6		
0.7		
0.8		contorted layering
0.9		thin layering
1.0		
0.1		
0.2		
0.3		
0.4		
0.5		
0.6		
0.7		
0.8		
0.9		
1.0		
0.1		
0.2		Thin layering
0.3		
0.4		
0.5		Natural fracture (?)
0.6		
0.7		
0.8		
0.9		
1.0		
0.1		
0.2		
0.3		
0.4		
0.5		
0.6		
0.7		
0.8		
0.9		
1.0		
0.1		
0.2		Natural fracture - with
0.3		Carbonate filling, 1mm aperture
0.4		healed fracture, Dip 40°
0.5		from core axis.
0.6		
0.7		
0.8		
0.9		
1.0		

$$RQD = \frac{46''}{60''} =$$

EGS COLLAB PROJECT CORE LOG, SURF 4850' LEVEL

HOLE: E1-03 DATE: 10/10/17 LOGGER: KATE CONDON
 RUN: #2, Depth 5-10 SCRIBED (Y/N): Y HEAD DRILLER: DAVE ZACCARDI

DEPTH	CORE SKETCH	NOTES
0.1		
0.2		main: GRAPHITIC CARBONATE
0.3		white carbonate layers & folding
0.4		PHYL'LITE
0.5		
0.6		
0.7		
0.8		
0.9		
1.0		
1.0		
0.1		
0.2	x	Drilling Fracture
0.3	x	
0.4		
1.5		
0.5		
0.6		
0.7		
0.8		
0.9		
7		FOLDING w/ CARBONATE
0.1		
0.2		
0.3		
0.4		
2.5		foliation from core axis ~ 10°
0.5		
0.6		
0.7		
0.8		
0.9		
9		
0.1		Drill break along foliation
0.2		
0.3		
0.4	x	
3.5		
0.5		
0.6		
0.7		
0.8		
0.9		
9		Drill break & missing pieces
0.1	x	carbonate folding
0.2		end of core
0.3	x	
0.4		
4.5		
0.5		
0.6		
0.7		
0.8		
0.9		
FD		
1.0		

* good for anisotr folding 0-3' "

EGS COLLAB PROJECT CORE LOG, SURF 4850' LEVEL

HOLE: E1-OB DATE: 10/16/17 LOGGER: KATE CONDON
 RUN: 3, D 10'-15" SCRIBED (Y/N): DISCONTIN. HEAD DRILLER: DAVE Z.

DEPTH	CORE SKETCH	NOTES
0.1		Major: Graphitic Phyllite
0.2		
0.3		
0.4		
0.5		natural carbonate filled fracture
0.6		drill mark? foliation ~ 20-25° from core axis
0.7		
0.8		pyrite carbonate vein
0.9		
11 1.0		
0.1		
0.2		
0.3		
0.4		
0.5		
0.6		
0.7		
0.8		
0.9		fracture filled w/ carbonate mineralization
12 1.0		
0.1		
0.2		
0.3		
0.4		healed carbonate fracture
0.5		
0.6		unseen surface - drill mark
0.7		
0.8		
0.9		foliation consistent ~ 25° from core axis
13 1.0		
0.1		
0.2		minor carbonate filled fracture
0.3		
0.4		
0.5		healed fracture pyrite & carbonate in foliation
0.6		
0.7		fuzzy foliation
0.8		
0.9		
14 1.0		
0.1		
0.2		brittle fracture along foliation ~ 45°
0.3		quartzite deposit
0.4		
0.5		healed carbonate fracture
0.6		
0.7		
0.8		
0.9		
15 1.0		

EGS COLLAB PROJECT CORE LOG, SURF 4850' LEVEL

HOLE: E1-03 DATE: 10/16/17 LOGGER: KATE CONDON
 RUN: 4, Depth 15'-20' SCRIBED (Y/N): HEAD DRILLER: DAVE Z.

DEPTH	CORE SKETCH		NOTES
0.1			Jagged broken edge
0.2	X	X	MAJOR: GRAPHITIC PHYLLITE
0.3			Foliation ~ 40°
0.4			
0.5			
0.6			
0.7			
0.8			less defined foliation
0.9			
1.0			
0.1			folding
0.2			
0.3			w/ carbonate
0.4	X		
0.5			
0.6			
0.7			iron sulfides
0.8			break at contact btwn
0.9		X	phyllite & Qtz - missing pieces
1.0			(graphitic)
0.1			
0.2			
0.3			
0.4			
0.5			folding
0.6			w/ carbonate
0.7			
0.8			
0.9			
1.0			
0.1			
0.2			
0.3			
0.4			folding w/ iron sulfides & carbonates
0.5			
0.6			
0.7		X	Mechanical break at 50°
0.8	X		
0.9			Foliation ~ 30°
1.0			
0.1			
0.2			
0.3			
0.4			folding w/ carbonate & iron sulfides
0.5			
0.6			
0.7			
0.8			
0.9			
1.0			Qtz/carbonate vein boundary fizzes w/ HCl

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # <u>1</u>	Borehole ID <u>E 1-OR</u>	Scribed (red line)? <input checked="" type="checkbox"/> <u>Discontinued</u>
Depth Interval (ft) <u>20'-25'</u>	Box #	Run # <u>5</u>
Date <u>10/17/2017</u>	Core Logger(s) <u>Stirling Richard</u>	

Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="text-align: center;"> </div>	<p style="text-align: center;">Resin</p> <p style="text-align: center;">Carbonate Graphitic Partite Drill-induced fractures</p> <p style="text-align: center;">HQ PQ</p> <p style="text-align: center;">Well defined bedding Thickly bedded (0.5-2 inch)</p> <p style="text-align: center;">15° from Red line</p> <p style="text-align: center;">Healed Fracture - Carbonate 1mm Aperture</p>	

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # <u>1</u>	Borehole ID <u>E-2-OB</u>	Scribed (red line)? <input checked="" type="checkbox"/> <u>Continuous</u>
Depth Interval (ft) <u>25'-30'</u>	Box #	Run # <u>6</u>
Date <u>10/17/2017</u>	Core Logger(s) <u>Sterling Richer</u>	

Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div>		<p>Well defined Thinly bedded 30° from Red line</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div>		<p>Carbonate Graphitic Phyllite Folding</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div>		<p>Folding</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div>		<p>Slight Deformation</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div>		<p>Large (0.8 ft) Quartz Pod</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # <u>1</u>	Borehole ID <u>E1-08</u>	Scribed (red line) <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Depth Interval (ft) <u>30'-35'</u>	Box #	Run # <u>7</u>
Date <u>10/17/2017</u>	Core Logger(s) <u>KATE CONDON</u>	

Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="text-align: center;">0</div> <div style="text-align: center;">0.5</div> <div style="text-align: center;">1</div>		<p>core greater than 5'</p> <p style="text-align: center;">Qtz</p>
<div style="text-align: center;">0.5</div> <div style="text-align: center;">2</div>		<p>phyllite with some Fe sulfides</p> <p>fractured Qtz</p> <p>Mechanical break from drill</p>
<div style="text-align: center;">0.5</div> <div style="text-align: center;">3</div>		<p style="text-align: center;">Qtz</p> <p>phyllite</p> <p>50° foliation break along foliation ~ 90°</p>
<div style="text-align: center;">0.5</div> <div style="text-align: center;">4</div>		<p>thin healed fracture carbonate fold</p>
<div style="text-align: center;">0.5</div> <div style="text-align: center;">5</div>		<p>messy undeformed phyllite</p>

Filename range (digital core images)

35.2

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID C-E1-OB	Scribed (red line) <input checked="" type="checkbox"/> Y/N Y
Depth Interval (ft) 35.2 - 40	Box #	Run # 8
Date 10/18/17	Core Logger(s) Kate CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
0.5 1 36		START Fe sulfide carbonate fold
0.5 1 37		healed fracture < 1mm
0.5 1 38		messy texture
0.5 1 39		Carbonate sulfide phyllite marking
0.5 1 40		healed fracture 2mm Foliation ~ 20° from axis

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID C-E10B	Scribed (red line) <input checked="" type="checkbox"/> N 4
Depth Interval (ft) 40-45	Box #	Run # 9
Date 10/18/17	Core Logger(s) Kate Condon	

Depth	Sketch [fractures, foliation & fold directions]	Notes
0.5 1		Main - Phyllite Graphite Break along foliation. w/ end of core (extra length from break extends ~0.2ft) 20° from core axis foliation w/ carbonate 15° - 20°
0.5 1		filled carbonate drill induced fracture along foliation ~ 20°
0.5 1		many healed veinlet fractures <1mm - 1mm thick
0.5 1		drill induced fracture along foliation folding w/ carbonate
0.5 1		healed fracture marbled folding healed fracture

Filename range (digital core images) messy folding w/ Fe sulfides & carbonate
- should end @ 5 ft

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 2	Borehole ID C-E1-0B	Scribed (red line)? YN Y
Depth Interval (ft) 45-50'	Box #	Run # 10
Date 10/18/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
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0.5 1		thin carbonate healed fractures ~80°
0.5 1		open healing fracture w/ carbonate & Fe sulfide mineralization, 2mm wide ~60°
0.5 1		healed fracture ~50°
0.5 1		natural fracture partially open/healed
0.5 1		healed fracture - 5mm 45°
0.5 1		vuggy partially open fracture w/ mineralization
0.5 1		x Drill induced fracture ~45° core break
0.5 1		calcite mineralization
0.5 1		folding w/ carbonate & Fe sulfide
0.5 1		healed carbonate fracture
0.5 1		healed carbonate fracture ~40°
0.5 1		warped foliation
0.5 1		Carbonate deposits w/ Fe sulfide, warped foliation
0.5 1		~45° foliation w/ Fe sulfide & some carbonate

messy foliation w/ carbonate

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	4	Borehole ID	E1-03	Scribed (red line)? Y/N	Y
Depth Interval (ft)	50-55'	Box #		Run #	11
Date	10/18/17	Core Logger(s)	KATE CONDON		

Depth	Sketch [fractures, foliation & fold directions]	Notes
51.0 - 51.5	<p>calcite mineralization pod on underside</p>	<p>chip</p> <p>↳ w/ significant Fe sulfide</p> <p>folding w/ pyrite (thin foliations in fold)</p>
51.5 - 52.0		<p>messy folding</p>
52.0 - 52.5		<p>foliation ~ 20°</p> <p>marbled texture</p>
52.5 - 53.0		<p>healed fracture ~ 2mm</p> <p>foliation ~ 20°, w/ iron sulfides</p>
53.0 - 53.5		<p>thin healed fractures 10°</p> <p>folding, w/ ~ 1mm pyrite/carbonate layers</p>
53.5 - 54.0		<p>bands of carbonate in fold</p>
54.0 - 54.5		<p>distinguishable bands of Fe sulfide ~ 0.5-1mm thick</p>
54.5 - 55.0		<p>thin healed fractures cut across foliation ~ 45°</p>
55.0 - 55.5		<p>marble folding of sulfides w/ carbonate + phyllite</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

DISCONTINUOUS


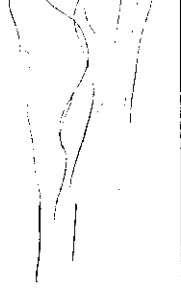
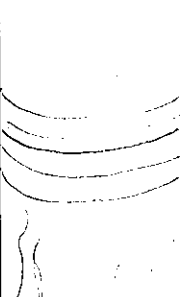

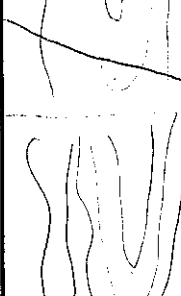
Experiment # 1	Borehole ID C-E1-0B	Scribed (red line)? <input checked="" type="checkbox"/> Y/N start new Scribe @ 58.6 -
Depth Interval (ft) 55'-60'	Box #	Run # 12
Date 10/18/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
56		MAJOR: GRAPHITIC PHYLLITE Qtz - surrounded by Fe sulfide & carbonate Fe sulfide specks pockets of carbonate folded around Fe sulfides rich in Fe sulfide
57		healed fracture ~ 50° - healed fracture x drill induced fracture core break perp to core axis
58		healed thin fracture x core break (drill induced fracture) perp to core axis core piece re drill → piece fall back into hole? New scribe line started @ 3.6
59		x core break - drill (vert) messy foliation not well defined ~ 5-10° from core axis
60		x core break - drill (vert) - thin bands of pyrite & carbonate x core break - drill (~85°) healed fracture ~ 45°

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID C-E1-OB	Scribed (red line) <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Y
Depth Interval (ft) 60-65	Box #	Run # 13
Date 10/18/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div> <div style="text-align: right; margin-bottom: 5px;">61</div>		<p>MAJOR: GRA PHYLLITE</p> <p>foliation approx in line parallel w/ core axis & wavy small folding w/ carbonate & Fe sulfides</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div> <div style="text-align: right; margin-bottom: 5px;">62</div>		<p>not very distinguishable foliation</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div> <div style="text-align: right; margin-bottom: 5px;">63</div>		<p>foliation ~50° to core axis</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div> <div style="text-align: right; margin-bottom: 5px;">64</div>		<p>foliation rolling wavy in general direction in line w/ core axis foliation w/ Fe sulfides & carbonate</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">1</div> <div style="text-align: right; margin-bottom: 5px;">65</div>		<p>healed fracture ~0.5mm width @ ~35° to core axis</p> <p>X Drill induced core break</p> <p>marbled foliation</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	1	Borehole ID	C-E1-OB	Scribed (red line)?	Y/N
Depth Interval (ft)	65-70	Box #		Run #	14
Date	10/18/17	Core Logger(s)	KATE CONDON		

Depth	Sketch [fractures, foliation & fold directions]	Notes MAJOR: PHYLLITE (graphitic)
65		foliation approx in line w/ core axis (0°) wavy & rolling pattern
67		thin, healed fracture in 65-75° from core axis partially healed fracture w/ open space mineralization width thickness varies btwn 2mm - 10mm foliation in 10° from core axis @ 35° from core axis
68		<1mm healed fracture approx 85° from axis narrow, healed fracture
69		indistinct foliation
70		vertical carbonate band 7mm thick Fe sulfide band more sulfides present indistinct foliation

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	1	Borehole ID	C-E1-OB	Scribed (red line) <input checked="" type="checkbox"/> Y/N	Y
Depth Interval (ft)	70'-75'	Box #		Run #	15
Date	10/18/17	Core Logger(s)	KATE CONDON		

Depth	Sketch [fractures, foliation & fold directions]	Notes
71		Phyllite (carbonate rich?) - dries out much faster than all previous core, much lighter in color about 60°
72		Fe sulfide band Indistinct foliation - approx in line w/ core axis - mostly carbonate
73		Fe sulfide band ~ 2mm thick healed carbonate fracture ~ 60° from axis
74	healed vertical fracture	foliation indistinct approx in line w/ core axis
75		

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	1	Borehole ID	C-E1-03	Scribed (red line)?	Y/N
Depth Interval (ft)	75-80	Box #		Run #	16
Date	10/18/17	Core Logger(s)	KATE CONDON		

Depth	Sketch [fractures, foliation & fold directions]	Notes
		MAJOR: PHYLLITE (graphitic)
76		carbonate & sulfides in foliation
77		
78		Drill induced mechanical core break
79		
80		

80.2 5.2 x x messy warped texture

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID C-E1-08	Scribed (red line) <input checked="" type="checkbox"/> Y/N 4
Depth Interval (ft) 80'-85'	Box #	Run # 17
Date 10/18/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
81		GRAPHITIC PHYLLITE - feels rich in mica foliation approx to core axis
82		folding warped
83	Carbonate pockets 	foliation indistinct - warped
84		rich in mica & graphite core break w/ small piece (drill induced) along foliation as part of healed fracture ~30°
85		core break along foliation ~30°

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # <u>1</u>	Borehole ID <u>C-E1-03</u>	Scribed (red line) <input checked="" type="checkbox"/> Y/N <u>Y</u>
Depth Interval (ft) <u>85-90</u>	Box #	Run # <u>18</u>
Date <u>10/18/17</u>	Core Logger(s) <u>KATE CONDON</u>	

Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">86 1</div> <hr style="border-top: 1px dashed black;"/> <div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">87 1</div> <hr style="border-top: 1px dashed black;"/> <div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">88 1</div> <hr style="border-top: 1px dashed black;"/> <div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">89 1</div> <hr style="border-top: 1px dashed black;"/> <div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">90 1</div>		<p style="text-align: center;">PHYLLITE</p> <p style="text-align: center;">Consistent foliation ~ 10-15°</p> <p>healed fracture ~ 30°</p> <p>qtz pcd</p> <p>x Core break - drill induced along foliation ~ 10-15° - partial fracture</p> <p>← Fracture holding moisture</p> <p>x Core break - along foliation</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	1	Borehole ID	C-E1-0B	Scribed (red line) Y/N	Y
Depth Interval (ft)	90' - 95'	Box #		Run #	19
Date	10/18/17	Core Logger(s)	KATE CONDON		

Depth	Sketch [fractures, foliation & fold directions]	Notes
91	<p>Small healed fracture</p>	<p>PHYLLITE (GRAPHITIC)</p> <p>Iron sulfides</p>
92		<p>foliation not well defined ~10° from core axis w/ warped folding</p>
93		<p>Iron oxide & carbonate warped & folded</p>
94		<p>2 healed fractures - healed fracture - hairline - hairline fracture Carbonate</p>
95		<p>x Core break induced by drill jagged broke along foliation</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID C-E1-0B	Scribed (red line)? <input checked="" type="checkbox"/> Y
Depth Interval (ft) 95'-100'	Box #	Run # 20
Date 10/18/17	Core Logger(s) KATE CONDAN	

Depth	Sketch [fractures, foliation & fold directions]	Notes
96		Phyllite healed fracture - carbonate (shear zone?)
97		Fe sulfides warped texture many thin healed fractures
98		weakly distinguishable foliation ~ to core axis
99		healed fracture x core break - drill induced breakage
100		healed fracture - < 0.5 mm foliation non-distinct

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID C-E1-0B	Scribed (red line)? <input checked="" type="checkbox"/> Y/N <input checked="" type="checkbox"/> Y
Depth Interval (ft) 100-105'	Box #	Run # 21
Date 10/18/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
100	<p>~ 30° healed fracture</p>	healed fracture
101	<p>healed fracture</p>	foliation - fine scale ~ 45°
102	<p>healed fracture</p>	healed fracture
103	<p>healed fracture</p>	vein? healed fracture ~ 2-3mm thick
104	<p>healed fracture</p>	healed fracture
105	<p>healed fracture</p>	Q+Z seam at contact in plane w/ foliation
106	<p>healed fracture</p>	Q+Z x Core break - mechanical - drill induced
107	<p>healed fracture</p>	x Core break - mechanical - drill fracture
108	<p>healed fracture</p>	Q+Z x Core break - mechanical - drill fracture
109	<p>healed fracture</p>	phyllite

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID E1-0B	Scribed (red line)? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Depth Interval (ft) 105-110	Box #	Run # 22
Date 10/19/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
106	<p>Qtz</p>	<p>MAJOR: Graphitic Carbonate Phyllite</p> <p>warped phyllite</p> <p>x mechanical core break</p>
107	<p>phyllite following Qtz contact</p>	<p>x partially open fracture w/ mineralization ~50° from core axis</p>
108	<p>partially healed fracture (hairline)</p> <p>healed fractures</p>	<p>x mechanical core breaks at Qtz-phyllite</p> <p>x mechanical core break at Qtz-phyllite contact along foliation direction 30°</p> <p>thin foliation @ 30° consistent</p>
109	<p>open fracture w/ carbonate mineralization (appears to be flowing)</p> <p>healed fractures</p>	
110	<p>folded carbonate w/ Qtz</p>	<p>x mechanical core break ~60°</p>

Filename range (digital core images)

foliation ~ 20°
healed fracture

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	1	Borehole ID	C-E1-OB	Scribed (red line)?	Y/N	discontin
Depth Interval (ft)	110-115	Box #		Run #	23	@ 113.2
Date	10/19/17	Core Logger(s)	KATE CONDON			

Depth	Sketch [fractures, foliation & fold directions]	Notes
111		Qtz filled foliation ~45°
112		Qtz filled marbled foliation open fracture w/ mineralization core break - mechanical natural fracture around Qtz contact containing Iron Sulfide mineralization
113		natural fracture, less than fingernail width pyrite mineralization in some parts ~30° along foliation core break along foliation slightly open fracture (fingernail width) Qtz - containing fractures ~60° along Qtz boundary
114		scribe line discontinued foliation ~50° sulfide/mica rich, is
115		Carbonate filled deposits in line w/ foliation ~50° Carbonate filled deposit

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID C-E1-0B	Scribed (red line) <input checked="" type="checkbox"/> Y/N
Depth Interval (ft) 115-120	Box #	Run # 24
Date 10/19/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">116</div>		<p>MAJOR: PHYLLITE</p> <p>Qtz + carbonate carbonate band foliation ~ 45° core axis carbonate band healed fracture x Core break w/ foliation ~ 45°</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">117</div>		<p>top of sinusoidal mica/sulfide rich</p> <p>more graphite-rich</p> <p>x core break, jagged follows foliation sort of ~ 30°</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">118</div>		<p>Qtz healed fracture</p> <p>x core break at Qtz phyllite contact</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">119</div>		<p>foliation ~ 45°</p>
<div style="text-align: right; margin-bottom: 5px;">0.5</div> <div style="text-align: right; margin-bottom: 5px;">120</div>		<p>Carbonate - mica/sulfide banding</p> <p>foliation ~ 60° x core break w/ foliation ~ 60° foliation w/ folding</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1 Borehole ID CE1-08 Scribed (red line) Y/N Y
 Depth Interval (ft) 120' - 125' Box # Run # 25
 Date 10/19/17 Core Logger(s) KATE CONDON

Depth	Sketch [fractures, foliation & fold directions]	Notes
121	<p>Iron Sulphides</p>	<p>Qtz & calcite ~ 45°</p> <p>mechanical core break</p> <p>marbled foliation</p>
122		<p>Qtz & calcite</p> <p>marbled</p> <p>very graphitic, soft</p>
123	<p>Qtz & calcite</p>	<p>mechanical core break w/ foliation ~ 45°</p> <p>healed fracture</p>
124	<p>healed fracture</p>	<p>foliation ~ 45°</p> <p>mech core break</p>
125	<p>healed fracture</p> <p>Qtz & calcite</p> <p>carbonate</p>	<p>healed fracture healed, ~ 80°</p> <p>mech core breaks</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID C-E1-0B	Scribed (red line)? Y/N Y
Depth Interval (ft) 125-130	Box #	Run # 26
Date 10/19/17	Core Logger(s) Kate Carden	

Depth	Sketch [fractures, foliation & fold directions]	Notes
126	<p>Qtz</p>	<p>foliation ~ 20°</p> <p>Qtz</p>
127	<p>Qtz</p>	<p>x core break, mechanical</p> <p>Qtz + carbonate</p> <p>Qtz + carbonate</p>
128		<p>mica rich, iron sulfide rich</p> <p>foliation ~ 40°</p>
129		<p>foliation ~ 10°</p> <p>x core break, mechanical, along foliation ~ 60°</p> <p>x core break, mechanical, foliation vert</p>
130		<p>x core break, mechanical, along foliation 50°</p> <p>x core break, mechanical, along foliation, 45°</p>
Filename range (digital core images)		

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID E1013	Scribed (red line) DN Y
Depth Interval (ft) 130-135	Box #	Run # 27
Date 10/19/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
131		Phyllite foliation ~ vertical w/ Fe sulfide. x mechanical core break foliation still ~ vertical
132		qtz & Fe sulfide band x core break w/ foliation ~ 40°
133		qtz & calcite marbled texture → side looks like faintly healed veins
134		qtz & calcite folded foliation around fold mica, Fe sulfide, qtz foliation ~ 50°
135		x core break ~ 75° foliation ~ 70°

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # 1	Borehole ID E10B	Scribed (red line)? Y/N Y
Depth Interval (ft) 135 - 140	Box #	Run # 28
Date 10/19/17	Core Logger(s) KATE CONDON	

Depth	Sketch [fractures, foliation & fold directions]	Notes
135 0.5 1	headbed fracture	Phyllite
136 0.5 1		foliation ~ 30°
137 0.5 1		carbonate deposit vein Fe sulfide rich w/ carbonate in foliation
138 0.5 1		carbonate + Qtz
139 0.5 1		foliation ~ 20°
140 0.5 1		foliation ~ 30°

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	1	Borehole ID	E1-08	Scribed (red line)? Y/N	Y
Depth Interval (ft)	140-145	Box #		Run #	29
Date	10/19/17	Core Logger(s)	KATE CONNOR		

Depth	Sketch [fractures, foliation & fold directions]		Notes
140 - 141			PHYLITE foliation ~ 30° x core break w/ foliation @ 30°
141 - 142			x core break @ ~ 80° small carbonate bands healed fracture
142 - 143			iron sulfide + Qtz band
143 - 144			mica rich x core break vertical
144 - 145			very lightly foliated ~ 10° x mechanical core break w/ weak mica interface

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	E1-OB	Borehole ID	E1-OB	Scribed (red line)?	<input checked="" type="checkbox"/> N
Depth Interval (ft)	145-150	Box #	28-30	Run #	30
Date	10/24/17	Core Logger(s)	Bill, Megan, Luke, & Co.		

45

Depth	Sketch [fractures, foliation & fold directions]	Notes
0.5		Carbonate mica phyllite metamictic breccia
1		← calcite band ← weak interface ~ 90°
0.5		← Fractured ← Likely weak, intact
1		← weak plane, inconsistent mica sheets
0.5		Carbonate mica phyllite very micaceous
1		} Disking, Slippery Micas (low M) lost orientation ← chemically altered thickness ~ 0.2" thick
0.5		
1		} Consistent zone @ ~ 30-50° layers, little calcite

150

Filename range (digital core images) 6019-0038

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # E1-0B	Borehole ID E1-0B	Scribed (red line)? Y/N Y
Depth Interval (ft) 150-155	Box # MS → MS-100	Run # 31
Date 24 OCT 2017	Core Logger(s) Luke, Bill, Megan & LO	

Depth	Sketch [fractures, foliation & fold directions]		Notes
0.5 1		Foliation Fractures	
0.5 1		No Fractures	mineralization (qt) Crossing Foliations
0.5 1		leached folds	leached fold
0.5 1			Crossing Foliations
0.5 1			Fracture along mica flakes (scattered small flakes) ⇒ Random micro flaws Fresh fracture, probably mechanical
0.5 1			microfracture, closed, mineralized

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # E1	Borehole ID E1-0B	Scribed (red line)? Y/N (Y)
Depth Interval (ft) 155-160	Box # 31-32-33	Run # 32
Date 24 OCT 2017 TU	Core Logger(s) Wke, Bill R, Megan, & CO	

Depth	Sketch [fractures, foliation & fold directions]	Foliation	Fracture	Notes
0.5 1				Microfractures, banded, infilled
0.5 1				
0.5 1				Mechanical break along weakness
0.5 1				Foliation orientation rotates around axis
0.5 1				Very weak mica band, slippery, mechanical break likely
0.5 1				Fracture along strongly undulating mica-rich. foliations

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	Borehole ID E1-0B	Scribed (red line)? <input checked="" type="checkbox"/> Y/N
Depth Interval (ft) 160-165	Box #	Run # 33
Date 10/24/17	Core Logger(s) Megan & Luke	

Depth	Sketch [fractures, foliation & fold directions]	Notes
0.5 1		Aligned with 32 ☺
0.5 1		<p>← mechanical break along some disjoi discontinuous mica sheets</p> <p>← calcite fracture</p>
0.5 1		<p>← calcite filled microfracture</p> <p>} mica assisted fracture set Permeable</p>
0.5 1		<p>← calcite filled fractures</p>
0.5 1		<p>} complex zone</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	Borehole ID EI-0B	Scribed (red line)? Y/N
Depth Interval (ft) 165-170	Box #	Run # 34
Date 10/24/17	Core Logger(s) Megan & Luke	

Depth	Sketch [fractures, foliation & fold directions]	Notes
0.5		← Permeable calcite filled fracture, 1/8" thick
1		← mechanical break along mica sheets
0.5		← calcite filled fracture
1		
0.5		← Mechanical fracture along mica sheets, mica slippery to touch
1		← carbonate filled things
0.5		← calcite filled
1		← Mechanical break along mica sheets, slippery
0.5		← Thin calcite filled fractures
1		← Crossing calcite set

Juan (Stanford) 24 Oct 2017
 -MMS (photos)
 24 Oct 2017
 -MMS (photos)

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	Borehole ID <i>EI-0B</i>	Scribed (red line)? (Y/N)
Depth Interval (ft) <i>170-175</i>	Box #	Run # <i>35</i>
Date <i>10/24/17</i>	Core Logger(s) <i>Megan & Luke</i>	

Depth	Sketch [fractures, foliation & fold directions]	Notes
0.5 1		<i>Core Aligned w/ 34</i>
0.5 1		<p>← quartz fracture fill in interbedded mica, quartz, calcite</p> <p>← rough quartz vein</p>
0.5 1		← Once permeable calcite filled fracture
0.5 1		<p>Very rough mechanical break, no mica weaknesses</p>
0.5 1		<p>Networked crossing calcite, pyrite, pyroxene, some black shiny mineral</p>

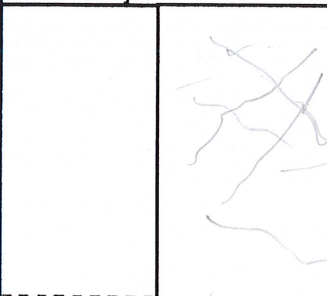
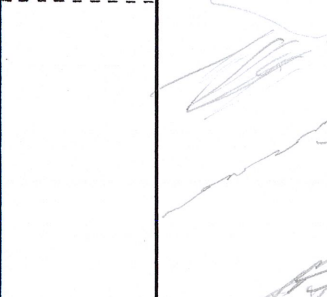
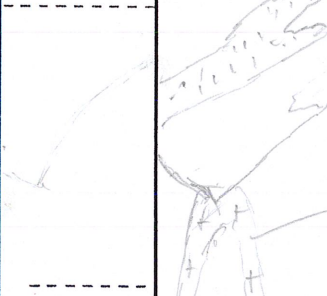
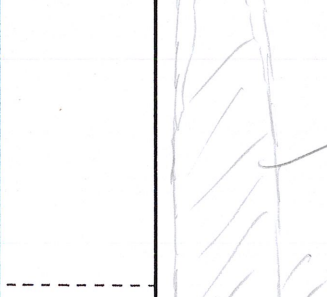
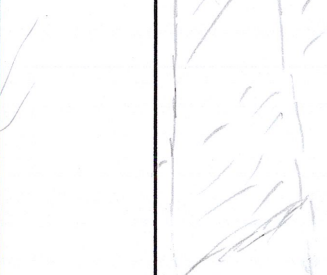
Very competent interval

Competent but some small networks

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # <i>E1-OB</i>	Borehole ID <i>E1-OB</i>	Scribed (red line)? <i>Y/N</i>
Depth Interval (ft) <i>175-180</i>	Box #	Run # <i>36</i>
Date <i>24 OCT 2017 (Tu)</i>	Core Logger(s) <i>Megan & Luke & Bill</i>	

Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="text-align: right; margin-bottom: 5px;"><i>75</i></div> 	<p>Core Aligned w 35 Carbonate mica Phyllite (all core) Small fracture at 90° to each other</p>	
<div style="text-align: right; margin-bottom: 5px;"><i>76</i></div> 	<p>thinly bedded; foliation at 30° to axis small, headed fracture; ~0.5mm aperture carbonate filling with discontinuous boundary with phyllite</p>	
<div style="text-align: right; margin-bottom: 5px;"><i>77</i></div> 	<p>Small fracture extends from 177.6 to end/bottom of core; quartz-filled; ~0.5mm aperture</p>	
<div style="text-align: right; margin-bottom: 5px;"><i>78</i></div> 	<p>uniform dip on foliation at 20° to axis. Few small fractures</p>	
<div style="text-align: right; margin-bottom: 5px;"><i>79</i></div> 	<p>gray color and thinly bedded (2-6 mm),</p>	

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment # E1	Borehole ID E1-0B	Scribed (red line)? Y/N
Depth Interval (ft) 180-185	Box #	Run # 37
Date 24 OCT 2017 (TU)	Core Logger(s) Megan, Luke, Bill	

80

81

82

83

84

185

Depth	Sketch [fractures, foliation & fold directions]	FOLIAT	FRAC	Notes
<div style="text-align: center;">0.5</div> <div style="text-align: center;">1</div>		FOLIAT	FRAC	aligned w/ R36 v slight 1-2mm offset along fracture (vein) fracture almost // to core long axis (2nd one too, punching out) → QZ
<div style="text-align: center;">0.5</div> <div style="text-align: center;">1</div>				
<div style="text-align: center;">0.5</div> <div style="text-align: center;">1</div>	calcite w/ sulfides			calcite fracture dip ~40° from core long axis
<div style="text-align: center;">0.5</div> <div style="text-align: center;">1</div>	thick cc band			cc = calcite minor cc frac, dipping ~60° from core long axis
<div style="text-align: center;">0.5</div> <div style="text-align: center;">1</div>				

Filename range (digital core images)



EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	Borehole ID <i>EI-0B</i>	Scribed (red line)? <input checked="" type="checkbox"/> Y/N
Depth Interval (ft) <i>185-190</i>	Box #	Run # <i>38</i>
Date <i>10/27/17</i>	Core Logger(s) <i>Megan & Luke</i>	

185

Depth	Sketch [fractures, foliation & fold directions]	Foliation	Fractures	Notes
<div style="text-align: center;">0.5</div> <hr style="border: 1px solid black;"/> <div style="text-align: center;">1</div>	<p>Mineral</p> <p><i>Veiny BRW Calcite & Mica</i></p>			<p><i>Subtle calcite fracture</i></p> <p>← Interface weakness (contact?) pyrite? with strong mica sheet effects, included pyrite</p>
<div style="text-align: center;">0.5</div> <hr style="border: 1px solid black;"/> <div style="text-align: center;">1</div>	<p><i>Calcite Rich Band</i></p>			<p>← Mechanical break along weakness plane // to foliation</p>
<div style="text-align: center;">0.5</div> <hr style="border: 1px solid black;"/> <div style="text-align: center;">1</div>	<p><i>Calcite Rich Band</i></p>			<p>← Crossing fractures, in calcite matrix</p>
<div style="text-align: center;">0.5</div> <hr style="border: 1px solid black;"/> <div style="text-align: center;">1</div>	<p><i>Calcite Rich Band</i></p>			<p>← Natural fracture, healed and mechanically broken, was once <u>permeable</u></p>
<div style="text-align: center;">0.5</div> <hr style="border: 1px solid black;"/> <div style="text-align: center;">1</div>	<p><i>Calcite Rich Band</i></p>			<p>← Mechanical break, no associated natural weaknesses</p>

8.7

8.9

190

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	Borehole ID <i>EI-0B</i>	Scribed (red line)? <input checked="" type="checkbox"/> Y/N
Depth Interval (ft) <i>190-195</i>	Box #	Run # <i>39</i>
Date <i>10/24/17</i>	Core Logger(s) <i>Megan & Luke</i>	

90

92

195

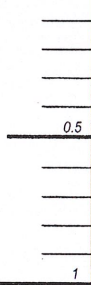

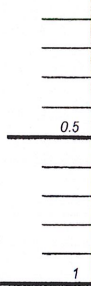

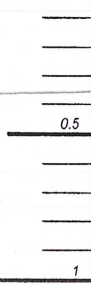

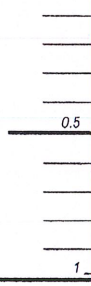

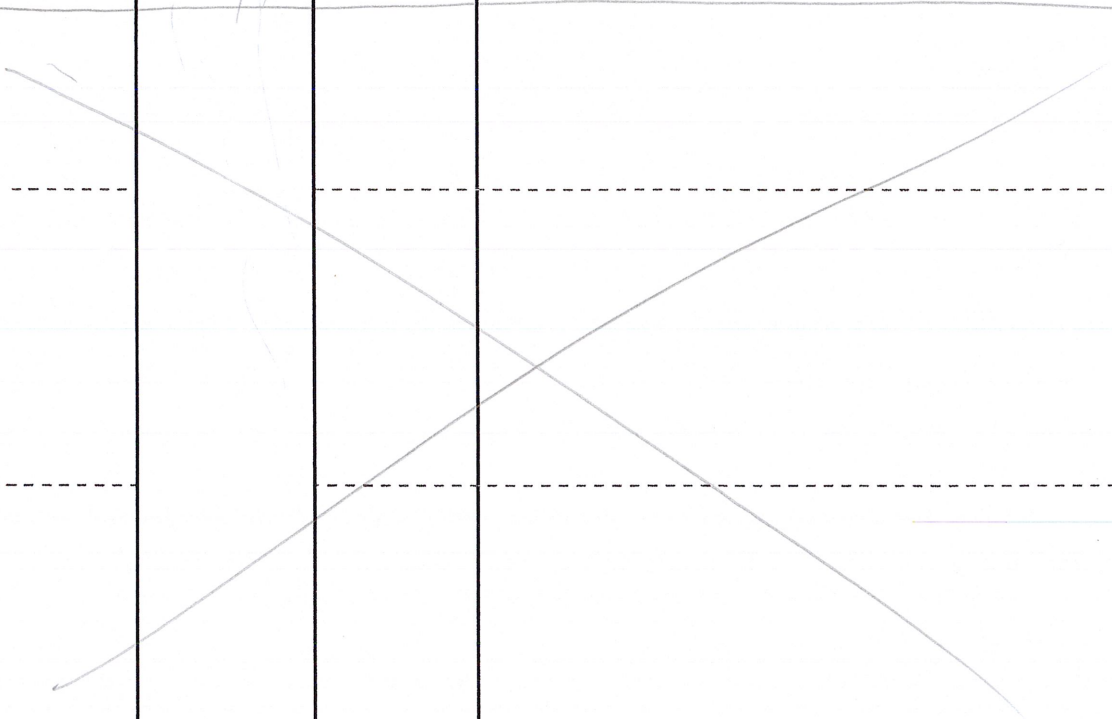
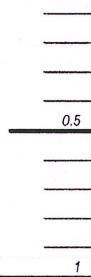

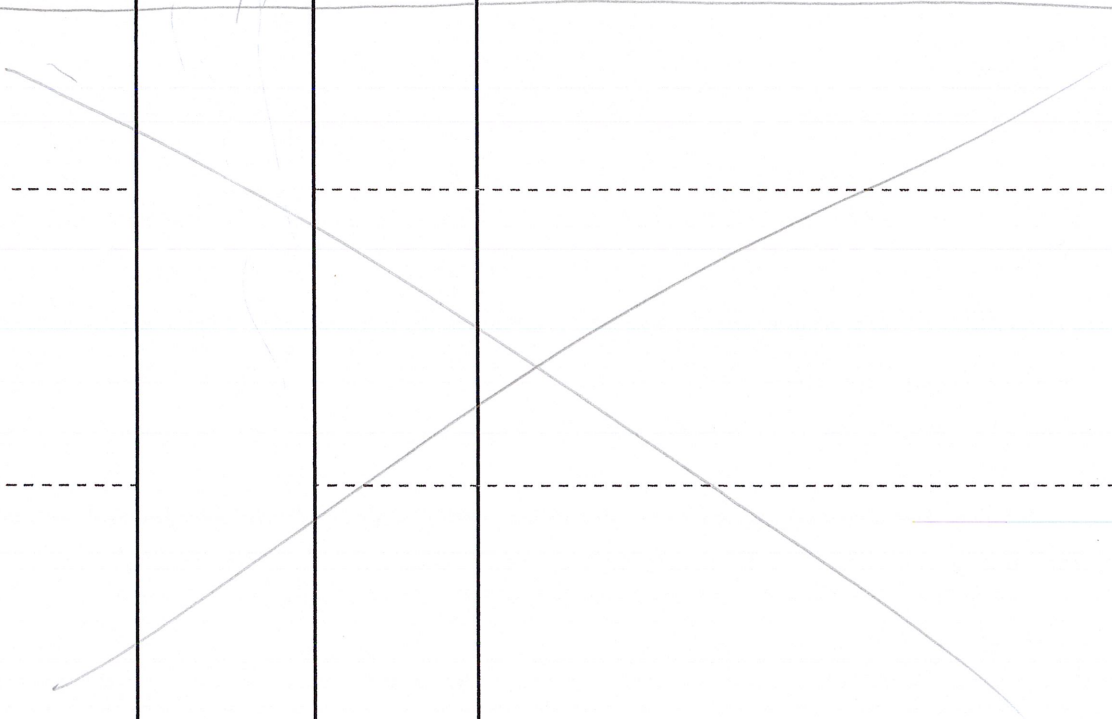
Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> </div> <div style="flex: 1;"> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Carbonate</p> </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="text-align: center;"><i>Foliation</i></p> </div> <div style="width: 45%;"> <p style="text-align: center;"><i>Fractures</i></p> </div> </div>	<p>← Quartz infilled fracture contains some gold shiny stuff</p> <p style="text-align: right; writing-mode: vertical-rl; transform: rotate(180deg);">Very competent rock, no separated fractures</p> <p>← mostly quartz infilled</p> <p>← mostly quartz infilled</p> <p>← Quartz infilled fracture</p> <p style="text-align: right; writing-mode: vertical-rl; transform: rotate(180deg);">no obvious permeable fractures</p>

Filename range (digital core images)

EGS SIGMA-V Collab ROCK CORE LOG, SURF 4850' LEVEL

Experiment #	Borehole ID <i>E1-0B</i>	Scribed (red line)? <input checked="" type="checkbox"/> Y/N
Depth Interval (ft) <i>195 - 197.33</i>	Box #	Run # <i>40</i>
Date <i>10/24/17</i>	Core Logger(s) <i>Megan & Luke</i>	

195

Depth	Sketch [fractures, foliation & fold directions]	Notes
<div style="text-align: center;">  </div>		
<div style="text-align: center;">  </div>		<p style="text-align: center;">} <i>Mostly intact & competent</i> <u><i>highly foliated</i></u> <i>carbonate bearing</i></p>
<div style="text-align: center;">  </div>		<p style="text-align: center;">← <i>Quartz filled fracture</i></p>
<div style="text-align: center;">  </div>		<div style="text-align: center;">  </div>
<div style="text-align: center;">  </div>		<div style="text-align: center;">  </div>

97

Filename range (digital core images)



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DRILL REPORT

Company Surf

Property Home Stalke

Hole # E1-03 Date 10-24-17 Job # 885-01

Driller David Z

Pre-Shift Safety Mtg _____

Helper Traus K

Pre-Shift Inspection _____

Helper _____

Run #	Rods in Hole	Stick Up	Amount Cored	Amount Rec'd	Hole Depth	Time Start	Time End	Time Required	Remarks	Equipment Used (check)
5:30		leave house								<input type="checkbox"/> CP-65 <input type="checkbox"/> SD-1500 <input type="checkbox"/> Ingetrol 75E <input type="checkbox"/> JKS 300 <input type="checkbox"/> 4x4 Pickup <input type="checkbox"/> 10,000 lb. Trailer <input type="checkbox"/> 7,000 lb. Trailer <input type="checkbox"/> Bean 20 <input type="checkbox"/> _____ <input type="checkbox"/> _____
6:30		rock cage down								
6:45		ride to drill								
7:00		safety meeting								
7:40		Drilling			155					
1			5'	5'	160'	7:45	8:18			Supplies Used
8:20		Survey 150'								
2			5'	5'	165'	9:00	9:30			
3			5'	5'	170'	9:45	10:45			
4			5'	5'	175'	10:23	10:45			Bits
5			5'	5'	180'	10:55	11:11			Size _____
6			5'	5'	185'	11:24	11:40			Make _____
7			5'	5'	190'	11:53	12:10			S.N. _____
			5'	5'	195'	12:15	12:40			On _____
			2'	2'	197'	12:50	1:10			Off _____ Total _____
1:15		do 197' survey T.D								Casing Shoe
2:04		Download survey								Size _____
4:30		head up cage								Make _____
5:30		at house								S.N. _____
										On _____
										Casing
										Size _____
										Depth _____
										Water Loads

Hole depth begin shift _____

Signatures - Driller [Signature]

Hole depth end shift _____

Total depth drilled _____

Client Representative [Signature]

Time spent on hourly _____ Standby time _____