

CHIKYU Operation

C I

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤ 90)	from ($\pm 1, 90$ or 270)	top	bottom	az.	dip	
1.														

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Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface <i>thickness</i>		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip	
1	- vein	3	6	90	50	0	21	0.35		3	15			
	[mud injection with edge alteration (to calcite & zeolites)	3	15	(approx vertical)										interpretation: mud injection into strongly veined & altered basalt
	contact (with mud injection/sill)	13	24	270	27	0	22	3.0m		13	23			
	vein	27	37	90	31	180	60	1.0mm						calcite accumulates on vein edges
	vein	32	34	90	22	0	51	1.25mm						
	vein	33.5	35.0	270	18	180	10	0.85		23	54			
		58	70	90	65	180	54							
	vein	62.0	76.0	90	64	180	53	0.2-1.5						
	vein	85	97.5	90	69	180	47							
	vein	73.0	15.0	sub vertical		irregular (wavy)				55	123			
				0	90	180	90							
	vein	111	122.5	sub vertical		(irregular, wavy)								
				0	90	180	90							
	injection	106.0	116.5	sub vertical										
				0	90	180	90							
	vitric mud injection	65 - 0	124 - 62			2								
		Section 2												

Summary:

[illegible]

Structural Geology Observation Sheet

J

Exp.: 405

Site: C0019. Hole: P.

Core: 1.

Observer: HH. DG. YH. ^{AL}

Summary: Igneous rock w/ white mineral veins & brownish layer

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface thickness		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip	
3	mineral vein (white)	14	15	270	11	0	1	1.35		13	40.5			
	"	25	26	270	11	180	21	0.85						
	"	26	37	90	63	54	0	2.0						
	"	52.5	54.5	270	35	0	57	0.7		45	87			
	"	54.5	55	270	11	0	26	1.20						
	"	67	70	90	43	120	10	0.70						
	"	77.5	78.5	90	11	180	17	0.75						
	"	13.5	14	270	9	180	5	0.45		13	40.5			
	"	15.5	16	270	10	0	9	0.40						
	"	16.5	17	270	6	180	38	0.35						
	"	14.5	20	90	77			0.65	→ wavy					
	"	19.5	21	270	21	0	6	0.80	→ with bluish mineral					
	"	32.5	33	90	11	180	39	0.80						
	"	38	39.5	270	30	180	23	0.30						
	"	39	40.5	270	17	180	4	0.40						
	pinkish contact	21	37	90	15	0	16			13	40.5			
	"	39.5	40.5	270	18	180	4							
	pinkish contact	45.5	46.5	270	5	180	5	→ wavy		45	87			
	alteration front	52	86.5	270	84	0	74			45	87			

Yellow-orange alteration can be seen throughout 1-3 section. alteration front.

45 alteration front.

mineral veins.

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Structural Geology Observation Sheet

Exp.: 405

Site: 19

Hole: P

Core: ✓

Observer: YH, HH

Summary: Ignious rock w/ horizontal-white-mineral veins,

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface <i>thickness in core surface</i>		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip	
4	Mineral vein (white)	3	5	90	24	180	21	0.7		0	6.5			
	"	9.5	11.5	270	27	180	16	0.15		6.5	54			
	"	11.5	12.5	270	20	180	23	0.25						
	"	15.5	18	90	21	0	18	2.0						
	"	16	16.5	270	6	0	2	1.5						
	"	19	22.5	270	31	180	20	1.4						
	" (X2) ←	21.5	23	270	18	0	8	1.3	→ One principal vein (1.3) with thin vein (0.60).					
	"	21.5	24.5	270	22	180	8	0.70						
	"	23	24	270	11	180	2	0.70						
	"	20	34.5	90	67	0	63	1.00						
	"	33	34	90	4	180	10	0.95						
	"	48	49	270	10	0	1	2.5 mm						
	"	54	57.5	270	23	0	17	0.65		54	88			
	"	60	61	90	8	180	2	0.25						
	"	62	65	270	27	180	44	0.90						
	"	67.5	68	270	5	0	0	1.20	→ wavy					
	"	76.5	79	270	18	180	24	0.20						
	"	78	80	270	16	180	12	0.30						
	"	80	80.5	270	13	180	9	0.25	→ wavy					
	"	83	85	270	12	0	9	0.80	→ One principal vein with 2 thin veins.					
(X3) ←	Mineral vein	10.5	10.65	90	22	180	31	0.7 mm		10.5	11.0			
	vein	116	120	90	36	180	58			110	120			0.35 mm

Structural Geology Observation Sheet

Exp.: 405 Site: C0019 Hole: P Core: 2K Observer: HO AL Summary: _____

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip	
1	[Vein]	12	15	270	22	180	4	← several layers on the vein		0	31			
	"	15.5	16.5	270	12	180	10							
	"	16	17	270	11	180	12							
	"	22	31	90	68	0	71	← glassy? dark rim						
	fine crystal "mash"	16	18	90	25	?								
2	[Vein]	14	18.5	90	11	180	12	← Cream-like color (1-4 mm thick)		0	81			
	"	33	33.5	90	0	0	18	(0.8 mm thick)						
	["]	33	35	90	14	0	21	(0.3-0.9 mm thick)						
	"	35.5	35.5	90	2	0	0+	(0.4 mm thick)						
	["]	35	43	90	50	180	55	← dark glassy rim (1.0 mm thick)						
	"	39	42	90	25	180	31	(0.85 mm thick)						
	"	46	46.5	270	7	180	4	(0.8 mm thick)						
	"	63	64.5	90	20	0	10	(0.5 mm thick)						
	"	67	70.5	90	45	0	24	← curved. (90/45 → 90/6) (0.4 mm thick)						
	"	80	81	90	16	0	18	(3 mm thick)						
3	Vein	7.5	9.5	270	15	0	4	(0.3 mm thick)		0	114			
	"	29	29.5	90	0	0	14	(0.3 mm thick)						
	"	37	40.5	270	32	180	2	(0.25 mm thick)						
	"	41	42.5	270	12	180	25	(0.9 mm thick)						
	Alteration band (front)	50	65	90	35	0	25	(75 mm wide)						
	Vein	50	54.5	90	35	0	19	(70 mm thick)						
	"	54.5	58.5	90	35	0	12	(2.5 mm thick)						
	"	58	63	90	40	0	11	(1.5 mm thick)						

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↑ contain more bands.

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Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤ 90)	from ($\pm 1, 90$ or 270)	top	bottom	az.	dip	
3	Vein	73	76	270	30	180	23	(0.3 mm thick)	0	114			Alteration front is not parallel to veins.	
	"	74	76	270	23	0	49	(2.5 mm thick)						
	"	75.5	77	270	8	0	31	(3-5 mm thick)						
	Alteration front	74.5	77.5	270	27	0	41	(TOP)						
	"	"	"	270	10	0	21	(BOTTOM)						
	Vein	78	100	270	78	0	80	(0.5 mm thick)						
4	Vein	23	23.5	90	3	0	0	(0.3 mm thick)	17	92			Multiple veins are accumulated.	
	"	25	26	270	7	0	17	(0.5-0.8 mm thick)						
	"	40	40.5	270	7	0	15	(0.4 mm thick)						
	"	51	69	90	77	0	72	(0.75 mm thick)						
	"	62	63	270	15	180	4	(0.5-0.7 mm thick)						
	"	86.5	87.5	270	8	0	11	(0.4 mm thick)						
5	Vein	12	12.5	270	6	0	2	(0.3 mm thick)	0-37				Multiple layers.	
	"	13.5	14	270	4	0	3	(0.7 mm thick)						
	"	27	30	270	20	0	7	(0.5 mm thick)						
	"	34	36	270	13	0	6	(0.75 mm thick)						

Structural Geology Observation Sheet

Exp.: 405

Site: C0619 Hole: P Core: 2K Observer: HO

Summary:

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美 ~~1.5mm~~
0.5mm
(core)

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤ 90)	from ($\pm 1, 90$ or 270)	top	bottom	az.	dip	
6	Veins.	0	2.5	90	15	180	10	(2.5 mm thick, sharp boundary)						
	"	1.5	2	270	15	180	13	(0.5/1 " unclear boundary)						
	"	2.5	4	270	15	180	7	(0.25/1 mm " unclear boundary)						
	"	4	5.5	270	17	0	14	(0.7/1.5 " unclear boundary)						
	"	11.5	12	270	5	180	1	(1/1.5 " unclear boundary)						
	"	13	15	90	22	0	23	(0.85 " sharp boundary)						
	"	15	16	270	10	0	3	(0.25/0.75 " unclear boundary)						
	"	15.5	16.5	270	10	180	9	(0.35/1.2 " unclear boundary)						
	"	17	18	270	10	180	2	(0.5/2 " unclear boundary)						
	"	19	21	270	15	180	7	(1.5 mm sharp boundary)						
	"	20	20.5	270	10	180	2	(0.35/1.5 " unclear boundary)						
	"	23.5	25	270	22	0	5	(0.3/2 " unclear boundary)						
	"	24.5	26	270	19	0	7	(0.3/3 " unclear boundary)						
	"	27.5	27.5	270	3	180	19	(0.5 " sharp boundary)						
	"	29	29.5	270	3	180	9	(0.3/3 " unclear boundary)						
	"	30.5	31.5	270	9	180	9	(0.3/3 " unclear boundary)						
	"	31	31.5	90	5	0	34	(0.7 " sharp boundary)						
	"	32.5	33	270	7	0	7	(0.5/3 " unclear boundary)						
	"	33	34	90	10	0	24	(0.6 " sharp boundary)						
	"	35	37	270	20	180	2	(0.8/3 " unclear boundary)						
"	38	39.5	270	14	0	18	(0.3/3 " unclear boundary)							
"	38	41	270	19	180	8	(0.3/3 " unclear boundary)							
"	39	41	270	10	180	6	(0.3/3 " unclear boundary)							
"	42	43	270	5	0	16	(2.5 mm sharp boundary)							
"	47.5	48	270	3	0	6	(0.3/2.5 " unclear boundary)							
"	50	52	270	11	0	1	(1-5 mm sharp boundary)							

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Summary:

[illegible]

Re-written cleaner

Structural Geology Observation Sheet

Exp.: 405 Site: C0019 Hole: P Core: 3K Observer: HH Summary: Contact zone of redish (chert-mud) / basalt with veins

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface thickness		Coherent interval (for P-mag)		P-mag pole		Note				
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip					
1.	Biscuitting.	0	12.5															
	Highly Disturbed.	12.5	26.5															
	Biscuitting.	26.5	41															
	ness-Contact	46.5	47	subhorizontal				can NOT measure Orientation.										
	Mod. disturbed.	41	58.5															
	white n blue	Contact.	71	71.5							71.	90						
		Vein.	76	76.5	270	5	180	3										
		Vein.	78	78.5	270	9	0	8										
		Vein.	79	80	270	11	0	7										
		Vein.	81.5	82.5	270	11	0	3	2.0mm									
	Vein (white).	83	84	270	9			0.50										
	"	83.5	85	270	16			4.5mm										
CC	Mod. Disturbed.	0	18															
	white Vein.	3	4	sub horizontal.				6mm				0		18		} TOO DISTURBED, not in situ		
	"	10	11									1		1				
	Vein zone.	18	20	" ↓				7mm				18		20				
One thick white vein with intense veins.																		

contact between reddish clay/mud & basalt w/ abundant veins

[illegible]

Igneous rock, w/

Sub-horizontal Tiny mineral veins, overlapping $> 2\text{mm}$ veins

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface thickness		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip	
1	Mineral vein (White, >2mm)													
	①	0.5	2	90	9	180	7	4mm		0	32.5			
	②	13.5	15.5	90	6	180	2	17mm		=	=			
	③	23	24	90	4	180	4	8mm		0	32.5			
	④	31	32.5	90	8	0	4	6mm		0	32.5			
	⑤	40	41	90	1	0	6	5mm		34	47			
									Major thickness of veins					
	Mineral vein (White, sub-parallel, tiny vein zone)	0	2.5	un continuous accumulation of several events?						0	32.5			
		3.5	4.5											
		5	6.5	90	4	180	1	0.35						
		17	20	90	10	180	3	0.25						
		20.5	22.5	90	6	0	0	0.4						
		28	31	90	9	0	2	0.4						
		34	35	270	4	180	10	0.25		34	47			
		39.5	40.5	90	1	180	9	0.6						
		44	45.5	90	1	180	10	0.2						
		8	9	270	2	180	3	0.2		0	32.8			
		9.5	10.5	270	3	180	4	0.5						
	11	12.5	90	1	180	1	one-thick (1mm) accompanied w/ 0.25mm							

