THIN SECTION LABEL ID:	371-U1507A-32X-1-W 32/34-TSB-TS16	Thin section no.:	16
Observer:	MG	Unit/subunit:	Unit I / 1a
Thin section summary:	Upper part of a 1m thick layer. Conglomeratic tuff with for angular grains of basaltic composition, including plagiocla	aminifera. Poorly s ase, pyroxene, and	orted and olivine

Plane-polarized: 42939671	Cross-polarized: 42939691
Sediments and Sedimentary Rock	
Name: conglomeratic tuff with foraminifers	

Remarks: Upper part of 1m volcanoclastic bed in chalk succession. Plagioclase, pyroxene and olivine phenocrysts still present.

TEXTURE	Gravel	Sand	Silt	Clay	Matrix	Cement
Percent		65		35		

COMPOSITION	Siliciclastic	Calcareous	Biosiliceous	Ash
Percent		5		95

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THIN SECTION LABEL ID:	371-U1507A-32X-1-W 102/104-TSB-TS17	Thin section no.:	17
Observer:	MG	Unit/subunit:	Unit I / 1a
Thin section summary:	Lower part of a 1m thick layer. Conglomeratic tuff with for	aminifera. Poorly s	orted and

angular grains of basaltic composition, including plagioclase, pyroxene, and olivine



# Sediments and Sedimentary Rock

Complete Lithology Name:	conglomer	conglomeratic tuff with foraminifers											
Remarks:	Lower part phenocrys	of 1m v ts still p	volca reser	noclastic bec nt.	d ir	n chalk su	ccession.	Pla	gioclase, py	roxer	າe and	olivi	ne
TEXTURE	Gravel	Sand		Silt	Cl	ау	Matrix		Cement				
Percent		60			40	)							
COMPOSITION	Siliciclastic		Calc	areous		Biosiliced	ous	As	sh		1		
Percent			5					95	5		I		

	ELID. <b>3</b>	/1-0130/A	-398-4-18/2	23-12B-12	018	I	nin section no.:	10
Observer:	N	1G				ι	Jnit/subunit:	Unit I / 1a
Thin section sum	mary: F	oraminifera	I packstone wi	th parallel	lamination	created by	variable amount	of matrix
	Plane-pola	rized: 429	39751	Cross	-polarized	: 42939771		
[8]			123					
			19.					
7 H			4.					
120			-X-					
D	and a state of the state		m.		NY SILABARAN IN			
Sediments and S	Sedime	ntary Ro	ock					
Complete Lithology Name:	foramini	feral packsto	one					
Complete Lithology Name: Remarks:	foraminif Parallel la	feral packsto amination ci	one reated by variab	ole amount	of matrix			
Complete Lithology Name: Remarks: TEXTURE	foraminif Parallel la Gravel	feral packsto amination ci	one reated by variab Silt	ole amount Clay	of matrix Matrix	Cement	]	
Complete Lithology Name: Remarks: TEXTURE Percent	foraminil Parallel la Gravel	feral packsto amination co Sand 80	one reated by variab	ole amount Clay 20	of matrix Matrix	Cement		
Complete Lithology Name: Remarks: TEXTURE Percent COMPOSITION	foraminit Parallel la Gravel Siliciclast	feral packsto amination cr Sand 80 :ic C	one reated by variab Silt alcareous	ole amount Clay 20 Biosiliced	of matrix Matrix Dus	Cement Ash		

THIN SECTION LABEL ID:	371-U1507B-4R-4-W 80/83-TSB-TS19	Thin section no.:	19
Observer:	MG	Unit/subunit:	Unit I / 1a
Thin section summary:	Foraminiferal packstone/ muddy limestone from a soft def Forams chambers sometimes filled with authigenic opaqu	ormed sedimentar e minerals	y bed.



THIN SECTION LABE	LID: 371	-U1507E	B-13R-5-W 58/6	0-TSB-TS	520	Т	hin section no.:	20
Thin section sumn	nary: Bio	clastic wa	ackestone with	foraminife	ra and trac	es of lithic g	rains	Unit 17 1D
U15078 > (20)	Plane-polariz	zed: 429	939831	Cross	-polarized:	: 42939851		
Sediments and S	ediment	ary Ro	ock					
Complete Lithology Name:	bioclastic w	vackestor	ne with foraminif	ers				
Remarks:								
TEXTURE	Gravel	Sand	Silt	Clay	Matrix	Cement		
Percent		10	30		60			
COMPOSITION	Siliciclastic	C	Calcareous	Biosilice	ous /	Ash		
Percent		9	99		1	1		

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THIN SECTION LABEL ID:	371-U1507B-15R-6-W 40/43-TSB-TS21	Thin section no.:	21
Observer:	MG	Unit/subunit:	Unit I / 1b
Thin section summary:	Contact between bioturbated bioclastic wackestone and or packstone. The two have similar composition, juts different of authigenic minerals. Forams seem internally silicified.	ross-laminated bic nt amount of matrix	clastic and traces





Sediments and S	Sediment	ary R	lock	ζ						
Complete Lithology Name:	bioclastic v	vackest	one w	ith intraclasts	i					
Remarks:	Contact be The two ha silicified.	Contact between bioturbated bioclastic wackestone and cross-laminated bioclastic packstone. The two have similar composition, juts different amount of matrix. Forams seem internally silicified.								
TEXTURE	Gravel	Sand		Silt C	lay	Matrix	Cement			
Percent		20		20		60				
	Siliciclastic		Calca		Biosilice		Ash	 ]		
	Jinciciastic		Calca		Diosiliced	503				
Percent			99				1			

 THIN SECTION LABEL ID:
 371-U1507B-16R-1-W 67/70-TSB-TS22
 Thin section no.: 22

 Observer:
 MG
 Unit/subunit:
 Unit / 1b

 Thin section summary:
 Bioclastic wackestone with intraclasts, partly disturbed and partly homogeneous.
 Unit / 1b



COMPOSITION	Siliciclastic	Calcareous	Biosiliceous	Ash
Percent		99		1

 THIN SECTION LABEL ID:
 371-U1507B-16R-1-W 85/88-TSB-TS23
 Thin section no.: 23

 Observer:
 MG
 Unit/subunit:
 Unit I / 1b

 Thin section summary:
 Bioclastic wackestone with intraclasts. Bioclasts consist mainly of foraminifera. Rare authigenic minerals are present.

Plane-polarized: 42939951 Cross-polarized: 42939971 **Sediments and Sedimentary Rock Complete Lithology** bioclastic wackestone with intraclasts Name: **Remarks:** Irregular lamination TEXTURE Gravel Sand Silt Clay Matrix Cement 25 20 55 Percent

COMPOSITION	Siliciclastic	Calcareous	Biosiliceous	Ash
Percent		99		1

# THIN SECTION LABEL ID: 371-U1507B-19R-3-W 113/115-TSB-TS24 Thin section no.: 24 Observer: MG Unit/subunit: Unit / 1c Thin section summary: Intraclastic packstone with bioclasts, with burrows filled with intraclastic wackestone. Carbonate grains are rather re-crystalized. Traces of volcanic clasts are present, as well as rare opaque grains, probably of both lithic and authigenic origin.





Sediments and S	Sediment	ary R	lock					
Complete Lithology Name:	intraclastic	packsto	one with bi	oclasts				
Remarks:	Carbonate other prob	grains a ably aut	ire rather re higenic.	e-crystali	zed. Seve	ral opaque	e grains are pro	esent
TEXTURE	Gravel	Sand	Silt	C	ау	Matrix	Cement	]
Percent		40	10			50		
COMPOSITION	Siliciclastic		Calcareou	s	Biosilice	ous	Ash	
Percent			99				1	

Γ

THIN SECTION LABEL ID: Observer	371-U1507B-19R-3-W 145/14 MG	48-TSB-TS25	Thin section no.: Unit/subunit:	: 25 Unit I / 1c
Thin section summary:	Intraclastic packstone, with bu fine carbonate grains. Traces detrital and authigenic. Abunc contacts.	urrows filled with wackeston of volcanic clasts and opaq lant sparite in the packstone	e with foraminifera ue mineral, probal a. Presence of styl	and other oly both olitic grain
Plane-p	oolarized: 42940031	Cross-polarized: 429400	)51	





# Sediments and Sedimentary Rock

Complete Lithology intraclastic packstone

Remarks: Abundant sparite in the packstone. Presence of stylolitic contacts. Some of the opaques are probably authigenic

TEXTURE	Gravel	Sand	Silt	Clay	Matrix	Cement
Percent		80	10		10	

COMPOSITION	Siliciclastic	Calcareous	Biosiliceous	Ash
cent		99		1

THIN SECTION LABEL ID:	371-U1507B-20R-1-W 48/51-TSB-TS26	Thin section no.:	26
Observer:	MG	Unit/subunit:	Unit I / 1c
Thin section summary:	Bioclastic wackestone with intraclasts. Bioclasts include for	oraminifera and oth	ner



TEXTURE	Gravel	Sand	Silt	Clay	Matrix	Cement
Percent		30			70	

COMPOSITION	Siliciclastic	Calcareous	Biosiliceous	Ash
Percent		95		5

THIN SECTION LABEL ID:	371-U1507B-20R-5-W 39	/43-TSB-TS27	Thin section no	o.: 27
Observer:	MG		Unit/subunit:	Unit I / 1c
Thin section summary:	Intraclastic packstone from clustered, with the local p composition. Rare foraming	m the upper part of a tur resence of cement. Con nfera and other bioclast	biditic layer. Matrix and g nmon volcanic grains of b s.	rains are basaltic
Plane-p	oolarized: 42940111	Cross-polarized:	42940131	
V (27)				

Sediments and S	ediments and Sedimentary Rock							
Complete Lithology Name:	intraclastic	packsto	one					
Remarks:	Upper part	of a tur	biditi	ic layer				
TEXTURE	Gravel	Sand		Silt C	lay	Matrix	Cement	]
Percent		65		10		20	5	
COMPOSITION	Siliciclastic		Calc	areous	Biosilice	ous	Ash	
Percent			90				10	

371-U1507B-20R-5-W 39/43-TSB-TS27 Page 1 of 1

THIN SECTION LABEL ID:	<b>371-U1507B-20R-5-W 46/50</b>	-TSB-TS28	Thin section no.:	28
Observer:	MG		Unit/subunit:	Unit I / 1c
Thin section summary:	Highly mixed and very poorly	sorted carbonate volca	anoclastic conglomerate	e. The
	carbonate fraction includes m	icrite (matrix), planktor	nic foraminifera and sha	llow water
	bioclasts, including benthic fo	raminifera, algae, valv	es, and crinoids. Volcan	nic clasts are
	mainly basaltic tefra and glas	s. Grains are compene	etrating with stylolithic co	ontacts.
Plane-p	olarized: 42940151	Cross-polarized: 42	2940171	
	O SHORE SHOW	C. S. Wash	The second of th	



### **Sediments and Sedimentary Rock**

**Complete Lithology** calcareous conglomerate with silicate minerals Name:

Highly mixed and very poorly sorted carbonate volcanoclastic rock. Present several shallow water carbonate bioclasts, including benthic foraminifera, algae, valves, crinoids, as well as planktonic foraminifera. Grains are compenetrating with stylolithic contacts. **Remarks:** 

TEXTURE	Gravel	Sand		Silt	Cl	ау	Matrix		Cement	
Percent	35	40		10			10		5	
COMPOSITION	Siliciclastic	Siliciclastic C		areous		Biosiliceo	ous	As	sh	
Percent			50					50	)	

#### 371-U1507B-20R-5-W 46/50-TSB-TS28 Page 1 of 1

THIN SECTION LABEL ID:	371-U1507B-23R-2-W 12	26/128-TSB-TS29	Thin section no.:	29
Observer:	MG		Unit/subunit:	Unit I / 1c
Thin section summary:	Highly mixed and poorly s fraction includes micrite (including benthic foramini are mainly basaltic tefra.	sorted carbonate volcanoclas matrix), planktonic foraminife ifera, algae, bryozoans, valve	tic sandstone. The ca ra, and shallow water s, and crinoids. Volca	arbonate bioclasts, anic clasts
Plane-p	olarized: 42940191	Cross-polarized: 4294	40211	



### **Sediments and Sedimentary Rock**

Complete Lithology Name: calcareous sandstone with silicate minerals

Remarks:

Highly mixed and poorly sorted carbonate volcanoclastic rock. Present several shallow water carbonate bioclasts, including benthic foraminifera (Nummulites), algae, bryozoans, valves, crinoids, as well as planktonic foraminifera.

TEXTURE	Gravel	Sand		Silt	Cl	ау	Matrix		Cement
Percent	5	30		15			50		
COMPOSITION	Siliciclastic		Calc	areous		Biosilicec	ous	As	h
Percent			60					40	)

#### 371-U1507B-23R-2-W 126/128-TSB-TS29 Page 1 of 1

THIN SECTION LABEL ID:	371-U1507B-23R-3-W 2/5-TSB-TS30	Thin section no.: 30
Observer:	MG	Unit/subunit: Unit I / 1c
Thin section summary:	Bioclastic conglomerate with volcanic clasts. The c (matrix), and bioclasts, mainly foraminifera. Volcan composition. There are traces of authigenic sulfide	arbonate fraction includes micrite ic clasts are common and of basaltic s.

Cross-polarized: 42940251



# Sediments and Sedimentary Rock

Complete Lithology Name: bioclastic conglomerate with volcanic ash

**Remarks:** 

TEXTURE	Gravel	Sand		Silt	Clay	Matrix	Cement
Percent	5	50		15		30	
COMPOSITION	Siliciclasti	c	Calc	areous	Biosilio	ceous	Ash
Percent			90				10

THIN SECTION LABEL ID:	371-U1507B-24R-8-W 75/78-TSB-TS31	Thin section no.:	31
Observer:	MG	Unit/subunit:	Unit I / 1c
Thin section summary:	Bioclastic tuff. Dominant sand size volcanic glass with rar	e basaltic tephra. E	Bioclasts



COMPOSITION	Siliciclastic	Calcareous	Biosiliceous	Ash
Percent		5		95

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THIN SECTION LABEL ID:	371-U1507B-29R-1-W 87/90-TSB-TS32	Thin section no.:	32
Observer:	MG	Unit/subunit:	Unit I / 1c
Thin section summary:	Bioclastic tuff formed by lapilli, and basaltic grains w Carbonate grains include foraminifera, a bryozoan, identification.	vith pyroxene and plagio and fragments of difficul	clase. t



Sediments and S	Sedimer	ntary F	Rock					
Complete Lithology Name:	Tuff with	bioclasts						
Remarks:	Rock form bryozoan	ned by la recogniz	pilli, pyroxene zed	and J	plagiocla	se crystals,	and mafic lith	nics. Fo
TEXTURE	Gravel	Sand	Silt	С	lay	Matrix	Cement	
Percent	1	49	20				30	
COMPOSITION	Siliciclasti	c	Calcareous		Biosilice	ous	Ash	
Percent			1				99	

THIN SECTION LABEL ID: Observer:	<b>371-U1507B-33R-2-W 63/66-TSI</b> MG	3-TS33	Thin section no.: Unit/subunit:	33 Unit I / 1c
Thin section summary:	Contact between intraclastic pack turbiditic tuff). Carbonate grains ra greenish surface, probably chlorit altered intraclasts, bioclasts, and packstone. Many cavities in the tu	stone and lapilli ather recrystaliz ized, associated volcanic grains. Iff part of the thi	i tuff (Bioturbated chalk over ed, The contact consists of I to sparitic carbonate, and Burrows protrude into the n section	erlaid by an irregular containing intraclastic
Plane-p	olarized: 42940351 C	ross-polarized:	42940371	
078 > (33)	-2. 63/6			

# Sediments and Sedimentary Rock

Complete Lithology intraclastic packstone

**Remarks:** Bioturbated chalk overlaid by turbiditic tuff. Carbonate grains rather recrystalized, Many cavities in the tuff part of the thin section.

TEXTURE	Gravel	Sand		Silt	CI	ау	Matrix		Cement
Percent		1		89					10
COMPOSITION	Siliciclastic		Calc	areous		Biosiliced	ous	As	sh
Percent			99					1	

#### 371-U1507B-33R-2-W 63/66-TSB-TS33 Page 1 of 1

 THIN SECTION LABEL ID:
 371-U1507B-34R-6-W 67/70-TSB-TS34
 Thin section no.: 34

 Observer:
 MG
 Unit/subunit:
 Unit I / 1c

 Thin section summary:
 Calcareous sandstone with volcanic clasts. Abundant micrite (matrix) and common volcanic glass grains. Rare basaltic tephra and traces of calcareous fragments.
 Model of the section summary is a section of the section o

Plane-polarized: 42940391 Cross-polarized: 42940411

# Sediments and Sedimentary Rock

Complete Lithology calcareous sandstone with volcanic ash

**Remarks:** 

TEXTURE	Gravel	Sand	Silt	Clay	Matrix	Cement
Percent		60			35	5

COMPOSITION	Siliciclastic	Calcareous	Biosiliceous	Ash
Percent		70		30

Γ

THIN SECTION LABEL ID:	371-U1507B-35R-1-W 93/96-TSB-TS35	Thin section no.:	35
Observer:	MG	Unit/subunit:	Unit I / 1c
Thin section summary:	Tuff consisting of abundant lapilli and common basaltic g plagioclase and oxides. Common carbonate intraclasts a other bioclasts.	rains with crystals on nd traces of forami	crystals of nifera and





Sediments and Sedimentary Rock										
Complete Lithology Name:	tuff with ir	ntraclast	s							
Remarks:	Common crystals of plagioclase and oxides									
TEXTURE	Gravel	Sand	Sil	t C	lay	Matrix	Cement			
Percent		70	10			5	15			
COMPOSITION	Siliciclastic Calcareous Biosiliceous Ash									
Percent			10				90			

 THIN SECTION LABEL ID:
 371-U1507B-45R-2-W 129/132-TSB-TS36
 Thin section no.: 36

 Observer:
 MG
 Unit/subunit:
 Unit II

 Thin section summary:
 Micritic limestone with rather recrystalized bioclasts, traces of foraminifera are still recognizable. A hard layer with abundant authigenic sulfides is in the lower part of the section.





Sediments and Sedimentary Rock											
Complete Lithology Name:	micritic lim	micritic limestone with bioclasts									
Remarks:	Bioclasts rather recrystalized. Harder layer with more authigenic sulfides in the lower part of the section										
TEXTURE	Gravel	Gravel Sand Silt Clay Matrix Cement									
Percent		5		5		90					
COMPOSITION	Siliciclastic	Siliciclastic Calcareous Biosiliceous Ash									
Percent			100								

THIN SECTION LABEL ID:	371-U1507B-45R-3-W 49/52-TSB-TS37	Thin section no.:	37
Observer:	MG	Unit/subunit:	Unit II
Thin section summary:	Micritic limestone with rather recrystalized bioclasts, trace recognizable, filled with cement or oxides. Section from s core.	es of foraminifera au lightly darker interv	re still al in the



Sediments and Sedimentary Rock											
Complete Lithology Name:	micritic lir	nestone	with bioclasts								
Remarks:	Section from slightly darker interval in the core. Bioclasts rather recrystalized. Forams filled with cement or oxides.										vith
TEXTURE	Gravel	Gravel Sand Silt Clay Matrix Cement									
Percent		5 5 90									
COMPOSITION	Siliciclastic Calcareous Biosiliceous Ash										
Percent			100								

THIN SECTION LABEL ID:       371-U1507B-45R-5-W 132/135-TSB-TS38       Thin section no.: 38         Observer:       MG       Unit/subunit:       Unit II         Thin section summary:       Bioclastic packstone with abundant shallow water bioclasts, including benthic foraminifera (mainly Nummulites), green algae, bivalves, echinoderms, gastropods, bryozoans. among others more difficult to recognize; rather recrystalized, sometimes oxidized. Few volcanic plagioclase grains are also present. Section from a coarse, normally graded, 5cm thick layer.											
Plane-polarized: 42940551 Cross-polarized: 42940571											
Sediments and S	Sediment	ary Ro	ock								
Complete Lithology Name:	bioclastic p	ackstone	2								
Section from a coarser, normally graded, 5cm thick layer. Abundant shallow water bioclasts, including benthic foraminifera (mainly Nummulites), green algae, bivalves, echinoderms, gastropods, bryozoans. among others more difficult to recognize. Few lithics, probably volcanic plagioclase, are also present. Bioclasts rather recrystalized, sometimes oxidized.											
TEXTURE	Gravel	Sand	Silt	С	lay	Matrix	Cement				
Percent		80				20		]			
COMPOSITION	Siliciclastic Calcareous				Biosiliceous Ash						
Percent	99					1					