

Cities Service
BATMAN - 23

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Sample Number	Described by:		Bed Number	Features					County/State	Section	Remarks:			
	Stemcraft			Unit Name	Mud - wacke	Wacke / dark	Dark / Gs	Siliceous				Butler Co. KS	21. T. 26S. R. 5E	Arbuckle Gp
	ft.	10 cm												
		Measured section									Cored 1957			
									No.	Stratigraphic Description				
TS Gdd → 25	82									mudstone 5Y 2/1				
P → ✓					X					bedded to lam.				
P → T	83				X					Burrow mottled - fine grains around burrows Pyroclite fills center (dentrites) Possible				
T					X									
P →	84				X					Rebids				
P →					X					stromatolite				
TS 258 4'6" Gold → F									?	white "chalky"				
P →														
T	85									? former ? relict g.s. / Pak				
T														
	86									5Y 2/1				
FV										former ? relict g.s.				
P → V														
P → F	87									mudstone				
V										5Y 6/1 filled w/ former ? relict g.s.				
										Burrow mottled with vugs original rock ? wackestone				
P →					X					5Y 2/1				
25 88														

inst. / Pak - erosional / exposure surface
matolite or thrombolite Chert B modules after evaporates
ldy - wackestone / mudstone / boundstone "chalky"
at local influence

[illegible]

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[illegible]

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Sample Number	Described by: <u>Steinhoff</u>		Bed Number	Features					County/State <u>Butler</u> Section <u>21</u> , T. <u>26S</u> , R. <u>5E</u> Remarks:	
	Date: <u>7/25/1997</u>			Mud	Mud/P	Pac	Silt			
	ft.	10 cm						Measured section		
25	64									
T										
T										
T	65									
T										
T										
F	66									
V										
V										
V	67									
V										
V										
V	68									
V										
V										
V	69									
V										
V										
V	70									

No.	Stratigraphic Description
	sed struct.
	Massive to mottled Grainstone/ Packst.
	Grainstone - Packst. ? X-bedded
	chalky chert bed
	? X-bedded Grainstone / Packstone
	Cherty zone
	after evap.
	chalky Cherty zone - inter fm conglm. "edge wise"
	Grainstone / Packstone with ? thomb. caps

~ Box 23

Sample Number	Described by: <u>Steinhilff</u>		Bed Number	Unit Name <u>Banded</u>	Features				County/State <u>Butler</u> Section <u>21</u> , T. <u>26S</u> , R. <u>5E</u> Remarks:	
	Date: <u>7/25/1997</u>				Mud	Gravel	Pkt/Gr	Siliceous		
	ft.	10 cm								Measured section
25	58		?							
		Continued next page								
	59		?							
		← void?	?							
	60		?							
			?							
	61		?							
			?							
	62									
		Void								
	63									
	64									

No.	Stratigraphic Description
	? Shaly lens
	large Stromat. grainstone/wacke
	Chalky zone w/ fract. arg. chert
	zone with Chalky cement? (fill) between grains
	Algal stromatolite - unknown time
	? oncolite ? renals
	chalky filled wgs
	w/ "smaller" ooids
	Grainstone/Packstone with Thromb. caps
	filled w/ "large" ooids
	rounded & angular chert
	vuggy & chalky

Handwritten notes on the left margin:

- CSC up
- P →
- V
- P →
- 2563' 9" Gold
- P →
- P →
- P →

[illegible]

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Sample Number	Described by:		Bed Number	Unit Name	Features				County/State	Section	T.	R.	Remarks:
	ft.	10 cm			Measured section	mud cracks	cherty / p	Pack / Gr					
									No.	Stratigraphic Description			
25	46									Continued next page			
P → T				X	X			X		escape burrow?			
				X				X					
P → F	47				X	X				cherty zone in finer ? grainstone			
V					X	X							
	48				X	X				Pack / Gr.			
V						X							
V										some filled with fibrous stuff ? whitened material ? Ancient or recent			
25	49					X							
F								X		Pack stone / gr			
FV										Pac stone / white			
FV						X							
V	50												
P → V								X					
								X					
	51				X	X				? oolitic pack stone 59 1/4			
					X					Grainstone 104 8/2			
					X					? oolitic pk stone 59 1/4			
25	52				X								

~ Box 15

County/State Butler
Section 21, T. 26S, R. 5E
Remarks:

[illegible]

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[illegible]

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Sample Number	Described by: <u>Steinhilber</u>		Bed Number	Unit Name <u>Band</u>	Features				County/State <u>Butler</u> Section <u>21</u> , T. <u>26S</u> , R. <u>5E</u> Remarks:	
	Date: <u>7/28/1997</u>				mud/cl	lens/bed	bed/frag	siliceous		
	ft.	10 cm								Measured section
25	28									No. Stratigraphic Description 5Y 6/1 former dolitic or peloidal rock / grainstone 5YR 4/1 micromoldic, porosity stylolitic contact former ? dolitic grainstone "micromoldic" porosity
	29				X		X			
						?	X			
	30					?	X			
							X			
							X			
	25 31						X			
						X	X			
					X					
	32						X			
							X			
	33									
25	34									

P →
 T →
 P →

P →
 m →
 m →

↑
 Core 11
 S-3

[illegible]

Sample Number	Described by:		Bed Number	Unit Name	Features					County/State	Section	Remarks
	ft.	10 cm			Mod/w	w/pack	p/gr	Silicous				
	Steinhoff									Butler Co	21 T. 26 S. R5 E	
	Date: 7/28/1997											
	Measured section											
	Cont. next Page								No.	Stratigraphic Description		
25	16				x					mod/wackestone, mottled (v. fractures 0.25mm across) mottled texture nodular - almost "chicken wire" texture. soft sed del. (5m vert fract) wacke/mudstone		
17					x					Cherty mudstone		
18					y					Geopelia filled mudstone		
					x					chalky w/ chert		
25	19				x					mod Packstone wackestone		
20					x					mottled text packstone/wackestone "chalky" between grains		
21					x					filled with ? packing straw or ancient material		
25	22				x					mottled texture Pack/wacke 59 G/I Packstone / qtz st.		

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~ Box 13

[illegible]

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~ Box 12 α

[illegible]

[illegible]

~ Box 10

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~Box 9

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Sample Number	Described by:		Bed Number	Features					County/State	Section	T.	R.	Remarks
	Sternhoff			Unit Name/Beds	Mudw	ls/shale	Dol/or	Siliceous					
	ft.	10 cm	Measured section										
									No.	Stratigraphic Description			
	2474		Cont. next page 	?			x	x		? moldic porosity 16 YR 6/2			
	75		void 	?			x			? moldic porosity after clay open vertical fractures.			
	2476			?			x	x					
							x	x		fractured partially filled with shaly material			
	77						x	x		Chalky matrix Ang. to subrounded chert			
	2478		chalky 	x	x	x	x	x		? former packstone/gr			
				x			x			? Green ? Glascock lamination lam. Shaly mudstone			
	79			x						massive mudstone lam. mudstone			
				x						Chalky zone w/ internal laminations			
	2480			x			x			nod. mudstone			

~ Boxes 8 & 9

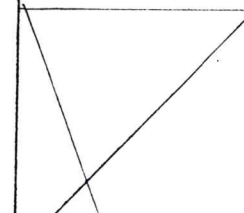
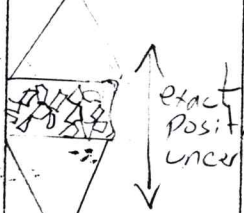
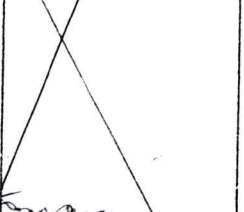
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Sample Number	Described by:		Bed Number	Unit Name	Features				County/State	Section	Remarks
	ft.	10 cm			Mud/W	U/P	P/Gr	Silic			
24/62											
62											
24/64											
65											
24/66											
67											
24/68											

No.	Stratigraphic Description
	mottled mudstone
	shaly mudstone
	mudstone w/ gr. clasts
	nod. mudstone
	shale lam.
	geopetal fill (shale)
	5YR 6/2
	5Y 2/1 mudstone
	Massive mudstone
	10YR 6/2 (light)
	mudstone clasts in chalky matrix
	stromatolite
	5Y 2/1 dark
	filled w/ siliceous, p. grained
	former
	? limestone - chalky matrix
	laminated
	shaly mudstone 5G 4/1
	Massive mudstone
	v. fractures filled w/ siliceous material, f. gr.
	10YR 6/2

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Sample Number	Described by: <u>Steinhoff</u>		Bed Number	Unit Name	Features			County/State <u>Butler</u> Section <u>R1</u> T <u>2CS</u> R <u>5E</u> Remarks:	
	Date: <u>7/28/1997</u>				Mud	W/P	P/S		Silt
	ft.	10 cm							
No.	Stratigraphic Description								
2456									
Core 8 S-4 m p → 2457									
P → 2458									
2459									
2460									
Approx. Position Core 9 S-1 ✓ ✓ mv → 2461									
P → 2462									

} Rubble only

Chalky zone
Crinkly between nodules
clasts

Very strange
Angular pink (5YR 7/2)
feldspar in grain to matrix
with matrix of green clay
(10GY 5/2)
? Cave fill

? Algal fabric

rounded chert nodules in
? former wackestone with
chalky matrix

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~ Box 5

Sample Number	Described by: <u>Steinhaut</u>		Bed Number	Unit Name <u>Burd</u>	Features				County/State <u>Butler Co</u>	Section <u>21</u> T. <u>26S</u> R. <u>5E</u>	Remarks:
	ft.	10 cm			Measured section	Mud/ls	ls/P	P/Gr			
24/44											
24/45											
24/46											
24/47											
24/48											
24/49											
24/50											

Cont. next Page

24/44

24/45

24/46

24/47

24/48

24/49

24/50

← oil stained →

lam. mdstone

shale stringer
nodular mdstone
10 YR 2/2
md. conglom.

?
? unconformity ?

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Sample Number	Described by: <u>Steinhart</u>		Bed Number	Unit Name <u>md</u>	Features	<table border="1"> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </table>																	County/State <u>Bitter Co</u> Section <u>21</u> T. <u>26S</u> R. <u>5E</u> Remarks:
Date: <u>7/28/1997</u>																							
ft.	10 cm	Measured section																					
						No.	Stratigraphic Description																
24 38 39 24 40 41 24 42 43 24 44				stylolitic mudstone 16 YR 2/2																			

Core 7
S-4

~ Box 4

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~ Box 3

Sample Number	Described by: <u>Stenhall</u>		Bed Number	Unit Name <u>Bond</u>	Features					County/State <u>B.ter</u>	Section <u>21</u> , T. <u>26S</u> , R. <u>5E</u>	Remarks:
	ft.	10 cm			Measured section	Mud/W	W/P	P/G	Silicene			
24/27												
24/28												
24/29												
24/30												
24/31												
24/32												
24/33												

No.	Stratigraphic Description
	Cont. next Page Rubble zone Poor recover 10Y 4/2 Shaly ls with chert cherts, rounded to sub ang. rounded chalky chert green matrix 10Y 6/2 mudstone breccia pyrite lam cherty mudstone 5Y 5/2 Rubble interval - inferred mudstone mudstone breccia w soft sed. dep. & pyrite blebs

P →

Pore 7
S-1

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~ Box 2

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Sample Number	Described by: <u>Sternhauft</u>		Bed Number	Unit Name - <u>Box 2</u>	Features				County/State <u>Butler</u> Section <u>21</u> T. <u>26S</u> R. <u>5E</u> Remarks:
	Date: <u>7/29/1997</u>				m	w	p	s	
	ft	10 cm							
24	21	Cont. next Page							
P →	22								Shaly limestone w/ chert 10' 8/2
24	23								limestone w/ chert 10' 8/2
24	24								Some chert has ooids 10' 8/2
24	25								Same lith. Rubble only
24	26								"Chalky" mudstone/limestone w/ chert 10' 8/2
24	27								

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Sample Number	Described by: <u>Steinhall</u>		Bed Number	Unit Name <u>Band</u>	Features			County/State <u>B. Her</u> Section <u>21</u> T. <u>26S</u> R. <u>SE</u> Remarks:
	Date: <u>7/29/1997</u>				Mid/ly	w/p	p/br	
	ft.	10 cm						
24	15							
	16							
24	17							
	18							
24	19							
	20							
24	21							

exact placement not certain

↑ decreasing chert content upward
shaly wackestone
1048/2

“chalky” ls. dact
shaly wackestone
1048/2
w/chert

} Rubble only
Some lith as below

~ Box 1

Arbuckle Gray

Sample Number	Described by:		Bed Number	Unit Name B	Features				County/State	Section	T.	R.	Remarks:
	ft.	10 cm			Mudst.	Silt.	Clay.	Gravel					
	Steinhilber								Baker Co	21	T. 26S.	R. 5E	Cored 1957
	Date: 7/29/1997												
	Measured section												
No.	Stratigraphic Description												
24/09													
24/11													Top Cored interval
24/13													? pyrite / limonite filled burrow
24/15													laminate green shale 10 Y 4/2 mudstone 5Y 5/6 pyrite