

**HERB DENES**  
CONSULTING GEOLOGIST  
108 W. 35th ST. PH. 765-625-3880 HAYS, KS 67601

COMPANY **Cherokee Exploration & Development**  
WELL **H. BATH #C-1**  
FIELD **Chase-Silica** STATE **Kansas**

LOCATION **100' FUL # 1300' FEL** COUNTY **Bartlesville** STATE **Kansas**  
SEC **25** TWP **19N** RGE **12W** KB **1778'**  
DF **1771'**

Logging by: **DLG**  
Log Tech: **DLG**  
1. Dual Induction Log  
2. Dual Compensated Resistivity Log  
3. Resistivity Log  
Contractor: **Shawmut Drilling Inc. R-2-6**  
Contracted: **1-16-2012** Completed: **1-24-2012**  
RTD **3438** LTO **3438**  
Surface casing **8 1/2" S&T to 354' of 2000psi Cement 2% Ca/3% Cc**

Production casing **5 1/2" S&T to 3438' to 1550' to 1550' to 1550'**

Drilling Time **2500' - RTD** Samples **2200' - RTD**

DATE	DEPTH	ACTIVITY	DATE	DEPTH	ACTIVITY
1-16	250'	Rm. Stud			
1-17	250'	Log. S&T			
1-18	250'	Log. S&T			
1-19	250'	Log. S&T			
1-20	250'	Log. S&T			
1-21	250'	Log. S&T			
1-22	250'	Log. S&T			
1-23	250'	Log. S&T			
1-24	250'	Log. S&T			

REMARKS: Recommendation To Ann. casing To 5.000' Test + develop LKC based on Assu/T's of DST's.

*Herb Denes*

Formation	Sample	Log	Datum	%	Formation	Sample	Log	Datum	%
Topakn	2621	2618	-839						
Heakven Shale	2883	2880	-1101						
Toronto	2908	2902	-1183						
Doughts Shale	2916	2910	-1131						
Brown Lime	3005	3002	-1223						
LKC	3028	3030	-1251						
BKC	3228	3276	-1497						
A buckle	3304	3302	-1523						
RTD	3438	3438	-1659						
LTD									

\* Structural Position to:

**LEGEND**

Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool. Lime	Chert	Dolomite

SCALE " = 100'

DEPTH	Sample Description	Remarks, drill stem tests, etc.
2500		Mud System - Gel Chemical Andy's Mud + Chemical
10		
20		
30		
40		
50		
60		
70		
80	Lm LT-dark brown Fx/N Foss - Fossiliferous	
90		
2600	Sh LT-med gray soft blocky	
10		
20		
30	Lm Cam-brown-gayish brown Fossiliferous - sh - chalk in part	
40		
50	Lm LT-med brown Fx/N	
60		
70	Lm LT-med brown Fossiliferous w/ chalk in part - ss	
80		
90	Lm LT-med brown Fx/N sh - Fossiliferous	
2700	Lm LT-med brown Fx/N	
10	Sh gray - blk carb	
20		
30	Lm LT-brown-gayish brown Fx/N	
40	Sh gray, green blocky	
50	Lm LT-med brown Fossiliferous-gayish	
60		
70	Lm LT-med brown Fx/N	
80		
90	Sh gray - blk carb	
2800	Lm LT-med brown Fx/N	
10	Lm LT-brown Fossiliferous Fossiliferous - trace oil stain	
20		
30	Lm LT-med brown Fx/N	
40		
50	Lm LT-med brown - gray Fx/N sh - Fossiliferous	
60	Lm Cam - LT-brown Fossiliferous sh - chalk	
70		
80	Sh blk carb	
90	Lm LT-med brown Fx/N	
2900	Sh LT-gray - bluish soft blocky	
10	Lm Cam Fossiliferous Fossiliferous - bluish gray - nodular partly developed	
20	Sh LT-med gray soft, blocky	
30		
40		
50	Sh LT-med gray soft, blocky	
60	SS V. Fossiliferous, partly sorted, gray soft - soft stain, nodular	Big Popping - down 11.5 hrs Pulled DP to collars
70		
80		
90	Sh LT-gray soft	
3000		
10	Lm med-dark brown Foss	
20	Sh LT-gray, med. brown	
30	Lm Cam-LT-brown Fossiliferous	
40	Lm LT-med brown Fossiliferous	
50		
60	Lm Cam-LT-brown-gayish brown Fossiliferous - sh - chalk	
70		
80	Lm LT-dark brown Fossiliferous sh - blk carb - fossiliferous in part	DST#3 Standlle Test 3077' - 3105' 30-30-10-60 Pac: GTS 8" Gauge 1106.83 MCF 60' GCMW - 10%G, 60%O 30%M, 5%W 60' md. oil - 10%G, 10%O 80%M 120' m. cov - 15%G, 15%O 50%M, 20%W CL 30,000 ppm ISIP: 538" FSIP: 538" FP: 378-366, 365-387 1st Open: String BOB 8 sec. Blow back: BOB 2nd Open: String BOB 8 sec Spray of oil, mud 40i Blow back: BOB Gas sample collected for Lab tests
90	Lm LT-med brown Fossiliferous w/ chalk in part	
3100	Lm LT-med brown Fossiliferous sh - blk carb - fossiliferous in part	
10	Lm brown-gayish Fossiliferous	
20	Lm LT-med brown Fossiliferous w/ chalk in part	
30	Lm LT-brown Fossiliferous soft - grayish brown - chalk in part	
40	Lm med brown Fossiliferous w/ sh - chalk	
50	Sh gray - blk pyritic	
60		
70	Lm LT-brown oolitic in part sh - nodular - cherty	
80	Lm LT-med brown-gayish brown Fossiliferous	
90	Lm LT-med brown Fossiliferous	
3200		
10	Lm LT-med brown mostly Fossiliferous Fossiliferous - oolitic - nodular - cherty	
20	Lm grayish brown Fossiliferous - thin	
30	Lm soft - cherty w/ water Fossiliferous - nodular - cherty partly developed partly developed partly developed	
40		
50	Lm Cam-LT-gray Fossiliferous sh - chalk in part	
60	Lm Cam - med brown Fossiliferous w/ chalk	DST#1 3277'-3311' 30-45-20-10 Pac: 5' med w/ spots of oil in mud ISIP: 501 FSIP: 47 FP: 39-55, 45-59 1st Open: Weak Surface blow No blow back 2nd Open: No blow, Flashed Tool No blow back
70	Lm brown-gayish brown	
80	Sh med. brown blocky	
90	Lm classic mix	
3300	Sh med. gray - pyritic silty	
10	Dal LT-brown Fossiliferous LT stain Fossiliferous - nodular - cherty partly developed	DST#2 Standlle Test 3310' - 3335' 10-30-10-30 Pac: 220' soft water CL: 23,000 ppm Pac: 20.45" ISIP: 1166" FSIP: 1166" FP: 410-796, 850-1087 1st Open: String - BOB < 1 min Blow back: weak surface blow 2nd Open: String BOB < 1 min No blow back
20	Dal cam-LT-brown mostly Fossiliferous	
30	Dal cam-LT-brown mostly Fossiliferous Chert - nodular - cherty	
40	Dal cam-LT-brown Fossiliferous nodular - cherty	
50	Dal cam-LT-brown Fossiliferous nodular - cherty	
60	Dal cam-LT-brown Fossiliferous nodular - cherty	
70	Dal LT-brown mostly Fossiliferous soft - nodular - cherty	
80	Dal LT-brown Fossiliferous - soft	
90	Dal LT-brown Fossiliferous - soft	
3400	Dal LT-brown Fossiliferous	
10		
20	Dal LT-brown Fossiliferous soft - nodular - cherty	
30		
40	Dal LT-brown Fossiliferous	
50		

LOG 7703