Marc A. Downing

Consulting Petroleum Geologist

Geologic Report

Drilling Time and Sample Log

Operator	**H&C Oil Operating, Inc.**		
Lease	**Kern**	No.	**3**
API #	**15-163-24259-0000**		
Field	**Kern**		
Location	**596' FSL & 1186' FWL**		
Sec.	**28**	Twp.	**9s**
Rge.	**20**		
County	**Rooks**	State	**Kansas**

Elevation

KB	2305
DF	2303
GL	2298

Casing Record

Surface
8 5/8" @ 262'
Production
5 1/2" @ 3953'

Electrical Surveys

CNL/CDL, DIL, MEL

Formation	Sample tops	Log Tops	Datum	Struct Comp
Top Anhydrite	NA	1796	+509	+8
Base Anhydrite	NA	1833	+472	+2
Topeka	3333	3331	-1026	+2
Heebner	3540	3538	-1233	+1
Toronto	3562	3559	-1254	+2
LKC	3578	3576	-1271	+2
BKC	3805	3800	-1495	+3
Arbuckle	3870	3866	-1561	+3
Total Depth	3955	3953	-1648	

Reference Well For Structural Comparison	H&C Oil Operating, Inc.	
Kern A-1	490' FSL & 1080' FWL	Sec. 26-8s-21w

Drilling Contractor	**American Eagle, Rig #2**			
Commenced	**9-24-14**	Completed		**10-1-14**
Samples Saved From	**3450**	To		**RTD**
Drilling Time Kept From	**3200**	To		**RTD**
Samples Examined From	**3450**	To		**RTD**
Geological Supervision From	**3200**	To		**RTD**

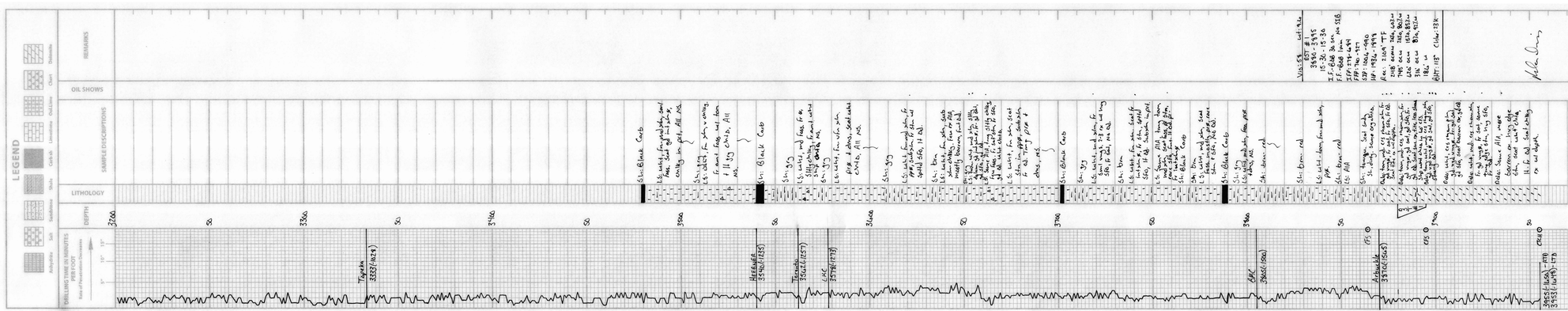
Summary and Recommendations

Due to structural position, DST recovery, and log evaluation, it was decided to set 5 1/2" production casing for completion.

Perforate:

Arbuckle: 3892-3895 (First)
3879-3880 (Covered in DST #1)

LKC C: 3616-3619 (Before Abandonment)

Respectfully Submitted,

Marc A. Downing