

Max R. Lowery

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

Ritchie Exploration, Inc.

COMPANY: Ritchie Exploration, Inc.
 LEASE: Grail #1
 FIELD: Bin South SW
 LOCATION: N/2 NE 31 SW
 SEC: 32 T14S R9E
 COUNTY: Trego STATE: KS
 CONTRACTOR: WWR Rig 12
 SPUID: 9-11-2012
 RTD: 4:39
 MUD UP: 2932


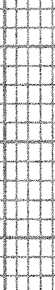







ELEVATIONS
 KB 2426

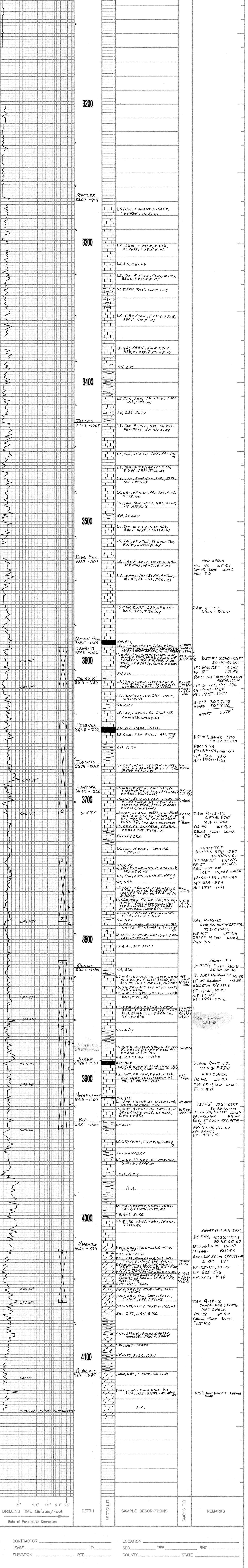
EL ELEVATIONS
 DF 2418
 CL 2418
 MEASUREMENTS ARE ALL FROM KB
 CASTING SURFACE 238 @ 230'
 PRODUCTION EL ELEVATIONAL SURVEYS R/S

FORMATION		FORMATION TOPS AND STRUCTURAL POSITION		FORMATION TOPS AND STRUCTURAL POSITION	
DEPTH	FORMATION	DEPTH	FORMATION	DEPTH	FORMATION
1867	Anhydrite	1867	Anhydrite	1867	Anhydrite
1908	Base Anhydrite	1908	Base Anhydrite	1908	Base Anhydrite
1908	Anhydrite	1908	Anhydrite	1908	Anhydrite
3247	Stotler	3247	Stotler	3247	Stotler
3249	Topeka	3249	Topeka	3249	Topeka
3527	King Hill	3527	King Hill	3527	King Hill
3527	Queen Hill	3527	Queen Hill	3527	Queen Hill
3597	Oread A	3597	Oread A	3597	Oread A
3597	Oread B	3597	Oread B	3597	Oread B
3614	Heeber	3614	Heeber	3614	Heeber
3648	Toronto	3648	Toronto	3648	Toronto
3692	Lansing	3692	Lansing	3692	Lansing
3740	Dev 34	3740	Dev 34	3740	Dev 34
3820	Muncie	3820	Muncie	3820	Muncie
3887	Stark	3887	Stark	3887	Stark
3913	Hushpuckney	3913	Hushpuckney	3913	Hushpuckney
3931	Bic	3931	Bic	3931	Bic
4020	Marmaton	4020	Marmaton	4020	Marmaton
4111	Arkuckle	4111	Arkuckle	4111	Arkuckle

REMARKS

LEGEND

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



CONTRACTOR _____ LOCATION _____

LEASE _____ IP _____ SEC _____ TWP _____ RNG _____

ELEVATION _____ RTD _____ COUNTY _____ STATE _____