

GEOLOGICAL REPORT

Larry A. Nicholson

NAD 83
39.52162975
-100.1467365

COMPANY & WELL Cobalt Energy, Caroline "A" #1-19

LOCATION 570 FNL 743 FEL
SEC 19 TWP 6S RGE 25W
COUNTY Graham STATE Ks

COMPANY Cobalt Energy, LLC
API # 15-065-24123 FIELD _____
LEASE Caroline WELL # "A" #1-19
LOCATION _____
SURVEY 570 FNL 743 FEL
SECTION 19 TWP 6S RGE 25W
COUNTY Graham STATE Kansas

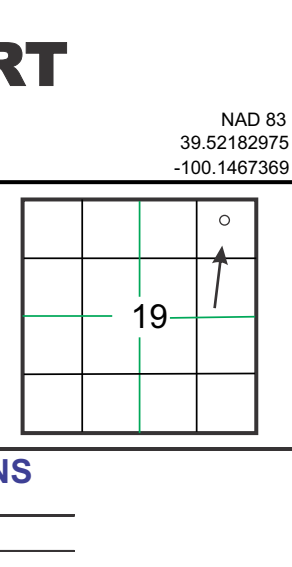
CONTRACTOR Murfin Drilling Company, Inc. Rig # Z
SPUD 12:30 pm 12-27-2016 COMP _____
RTD 3:970 2:24 pm 01-02-16 LTD 3,970
MUD UP AT 3137 displace 700 bbl
MUD TYPE Chemical MudCo

SAMPLES SAVED FROM 3400 TO RTD
DRILLING TIME FROM 3400 TO RTD
SAMPLES EXAMINED FROM 3400 TO RTD
GEOLOGICAL SUPERVISION FROM 3400 TO RTD
WELLSITE GEOLOGIST LARRY A. NICHOLSON

ELECTRICAL SURVEYS Pioneer, Den, Neu, Dual, Micro

ELEVATIONS
K.B. 2617
D.F. _____
G.L. 2612
All measurements from K.B. 2617

CASING RECORD
Conductor _____ of _____ w/ _____ sx
Surface 336 of 8.5/8 23# w/ 225 sx
Production _____ of _____ w/ _____ sx



FORMATION TOPS & STRUCTURAL POSITION

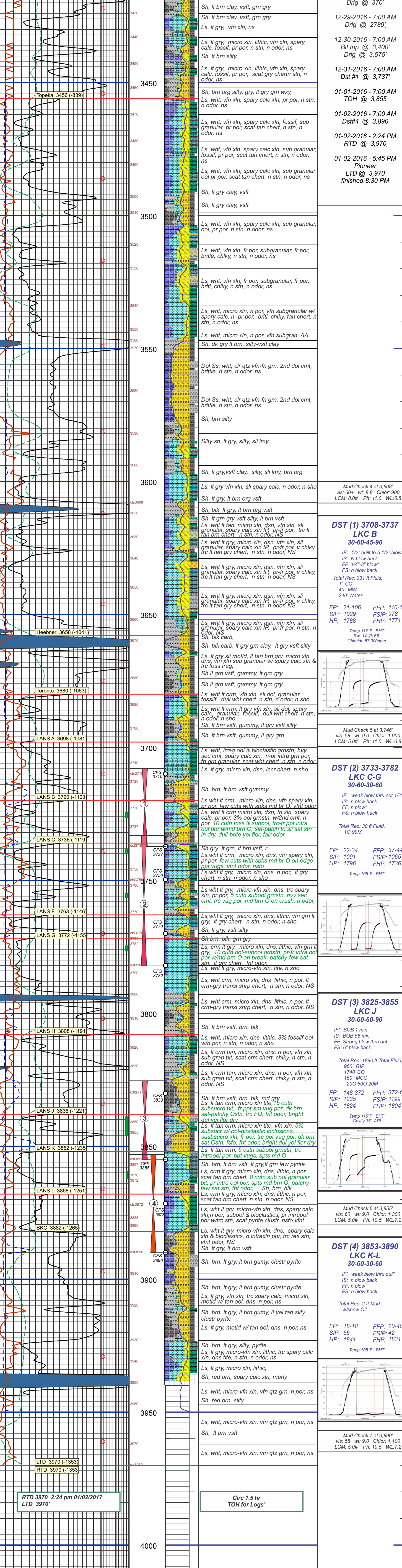
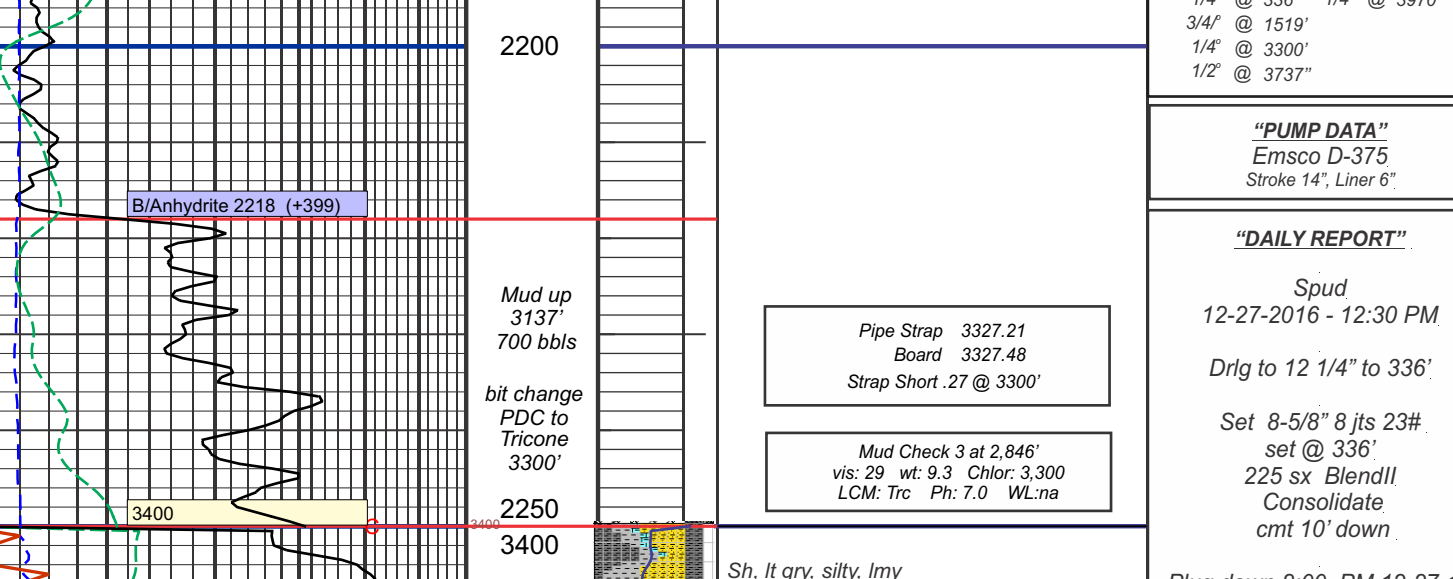
FORMATION	SAMPLE TOPS	SUBSEA DATUM	ELEC LOG TOPS	SUBSEA DATUM	REFERENCE WELL	
					A	B
Anhydrite			2186	+431		
B/Anhydrite			2218	+399		
Topeka			3456	-839		
Heebner			3658	-1041		
LANS A			3698	-1081		
LANS G			3772	-1155		
LANS H			3808	-1191		
LANS J			3838	-1221		
LANS K			3852	-1235		
LANS L			3868	-1251		
BKC			3882	-1265		
RTD			3970	-1353		
LTD			3970	-1353		

REFERENCE WELLS A: _____
B: _____

REMARKS & RECOMMENDATIONS:
Based on sample shows, dst recovery & pressures, 5 1/2 csg was run

LAN 7/92, Modified 5/05, 11/11, 4/12 Hanover, KS 66945 1inch = 25.4mm 8.5 x 9.75 216 mm x 2460 mm

LEGEND



RTD 3970 2:24 pm 01/02/2017
LTD 3970

Circ 1.5 hr
TOH for Logs

COMPANY Cobalt Energy, LLC
LEASE Caroline "A" #1-19
LOCATION 570 FNL 743 FEL SEC. 19 TWP 6S RGE 25W
COUNTY Graham STATE Ks

ELEVATIONS
K.B. 2617
D.F. _____
G.L. 2612
All measurements from K.B. 2617