

# Cynosure Energy, LLC

## 1401 17th Street, Suite 850

### Denver, CO 80202

## Leiker # 3-25-15-20

### 1235' FSL & 1160' FWL

### Sec. 25-T15S-R20W

### Ellis County, Kansas

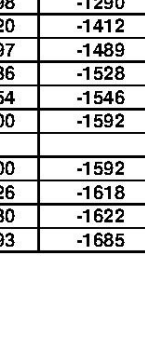
### KB = 2149'

Scale 1:240 Imperial

Well Name:	Leiker # 3-25-15-20
Surface Location:	1235' FSL, 1160' FWL, Sec 25-T15S-R20W
Bottom Location:	700' FSL, 330' FWL
API:	15-051-26869
License Number:	1349692
Spud Date:	4/10/2017
Region:	Ellis County
Drilling Completed:	4/17/2017
Surface Coordinates:	
Bottom Hole Coordinates:	
Ground Elevation:	2141.00ft
K.B. Elevation:	2149.00ft
Logged Interval:	2900.00ft To: 3865.00ft
Total Depth:	3865.00ft
Formation:	Lansing/KC
Drilling Fluid Type:	Chemical/Fresh Water Gel

Company:	Cynosure Energy, LLC	OPERATOR	
Address:	1235 17th Street, Suite 410 Denver, CO 80202	Address:	920 12th Street Golden, CO 80401
Contact Geologist:	Gene Davis	Contact Geologist:	Gene Davis
Contact Phone Nbr:	720-272-9620 / 720-476-3678	Contact Phone Nbr:	720-476-3678
Well Name:	Leiker # 3-25-15-20	Well Name:	Leiker # 3-25-15-20
Location:	1235' FSL, 1160' FWL, Sec 25-T15S-R20W	Location:	1235' FSL, 1160' FWL, Sec 25-T15S-R20W
Pool:	Kansas	Pool:	Kansas
State:	Kansas	State:	Kansas
Field:	Post Rock South	Field:	Post Rock South
County:	USA	County:	USA

### LOGGED BY



Company:	Charlie Sturdavant Consulting
Address:	920 12th Street Golden, CO 80401
Phone Nbr:	303-907-2295 / 303-984-9481
Logged By:	Geologist Name: Charlie Sturdavant

### NOTES

The Cynosure Energy Leiker # 3-25-15-20 well was drilled to an RTD of 3865' and an LTD of 3863', bottoming in the Pre-Cambrian Granite. The geologist was on location, examining samples at 2900'. Sample shows of oil were noted in the Lansing A, C, D, E, F, H, I, J, and K, and in the Pennsylvanian Conglomerate and Sandstone.

Two DST's were conducted in the Lansing, with encouraging results, free oil being recovered in each tests. All Lansing/Kansas City zones, except for the G and L zones, were covered by the DST's.

Based on the sample shows, DST results, and log analysis, it was determined by all parties involved that the well should be further tested through production casing.

The samples were saved and will be available for review at the Kansas Geological Survey well sample library, located in Wichita, Kansas.

Respectfully submitted,  
Charlie Sturdavant  
Consulting Geologist

### Well Comparison Sheet

## CHARLIE STURDAVANT CONSULTING

### WELL COMPARISON SHEET

FORMATION	2141' KB	2108' KB	2108' KB	2131' KB
Formation	Sample	Log	Sub-Sea	Log
Anhydrite Top	1375	1375	1375	1375
Bottom Anhydrite	1415	1415	1415	1415
Tarkio	3004	-855	3000	-851
Topkio	3124	-975	3124	-975
King Hill	3250	-1101	3250	-1101
Queen Hill	3312	-1163	3308	-1163
Hedberg	3405	-1256	3386	-1247
Toronto	3422	-1273	3428	-1279
Lansing	3440	-1291	3449	-1297
Munsie Creek	3476	-1327	3568	-1419
Shale	3546	-1397	3541	-1402
Stark	3656	-1507	3641	-1500
Rees-KC	3696	-1547	3669	-1539
Marmaton	3720	-1571	3727	-1578
Pratt	3766	-1617	3766	-1617
Cherokee Shale				
Compl. Sand	3790	-1641	3790	-1641
Compl. Sand	3804	-1655	3804	-1655
Compl. Sand	3854	-1705	3854	-1705
Total Depth	3865	-1716	3863	-1702

### Daily Drilling Report

## CHARLIE STURDAVANT CONSULTING

### DAILY DRILLING REPORT

Company:	Charlie Sturdavant Consulting	Location:	Leiker #3-25-15-20
Operator:	Cynosure Energy, LLC	Well:	1235' FSL & 1160' FWL
Contact Geologist:	Gene Davis	Sec:	25-T15S-R20W
Contact Phone Nbr:	720-476-3678	County:	Ellis County, Kansas
Well Name:	Leiker # 3-25-15-20		

Drilling Contractor:	Duke Drilling Co	Tool Pusher:	Shane Downs
Geologist:	Charlie Sturdavant	Phone Nbr:	303-907-2295
Office:	(303) 384-9481	Cell:	303-984-9481

DATE	TIME	AM	DEPTH	REMARKS
4/16/2017	06h			Move in, rig up, spud @ 2130 hrs.
4/16/2017	215 ft.			WOC: set 5 lbs of 23# new 8-5/8" surface esp. Cement w/ 170 cc of 80-200 po. Plug down @ 0315 hrs.
4/12/2017	1415 ft.			Drilling ahead. Drilled plug out @ 1200 hrs.
4/12/2017	2563 ft.			Drilling ahead. Geologist on loc @ 2150 hrs, 3005'.
4/14/2017	3245 ft.			Drilling ahead.
4/15/2017	3530 ft.			Conducting DST # 1: 3450'-3530'; Rec: 960' GIP, 30' OACGM (6% gas, 15% oil, 80% mud), 62' MGO (20% gas, 60% oil, 20% mud), 248' MGO (20% gas, 75% oil, 10% mud) SIP: 1087-1038'. Commence drilling @ 1301 hrs.
4/16/2017	3650 ft.			Trapping in hole w/ 021' @ 3:30P-3670; Rec: 30' OACGM (5% gas, 5% oil, 90% mud), 62' MGO (20% gas, 40% oil, 30% mud), 62' MGO (30% gas, 55% oil, 15% mud), 1902' Clean Oil. CFS @ 3650. DST # 2: 3670'-3760'; Rec: 30' OACGM (5% gas, 15% oil, 80% mud), 62' MGO (20% gas, 60% oil, 20% mud), 248' MGO (20% gas, 70% oil, 10% mud), SIP: 1087-1038'. Drilling ahead. RTD: 3865' @ 0827 hrs. Logging operations by Pioneer Energy Services. Completed logging operations @ 1710 hrs. Geologist on location @ 1600 hrs.
4/17/2017	3853 ft.			

### SURFACE CO-ORDINATES

Well Type:	Vertical
Longitude:	-99.500860
Latitude:	38.714521
N/S Co-ord:	
E/W Co-ord:	

### CONTRACTOR

Contractor:	Duke Drilling Co
Rig #:	8
Drillery:	4/04/2017
Spud Date:	4/10/2017
TD Date:	4/17/2017
Rig Release:	

### ELEVATIONS

K.B. Elevation:	2149.00ft	Ground Elevation:	2141.00ft
K.B. to Ground:	8.00ft		

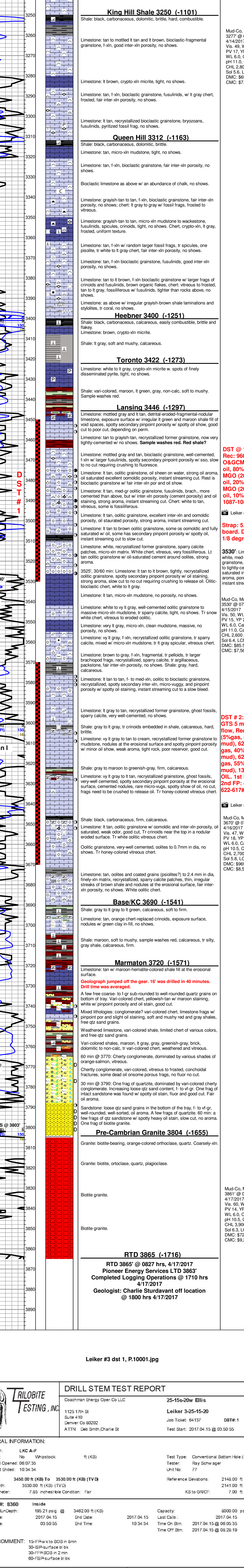
Congl	shale, gy	shale, py
Chert	shale, gm	Carbon Sh
Lmsl fw7-	shaly	shale, red
Lmsl fw7		Igneadic

### ACCESSORIES

MINERAL	FOSSIL	STRAT. SED. STRUCTS	TEXTURE
Argillaceous	Bioclastic or Fragmental	Convolute laminations	Sandstone
Calcareous	Brachiopod	Stylolites	Siltstone
Carbonaceous	Crinoid	Stylolites, discontinuity	Shale
Chert White	Fossiliferous		green shale
Chert, dark	Graptolite		red shale
Varicolored chert	Oolites		
Dolomite	Domestic		
Faded members of dol or mica	Peloids		
Nodules	Spicules		
Pyrite			
Silty			

### OTHER SYMBOLS

MISC	DST
Daily Report	DST Int
Digital Photo	DST alt
Document	
Folder	
Link	
Vertical Log File	
Horizontal Log File	
Core Log File	
Drill Cuttings Rpt	



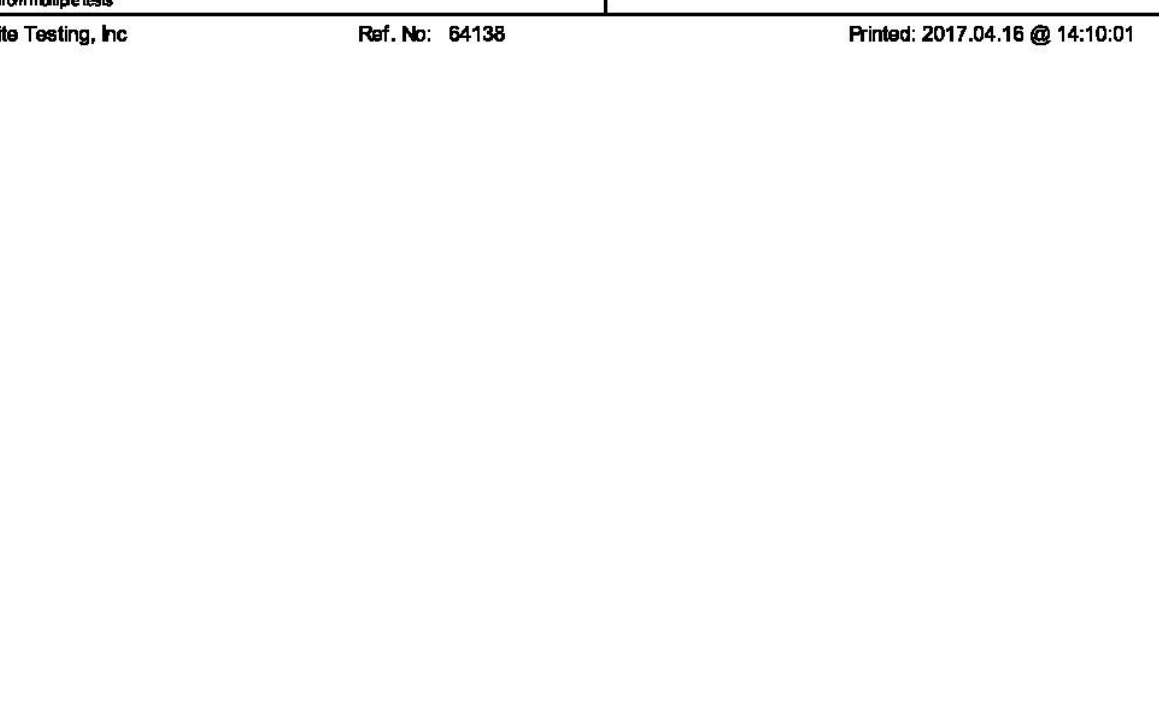
Leiker #3 dst 1, P10001.jpg
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DRILL STEM TEST REPORT	Coachman Energy Oper.Co LLC	25-15e-20w Ellis
1125 17th St	Suite 410	Leiker #3-25-15-20
Denver, CO 80202		Job Ticket: 64138
ATTN: Deb Smith, Charlie St		Test Start: 2017.04.16 @ 02:30:50

GENERAL INFORMATION:			
Formation:	LKD G-K	ft (KB)	Test Type: Conventional Bottom Hole (Inst)
Deviated:	No	Whipstock:	Unit No: 77
Time Tool Opened:	06:37:35		Reference Deviations:
Time Test Ended:	10:34:34		2148.00 ft (KB)
Interval:	3450.00 ft (KB) To 3530.00 ft (KB) (TVIS)		2141.00 ft (CF)
Total Depth:	3530.00 ft (KB) (TVIS)		7.00 ft
Log Diameter:	7.86 inches-Hole Condition: Fair		

Serial #: 8360	Inside	Capacity:	8000.00 psi/g
Press @ Run Depth:	540.86 psi/g @ 3570.00 ft (KB)	Last Callb:	2017.04.16
Start Date:	2017.04.16	End Date:	2017.04.16
Start Time:	02:35:14	End Time:	10:00:23
		Time On Brrt:	2017.04.16 @ 04:24:24
		Time Off Brrt:	2017.04.16 @ 06:50:54

TEST COMMENT: 15-FP-90B in 46 sec  
30-SP-Surface to bit  
15-FP-90B Thru-out  
60-FP-90B GTS in 5min



Recovery	Gas Rates
Length (ft)	Discovery
0.00	0.00
243.00	MGO 20%G10%W90%
62.00	MGO 20%G20%W80%
0.00	MGO 30%G30%W70%
30.00	OACGM 5%G95%W0%
0.00	9607

Flow Rate (gpm)	Pressure (psi)	Gas Rate (Mscf/D)
0	171.13	0.00
2	273.68	18.26
18	622.67	0.87
48	640.86	0.87
123	617.31	0.87
129	1673.46	0.02

Leiker #3 dst 2, P10001.jpg
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DRILL STEM TEST REPORT	Coachman Energy Oper.Co LLC	25-15e-20w Ellis
1125 17th St	Suite 410	Leiker #3-25-15-20
Denver, CO 80202		Job Ticket: 64138
ATTN: Deb Smith, Charlie St		Test Start: 2017.04.16 @ 02:35:14

GENERAL INFORMATION:			
Formation:	LKD G-K	ft (KB)	Test Type: Conventional Bottom Hole (Inst)
Deviated:	No	Whipstock:	Unit No: 77
Time Tool Opened:	06:37:35		Reference Deviations:
Time Test Ended:	10:00:23		2148.00 ft (KB)
Interval:	3570.00 ft (KB) To 3670.00 ft (KB) (TVIS)		2141.00 ft (CF)
Total Depth:	3670.00 ft (KB) (TVIS)		7.00 ft
Log Diameter:	7.86 inches-Hole Condition: Fair		

Serial #: 8360	Inside	Capacity:	8000.00 psi/g
Press @ Run Depth:	540.86 psi/g @ 3570.00 ft (KB)	Last Callb:	2017.04.16
Start Date:	2017.04.16	End Date:	2017.04.16
Start Time:	02:35:14	End Time:	10:00:23
		Time On Brrt:	2017.04.16 @ 04:24:24
		Time Off Brrt:	2017.04.16 @ 06:50:54

TEST COMMENT: 15-FP-90B in 46 sec  
30-SP-Surface to bit  
15-FP-90B Thru-out  
60-FP-90B GTS in 5min



Recovery	Gas Rates
Length (ft)	Discovery
0.00	0.00
1302.00	CO
62.00	MCO 30%G15%W85%
62.00	MCO 30%G30%W70%
30.00	OACGM 5%G95%W0%
0.00	9607

Flow Rate (gpm)	Pressure (psi)	Gas Rate (Mscf/D)
0	171.13	0.00
2	273.68	18.26
18	622.67	0.87
48	640.86	0.87
123	617.31	0.87
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