KOLAR Document ID: 1356851

Confiden	tiality Re	quested:
Yes	No	

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION Form ACO-1 January 2018 Form must be Typed Form must be Signed All blanks must be Filled

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #	API No.:		
Name:	Spot Description:		
Address 1:			
Address 2:	Feet from Dorth / South Line of Section		
City: State: Zip:+	Feet from East / West Line of Section		
Contact Person:	Footages Calculated from Nearest Outside Section Corner:		
Phone: ()			
CONTRACTOR: License #	GPS Location: Lat:		
Name:	(e.g. xx.xxxxx) (e.gxxx.xxxxx)		
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84		
Purchaser:	County:		
Decignate Type of Completion:	Lease Name: Well #:		
	Field Name:		
	Producing Formation:		
	Elevation: Ground: Kelly Bushing:		
	Total Vertical Depth: Plug Back Total Depth:		
	Amount of Surface Pipe Set and Cemented at:		
CM (Coal Bed Methane)	Multiple Stage Comparing Coller Lised?		
If Workover/Re-entry: Old Well Into as follows:	If yes, show depth set: Feet		
Operator:	If Alternate II completion, cement circulated from:		
Well Name:	feet depth to:w/sx cmt.		
Original Comp. Date: Original Total Depth:			
Deepening Re-perf. Conv. to EOR Conv. to SWD	Drilling Fluid Management Plan		
Plug Back Liner Conv. to GSW Conv. to Producer	(Data must be collected from the Reserve Pit)		
	Chloride content: ppm Fluid volume: bbls		
Commingled Permit #:	Dewatering method used:		
SWD Permit #:	Leastion of fluid diaposal if baulad affaita:		
EOB Permit #:	Location of huid disposant natied offsite.		
GSW Permit #:	Operator Name:		
	Lease Name: License #:		
Soud Date or Date Reached TD Completion Date or	Quarter Sec TwpS. R East _ West		
Recompletion Date Recompletion Date	County: Permit #:		

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY		
Confidentiality Requested		
Date:		
Confidential Release Date:		
Wireline Log Received Drill Stem Tests Received		
Geologist Report / Mud Logs Received		
UIC Distribution		
ALT I II III Approved by: Date:		

KOLAR Document ID: 1356851

Operator Nam	ne:			Lease Name:	. Well #:
Sec	Twp	S. R	East West	County:	

Page Two

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken (Attach Additional Sh	eets)	Y	es 🗌 No			og Formatio	n (Top), Depth	and Datum	Sample
Samples Sent to Geolog	nical Survey		és 🗌 No	Ν	lame	e		Тор	Datum
Cores Taken Electric Log Run Geologist Report / Mud List All E. Logs Run:	Logs		ies No ies No ies No						
		Repo	CASING I	RECORD] Ne	w Used rmediate, productio	on, etc.		
Purpose of String	Size Hole Drilled	Siz Se	ze Casing tt (In O.D.)	Weight Lbs. / Ft.		Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
			ADDITIONAL	CEMENTING /	SQU	EEZE RECORD			
Purpose: Perforate	Depth Top Bottom	Туре	e of Cement	# Sacks Used	k		Type and	Percent Additives	
Protect Casing Plug Back TD Plug Off Zone									
 Did you perform a hydra Does the volume of the is Was the hydraulic fractu 	ulic fracturing treatme total base fluid of the h ring treatment informa	nt on this w hydraulic fra tion submit	vell? acturing treatment tted to the chemica	exceed 350,000 al disclosure regis	gallo stry?	Yes Yes Yes Yes	 □ No (If No, s □ No (If No, s □ No (If No, f 	kip questions 2 ar kip question 3) ill out Page Three	nd 3) of the ACO-1)
Injection:			Flowing	Pumping		Gas Lift 🗌 O	ther <i>(Explain)</i>		
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Wate	er Bb	ls.	Gas-Oil Ratio	Gravity
DISPOSITION	I OF GAS:		M	ETHOD OF COM	IPLE	TION:		PRODUCTIO	ON INTERVAL:
Vented Sold (If vented, Subm	Used on Lease		Open Hole	Perf. D	ually <i>ıbmit</i>	Comp. Com ACO-5) (Subn	mingled	тор	Bottom
Shots Per Perf Foot	oration Perfora Top Botto	ition m	Bridge Plug Type	Bridge Plug Set At		Acid,	Fracture, Shot, C (Amount and Ki	ementing Squeeze	Record
	Size:	Set At:		Packer At:					

Form	ACO1 - Well Completion
Operator	Coachman Energy Operating Company LLC
Well Name	LEIKER 3-25-15-20
Doc ID	1356851

All Electric Logs Run

Density Neutron	
Microsensitivity	
Dual Induction	
Borehole Sonic	
Sector Bond Log	

Form	ACO1 - Well Completion
Operator	Coachman Energy Operating Company LLC
Well Name	LEIKER 3-25-15-20
Doc ID	1356851

Tops

Name	Тор	Datum
Top Anhydrite	1376	+773
Base Anhydrite	1418	+731
Tarklo	3000	-851
Topeka	3124	-975
King Hill	3250	-1101
Queen Hill	3308	-1159
Heebner	3396	-1247
Toronto	3428	-1279
Lansing	3442	-1293
Muncie Creek	3568	-1419
Stark	3641	-1492
Base KC	3688	-1539
Marmaton	3727	-1578
Pawnee	3766	-1617
Congl. Sand	3790	-1641
Pre-Cambrian	3804	-1655

Form	ACO1 - Well Completion
Operator	Coachman Energy Operating Company LLC
Well Name	LEIKER 3-25-15-20
Doc ID	1356851

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3468 - 3480	1000 gal 15% MCA	
4	3484 - 3488		
4	3510 - 3516	2000 gal 15% MCA	
4	3518 - 3523		

Form	ACO1 - Well Completion
Operator	Coachman Energy Operating Company LLC
Well Name	LEIKER 3-25-15-20
Doc ID	1356851

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	215	80/20 Poz	170	3% cc/2% gel
Production	7.875	5.5	15.5	3858	Common	200	10% salt + 5% gilsonite

	DRILL STEM TES	TREP	ORT				
I HILUDITL	Coachman Energy Oper.Co LLC		25-15s-2	20w Ellis			
ESTING , INC	1125 17th St Suite 410		Leiker	3-25-15-20			
	Denver Co 80202		Job Ticke	t: 64137	DST#: 1		
	ATTN: Deb Smith,Charlie St		Test Star	:: 2017.04.15@) 03:50:55		
GENERAL INFORMATION:							
Formation:LKC A-FDeviated:NoWhipstock:Time Tool Opened:06:07:35Time Test Ended:10:34:34	ft (KB)		Test Type: Conventional Bottom Hole (Initial) Tester: Ray Schwager Unit No: 77				
Interval: 3450.00 ft (KB) To 3	530.00 ft (KB) (TVD)		Referenc	e Elevations:	2148.00 ft (KB)		
Hole Diameter: 7.85 inches Ho	vD) e Condition: Fair			KB to GR/CF:	2141.00 ft (CF) 7.00 ft		
Serial #: 8360 Inside Press@RunDepth: 195.21 psig	@ 3462.00 ft (KB)		Capacity:		8000.00 psig		
Start Date: 2017.04.15	End Date:	2017.04.15	Last Calib.:		2017.04.15		
Start Time: 03:50:55	End Time:	10:34:34	Time On Btm: Time Off Btm:	2017.04.15	@ 06:05:35 @ 08:28:19		
TEST COMMENT: 15-IFP-w k to BOB in 8min 30-ISIP-surface bl bk 30-FFP-BOB in 2 min 60-FSIP-surface bl bk							
8300 Pressure		Time	Pressure Ter	np Annotatio	on		
1730	- 110	(Min.)	(psig) (deg	jF)	4-4-		
1500		2	1701.95 10 ² 56.64 103	1.01 Initial Hydr 3.99 Open To F	o-static low (1)		
		18	142.49 105	5.18 Shut-In(1)	()		
		47	1087.94 107	7.14 End Shut-I	n(1) iow (2)		
		78	195.21 109	9.35 Shut-In(2)	10W (2)		
		140	1083.07 111	I.02 End Shut-I	n(2)		
500 270 0 270 0 270 0 270 0 270 0 0 0 0 0	- 70 - 70 - 66 - 00 - 944	143	1665.44 111	I.42 Final Hydr	o-static		
Recovery				Gas Rates			
Length (ft) Description	Volume (bbl)		CI	noke (inches) Pressu	ure (psig) Gas Rate (Mcf/d)		
62.00 MGO 20%G20%M/0%C) 0.87						
30.00 O&GCM 5% G15% O80%	0.42						
0.00 960' GIP	0.00						

(On-		DRILL STEM TES	TREP	ORT					
		Coachman Energy Oper.Co LLC		25-15s-20	w Ellis				
	ESTING , INC.	1125 17th St		Leiker 3-	25-15-20				
		Suite 410 Denver Co 80202		Job Ticket:	64137 DST#:1				
		ATTN: Deb Smith, Charlie St		Test Start:	2017.04.15 @ 03:50:55				
GENERAL	INFORMATION:								
Formation: Deviated: Time Tool Ope Time Test End	LKC A-F No Whipstock: ned: 06:07:35 ed: 10:34:34	ft (KB)		Test Type: Tester: Unit No:	Conventional Bottom Hole (Initial) Ray Schwager 77				
Interval:	3450.00 ft (KB) To 35	530.00 ft (KB) (TVD)		Reference	Elevations: 2148.00 ft (KB)				
Total Depth: Hole Diameter:	3530.00 ft (KB) (1) 7.85 inchesHole	7D) e Condition: Fair		K	2141.00 ft (CF) B to GR/CF: 7.00 ft				
Serial #: 6 Press@RunDe Start Date: Start Time:	751 Outside epth: psig 2017.04.15 03:50:42	8000.00 psig 2017.04.15							
TEST COM	TEST COMMENT: 15-IFP-w k to BOB in 8min 30-ISIP-surface bl bk 30-FFP-BOB in 2 min 60-FSIP-surface bl bk								
	Pressure vs. T	Time		PRESS	JRE SUMMARY				
1753 1753 1250	OM Tre (fuc)	Grand and a second seco	Time (Min.)	Pressure Temp (psig) (deg F	Annotation				
	Recovery			G	as Rates				
Length (ft)	Description	Volume (bbl)		Chok	e (inches) Pressure (psig) Gas Rate (Mcf/d)				
248.00	MGO 20%G10%M70%O	3.48							
62.00	MGO 20% G20% M60% O	0.87							
30.00	U&GCM 5%G15%O80%	0.42							
0.00	1900 GIP	0.00							
	•	• •	1						

		DRI	LL STEM TEST REPORT	-		FLUID SUMMARY
家地		Coach	man Energy Oper.Co LLC	25-15s-20v	v Ellis	
	ESTING , IN	<i>IC</i> . 1125 1	7th St	Leiker 3-2	5-15-20	
		Suite 4	10 r Co 80202	Job Ticket: 6	4137	DST#: 1
		ATTN:	Deb Smith,Charlie St	Test Start: 2	017.04.15 @ 0	3:50:55
Mud and C	Cushion Informatio	 n				
Mud Type:	Gel Chem		Cushion Type:		Oil API:	40 deg API
Mud Weight:	10.00 lb/gal		Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	54.00 sec/qt		Cushion Volume:	bbl	-	
Water Loss:	6.00 in ³		Gas Cushion Type:			
Resistivity:	ohm.m		Gas Cushion Pressure:	psig		
Salinity:	2800.00 ppm					
Filter Cake:	1.00 inches					
Recovery	Information					
			Recovery Table		-	
	Le	ngth ft	Description	Volume bbl		
		248.00	MGO 20%G10%M70%O	3.479		
		62.00	MGO 20%G20%M60%O	0.870	2	
		30.00	O&GCM 5%G15%O80%	0.421		
		0.00	960' GIP	0.000	<u>)</u>	
	Total Length	340	0.00 ft Total Volume: 4.770 bbl			
	Num Fluid Sa	imples: 0	Num Gas Bombs: 0	Serial #:	:	
	Laboratory N	lame:	Laboratory Location:			
	Recovery Co	omments:				

Printed: 2017.04.15 @ 12:13:36

Ref. No: 64137





Coachman Energy Oper.Co LLC

Leiker 3-25-15-20

Printed: 2017.04.15 @ 12:13:36

Ref. No: 64137

Trilobite Testing, Inc



Serial #: 6751

Outside Coachman Energy Oper.Co LLC

Leiker 3-25-15-20

	DRILL STEM TES	T REP	ORT				
	Coachman Energy Oper.Co LLC		25-	15s-20w	Ellis		
ESTING , INC	1125 17th St		Lei	ker 3-25-	-15-20		
	Suite 410 Denver Co 80202		Job	Ticket: 641	138	DST#: 2	2
	ATTN: Deb Smith, Charlie St		Tes	t Start: 201	17.04.16 @	02:35:14	
GENERAL INFORMATION:	Į						
Formation:LKC G-KDeviated:NoWhipstock:Time Tool Opened:04:44:24Time Test Ended:10:00:23	ft (KB)		Tes Tes Unit	t Type: C ter: R No: 7	conventiona cay Schwaę 7	Il Bottom Hol ger	e (Reset)
Interval: 3570.00 ft (KB) To 3	670.00 ft (KB) (TVD)		Refe	erence Elev	ations:	2148.00	ft (KB)
Total Depth: 3670.00 ft (KB) (1	VD) Is Conditions – Enin					2141.00	ft (CF)
Hole Diameter: 7.85 inches Hole Condition: Fair KB to GR/CF: 7.00 ft						TL	
Serial #: 8360 Inside							
Press@RunDepth: 540.86 psig	@ 3576.00 ft (KB)		Capacity	:		8000.00	psig
Start Date: 2017.04.16	End Date:	2017.04.16	Last Calil Time On	b.: Btm: 20	017 04 16	2017.04.16	
		10.00.25	Time Off	Btm: 20	017.04.16 (017.04.16 (@ 06:50:54	
TEST COMMENT: 15-IFP-BOB in 45 sec 30-ISIP-BOB BL BK in 6min 15-FFP-BOB Thru-out 60-FSIP-BOB GTS in 5min							
Pressure vs.	Time		PF	RESSURI	E SUMM	ARY	
8300 Pressure	8360 Temperature	Time	Pressure	Temp	Annotatio	on	
		(10111.)	(psig) 1713.13	(deg F) 105.57	Initial Hydro	o-static	
	110	2	273.68	105.21	Open To F	low (1)	
	100	18	414.67	115.53	Shut-In(1)		
₽ <u></u>		48	622.67	118.22	End Shut-li	n(1)	
	- 50 E	64	540.86	119.52	Shut-In(2)	1000 (2)	
		123	617.31	119.11	End Shut-li	n(2)	
		129	1673.45	118.02	Final Hydro	o-static	
	¥ 70						
3444 6444 18 Sun Apr 2017 Time (Hours	3441						
Descurre					Detec		
Recovery Length (ft) Description	Volume (bbl)			Gas Choke (inc		re (psig) Ga	es Rate (Mcf/d)
0.00 Gas to Surface							
1302.00 CO	18.26						
62.00 MGO 30%G15%M55%	0.87						
62.00 MGO 30%G30%M40%C	0.87						
30.00 O&GCM 5% G5% O90%	M 0.42						
* Recovery from multiple tests	++						

Trilobite Testing, Inc

an-		DRILL STEM TE	ST REP	ORT					
		Coachman Energy Oper.Co LL	С	25-15s-20	w Ellis				
	ESTING , INC.	1125 17th St		Leiker 3-	25-15-20				
		Suite 410 Denver Co 80202		Job Ticket:	64138 DST#: 2				
		ATTN: Deb Smith, Charlie St		Test Start:	2017.04.16 @ 02:35:14				
GENERAL I	NFORMATION:								
Formation:	LKC G-K								
Deviated: Time Tool Open Time Test Ende	No Whipstock: ned: 04:44:24 d: 10:00:23	ft (KB)		Test Type: Tester: Unit No:	Conventional Bottom Hole (R Ray Schw ager 77	eset)			
Interval:	3570.00 ft (KB) To 36	670.00 ft (KB) (TVD)		Reference	Elevations: 2148.00 ft (I	<b)< td=""></b)<>			
Total Depth:	3670.00 ft (KB) (T	VD) Conditions Foir			2141.00 ft (CF)			
Hole Diameter:	7.85 Incheshole	e Condition: Fair		KI	B to GR/CF: 7.00 ft				
Serial #: 67	751 Outside								
Press@RunDej Start Date	pth: psig 2017 04 16	@ 3576.00 ft (KB) End Date:	2017 04 16	Capacity: Last Calib :	8000.00 psi 2017 04 16	9			
Start Time:	02:35:17	End Time:	10:00:11	Time On Btm:	2017.04.10				
				Time Off Btm:					
TEST COMM	TEST COMMENT: 15-IFP-BOB in 45 sec 30-ISIP-BOB BL BK in 6min 15-FFP-BOB Thru-out 60-FSIP-BOB GTS in 5min								
	Pressure vs. 1	Sime		PRESSI	JRE SUMMARY				
1750 -	6751 Pressure	6751 Tempendure	Time (Min.)	Pressure Temp (psig) (deg F	Annotation				
1500									
1270	/								
3 1000									
			5978EU78						
<u> </u>			<u>a</u>						
		1	8						
500									
2500			8 F)						
			80						
			8 3						
500 200 200 200 304 304 304	Orde Three(stars)		8 7						
500 200 0 200 304 30 San Apr 2017	over Time (tax) Recovery		* 7 7	6	Gas Rates				
200	Print (Recovery Description	944		Cnok	Gas Rates re (inches) Pressure (psig) Gas Rat	e (Mcf/d)			
200	Recovery Description Gas to Surface	Volume (bbl) 0.00		Cnok	Gas Rates re(inches) Pressure(psig) Gas Rat	e (Mcf/d)			
20 20 20 20 20 20 20 20 20 20	Recovery Description Gas to Surface CO	Volume (bbl) 0.00 18.26	• 7 7	G Chok	Sas Rates æ(inches) Pressure (psig) Gas Rat	e (Mcf/d)			
500 200 200 200 200 200 200 200	Recovery Description Gas to Surface CO MGO 30%G15%M55%O	Volume (bbl) 0.00 18.26 0.87		Cnok	Gas Rates re (inches) Pressure (psig) Gas Rat	e (Mcf/d)			
200 200 200 200 200 200 200 200	Recovery Description Gas to Surface CO MGO 30%G15%M55%O MGO 30%G30%M40%O	Volume (bbl) 0.00 18.26 0.87 0.87		G Chok	Gas Rates re (inches) Pressure (psig) Gas Rat	e (Mcf/d)			
200 200 200 200 200 200 200 200	Recovery Description Gas to Surface CO MGO 30%G15%M55%O MGO 30%G30%M40%O O&GCM 5%G5%O90%M	Volume (bbl) 0.00 18.26 0.87 0.87 10.42		Chok	Gas Rates ae (inches) Pressure (psig) Gas Rat	∋ (Mcf/d)			
Eength (ft) 0 1302.00 62.00 30.00 * Recovery from mult	Recovery Description Gas to Surface CO MGO 30%G15%M55%O MGO 30%G30%M40%O O&GCM 5%G5%O90%M	Volume (bbl) 0.00 18.26 0.87 0.87 10.42		G Chok	Sas Rates re (inches) Pressure (psig) Gas Rat	e (Mcf/d)			

Trilobite Testing, Inc

an-		DRI	LL STEM TEST RE	EPORT				ARY
	<u> </u>	Coach	man Energy Oper.Co LLC		25-15s-20w	/ Ellis		
	ESTING , INC	1125 1	7th St		Leiker 3-2	5-15-20		
	_	Suite 4	10		Job Ticket: 64	4138	DST#:2	
			Co 80202 Deb Smith Charlie St		Test Start: 20	017.04.16@0	2:35:14	
uh+dh.								
Mud and C	ushion Information							
Mud Type: G	Gel Chem		Cushion Type:			Oil API:	40 deg A	API
Mud Weight:	9.00 lb/gal		Cushion Length:		ft	Water Salinity:	ppm	
Viscosity:	55.00 sec/qt				bbl			
Water Loss:	6.00 in ^s		Gas Cushion Type:					
Resistivity:	onm.m		Gas Cushion Pressure:		psig			
Salimity. Filter Cake:	1.00 inches							
Bacovoraula	nformation							
Recovery II	mormation		Pacovon, Tabla					
	· · ·					1		
	Leng ft	jth	Description		Volume bbl			
		0.00	Gas to Surface		0.000			
		1302.00	00		18.264			
		62.00	MGO 30%G15%M55%O		0.870			
		62.00	MGO 30%G30%M40%O		0.870			
		30.00	O&GCM 5%G5%O90%M		0.421			
	Total Length:	1456	.00 ft Total Volume:	20.425 bbl				
	Num Fluid Sam	ples: 0	Num Gas Bombs:	0	Serial #:			
	Laboratory Nar	me:	Laboratory Location:					
	Recovery Com	ments:						

Printed: 2017.04.16 @ 14:10:02

Ref. No: 64138





Leiker 3-25-15-20

Printed: 2017.04.16 @ 14:10:02

Ref. No: 64138





Outside Coachman Energy Oper.Co LLC

Leiker 3-25-15-20

			Leik	ker	# 3-2	25-1	15-2	20			
			1235	' FS	L & 1	116	50' F	W	L		
			Sec	. 25	5-T15	5S-F	R20	W			
			Ellis	Co	unty	/, K	ans	as			
				KB	3 = 2	149).				
		Well Name:	Leiker # 3	Scale 1 3-25-15-2	1:240 Impe 20	rial					
	Surl Bot	face Location: tom Location: API:	1235' FS	L, 1160'F 6869	FWL, Sec 2	25-T15S	-R20W				
	LIC	Spud Date: Region: Completed:	1349692 4/10/2017 Ellis Cour 4/17/2017	7 nty 7			Time:	9:45 8:27	5 PM 7 PM		
Bo	Surface ottom Hole Grou	Coordinates: Coordinates: und Elevation:	2141.00ft	t				0.2.			
	K Lo	.B. Elevation: gged Interval: Total Depth: Formation:	2149.00fi 2900.00fi 3865.00fi				To:	386	5.00ft		
	Drilliı	ng Fluid Type:	Chemical	I/Fresh V	Vater Gel						
		Company: Address:	Cynosure 1125 17th Denver, (e Energy, n Street, CO 8020	LLC Suite 410 2						
	Cont Conta	act Geologist: ct Phone Nbr: Well Name:	Gene Da 720-272- Leiker # 3	vis 9620 / 72 3-25-15-2	20-476-367 20	8					
		Location: API: Pool:	1235' FS 15-051-2	L, 1160'F 6869	FWL, Sec 2	25-T15S	-R20W Field:	Pos	t Rock S	outh	
		State:	Kansas	LO	GGED BY		Country:	USA	4		
			<u>Charlin</u>	Star		enen	tinn (
			A Ba t II (, guill		-117 U	ully				
		Company: Address:	Charlie S 920 12th Golden. (turdavar Street CO 8040	nt Consultii 1	ng					
		Phone Nbr: Logged By:	303-907-1 Geologist	22953 t	303-384-94	81	Name:	Cha	arlie Sture	davant	
The Cyn	osure Leik	er # 3-25-15-2	20 well was c	lrilled to	NOTES an RTD of	3865' a	nd an LTI	 D of 38		oming in t	the Pre-
Cambria Lansing	n Granite. A, C, D, E	I he geologist , F, H, I, J, an	t was on loca d K, and in the	ation, exa he Penns	amining sa sylvanian (uraging	mples a Conglom	t 2900'. S ierate and	ample I Sands	shows of stone.	oil were	noted in the
Lansing/	I's were co Kansas Ci	ty zones, exce	e Lansing, w ept for the G	and L zo	ones were	covered	e oil havii by the D	ng beel ST's.	n recover	red in ead	ch tests. All
be furthe	r the sampler tested th	nrough produc	ton casing.	a log and	alysis, it wa	as deteri	Coologia			ved that t	rary loosts
Wichita,	Kansas.	saved and wi	ii de avaliadi	e for rev	lew at the	kansas	Geologica	ai Surv	ey well s	ampie lib	rary, locate
Charlie S Consultir	Sturdavant Geolog	itted, t ist									
	Cynos 2149	DRILLING WELL ure Energy Leiker 1235' FSL & 1160' Sec. 25 T15S R20 ' Ellis Co, KS KB	#3-25-15-20 FWL W	Cyno: 2108	COMPARISO sure Energy L 700' FNL & Sec. 25-T15S KB	N WELL eiker #1-2 330' FW -R20W Struc Relati	5-15-20 stural onship	Cynos 2131	COMPAR sure Energy 740' FSL Sec. 25 T KB	ISON WELL Leiker #2-2 & 2506' FWI 15S R20 W Struc Relatio	5-15-20 L ctural onship
Anhydrite Top	3ample 1375 1419	Sub-sea Lo 774 137 730 141 -855 300 -975 211	sub-Sea 76 773 18 731 00 -851 24 -975	Log 1328 1372 2956 3070	300-Sea 780 736 -848 -971	-6 -6 -7 -7	Log -7 -5 -3 -4	Log 1363 1403 2976 3100	5ub-Sea 768 728 -845 -969	5ample 6 2 -10 -6	Log 5 3 -6 -6
Bottom Anhyd. Tarkio Topeka	<u>3004</u> <u>31</u> 24	-1101 325	50 -1101 08 -1159 96 -1247	3207 3269 3355	-1099 -1161	-2	-2	3226	-1095 -1155 -1244	-6 -8 -7 -8	-6 -4 -3 -14
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto	3004 3124 3250 3312 3400 3422	-1163 330 -1251 339 -1273 342	28 -1279	3375	-1247 -1267	-2 -4 -6	2 0 -12	3286 3375 3396	-1265	-6	
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690	-1163 330 -1251 339 -1273 344 -1297 344 -1427 350 -1497 364 -1541 368	-1279 42 -1293 58 -1419 41 -1492 38 -1539	3375 3398 3520 3597 3636	-1247 -1267 -1290 -1412 -1489 -1528	-2 -4 -6 -7 -15 -8 -13	2 0 -12 -3 -7 -3 -11	3286 3375 3396 3422 3546 3620 3664	-1265 -1291 -1415 -1489 -1533	-12 -8 -8	-2 -4 -3 -6
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 364 -1541 366 -1571 372 -1616 376 -1016 376	-1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617	3375 3398 3520 3597 3636 3654 3700 3700	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1592 -1592	-2 -4 -6 -7 -15 -8 -13 -25 -24 1592	2 0 -12 -3 -7 -3 -11 -32 -25 -25 -25 -25	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP	-1265 -1291 -1415 -1489 -1533 -1563 -1601	-12 -8 -8 -8 -8	-2 -4 -3 -6 -15 -15
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3720 3765 3790 3804 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 364 -1541 366 -1571 377 -1616 376 -1616 376 -1641 379 -1655 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 56 -1617 90 -1641 94 -1655 53 -1714	3375 3398 3520 3597 3636 3636 3636 3700 3700 3700 3726 3730 3793	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1592 -1592 -1592 -1618 -1622 -1685	-2 -4 -6 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31	2 0 -12 -3 -7 -7 -3 -11 -32 -25 -25 -25 -25 -23 -23 -33 -33 -29	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -8 -8 -25 -25 -28 -48	-2 -4 -3 -6 -15 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3750 37790 3804 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 366 -1541 366 -1571 372 -1616 376 -1641 379 -1655 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 56 -1617 90 -1641 94 -1655 53 -1714	3375 3398 3520 3597 3636 3654 3700 3700 3726 3730 3793	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1592 -1592 -1592 -1618 -1622 -1685	-2 -4 -6 -7 -15 -8 -13 -25 -24 -24 -23 -33 -31	2 0 -12 -3 -7 -3 -11 -32 -25 -25 -25 -23 -33 -33 -29	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -8 -25 -25 -28 -48	-2 -4 -3 -6 -15 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3790 3790 3804 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 364 -1571 372 -1616 376 -1641 379 -1655 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617	3375 3398 3520 3597 3636 3654 3700 3700 3726 3730 3793	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1592 -1592 -1618 -1622 -1685	-2 -4 -6 -7 -15 -8 -13 -25 -24 -23 -23 -33 -31	2 0 -12 -3 -7 -7 -3 -11 -32 -25 -25 -25 -23 -33 -29	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -8 -25 -25 -28 -48	-2 -4 -3 -6 -15 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3790 3765 3790 3804 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 364 -1541 366 -1571 372 -1616 376 -1655 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 30 -1641 34 -1655 33 -1714	3375 3398 3520 3597 3636 3654 3700 3726 3730 3793	-1247 -1267 -1290 -1412 -1489 -1528 -1546 -1592 -1592 -1618 -1622 -1685	-2 -4 -6 -7 -15 -8 -13 -25 -24 -23 -24 -23 -33 -31	2 0 -12 -3 -7 -7 -3 -11 -32 -25 -25 -25 -23 -23 -33 -29	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1563 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -25 -28 -48	-2 -4 -3 -6 -15 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3765 3790 3804 3804 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 366 -1541 366 -1571 372 -1616 376 -1641 379 -1655 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 90 -1641 94 -1655 53 -1714	3375 3398 3520 3597 3636 3654 3700 3700 3700 3700 3700 3700 3793	-1247 -1267 -1290 -1412 -1489 -1528 -1546 -1592 -1592 -1618 -1622 -1685	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31	2 0 -12 -3 -7 -3 -11 -32 -25 -25 -23 -33 -33 -29	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1601 -1627 -1668	-12 -8 -8 -8 -25 -28 -28 -48	-2 -4 -3 -6 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3790 3804 3804 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 366 -1541 366 -1571 372 -1616 376 -1641 379 -1655 386 -1716 386	28 -1279 42 -1293 38 -1419 31 -1492 38 -1539 27 -1578 36 -1617 30 -1641 34 -1655 33 -1714	3375 3398 3520 3597 3636 3654 3700 3726 3730 3793 3793	-1247 -1267 -1290 -1412 -1489 -1528 -1546 -1592 -1618 -1622 -1618 -1622 -1685	-2 -4 -6 -7 -15 -8 -13 -25 -24 -23 -33 -31 -31	2 0 -12 -3 -7 -3 -11 -32 -25 -25 -23 -33 -33 -29	3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3790 3804 3804 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1427 366 -1541 366 -1571 372 -1616 376 -1641 379 -1655 386 -1716 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 	3375 3398 3520 3597 3636 3654 3700 3726 3730 3726 3730 3793 3793	-1247 -1267 -1290 -1412 -1528 -1528 -1528 -1592 -1592 -1618 -1622 -1685 -1685	-2 -4 -6 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31	2 0 -12 -3 -7 -3 -7 -3 -25 -25 -23 -23 -33 -29	3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1601 -1627 -1668	-12 -8 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3770 3804 3804 3804 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 366 -1551 375 -1616 376 -1616 376 -1655 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 	3375 3398 3520 3597 3636 3654 3700 3726 3730 3793 3793 3793 Daily D	-1247 -1267 -1290 -1412 -1489 -1528 -1546 -1592 -1592 -1618 -1622 -1618 -1622 -1685 -1685 -1685 -1685 -1685 -1685 -1685 -1685 -1685 -1685 -1685 -1685 -1685 -1685 -1592 -1592 -1592 -1618 -1622 -1685 -1592 -1618 -1622 -1685	-2 -4 -6 -7 -7 -7 -7 -7 -7 -7 -24 -25 -24 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -33 -29	3286 3375 3396 3422 3546 3620 3664 3694 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 - -1601 -1601 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Congl. Sand Pre-Cambrian Total Depth Total Depth Company: Operator: Operator: Operator: Operatorsis Ben Jackson	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3790 3804 3804 3865 3865 Charlie Stur 920 12th Str Golden, CO Cynosure E S: O: 720-476- O: 720-476-	-1163 330 -1251 339 -1273 344 -1297 344 -1427 366 -1497 366 -1551 375 -1616 376 -1641 375 -1655 386 -1716 386 -1716 386 SECUR DAIL rdavant Consulting reet 80401 nergy, LLC 3678 Cell: 720-27 3678 Cell: 720-27	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 	3375 3398 3520 3597 3636 3654 3700 3726 3730 3726 3730 3793 3793 Daily D	-1247 -1267 -1290 -1412 -1489 -1528 -1592 -1592 -1618 -1622 -1685 -1	-2 -4 -6 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -25 -25 -23 -23 -23 -23 -23 -23 -23 -23 -23 -23	3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 - -1601 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Cong	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3765 3765 3765 3765 3765 3765	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 366 -1551 377 -1616 376 -1551 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 	3375 3398 3520 3597 3636 3654 3700 3726 3730 3793 3793 3793 Daily D Daily D Control Control	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1592 -1592 -1618 -1622 -1618 -1622 -1685 -1685 -1685 -1685 -1685 -1685 -1592 -1618 -1622 -1685 -1685 -1592 -1618 -1622 -1685 -1595 -1685 -1595 -1685 -1595 -1685 -1595 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -33 -29 1592 -23 -33 -33 -29 1592 -23 -33 -33 -29	3286 3375 3396 3422 3546 3620 3664 3694 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 - -1601 -1601 -1627 -1668	-12 -8 -8 -8 -25 -28 -28 -48	-2 -4 -3 -6 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth Cherokee Shale Conglomerate Congl. Sand Pre-Cambrian Total Depth Company: Operator Contact Gene Davis Ben Jackson Wellsite Geologis Drilling Contractor	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3790 3804 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3790 3790 3790 3790 3790 3790 3790 3790	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 366 -1497 366 -1571 372 -1616 376 -1616 376 -1641 377 -1655 386 -1716 386	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 	3375 3398 3520 3597 3636 3654 3700 3726 3730 3793 3793 3793 Daily D Contemporation G REP Loc Elet Fiel Sur Pusher: S	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1592 -1618 -1592 -1618 -1622 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -7 -3 -11 -32 -25 -23 -33 -29 1592 -23 -33 -29 1592 -23 -33 -29 1592 -23 -33 -29	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Cong	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3770 3804 3864 3865 3865 3765 3765 3770 3765 3770 3804 3865 3765 3770 3765 3770 3765 3770 3765 3770 3765 3770 3804 3865 3770 3770 3804 3865 3770 3770 3700 3804 3865 3770 3700 3804 3865 3770 3700 3804 3865 3770 3700 3804 3865 3770 3700 3804 3865 3770 3700 3804 3865 3770 3700	-1163 330 -1251 339 -1273 344 -1297 344 -1427 356 -1497 364 -1497 364 -1511 375 -1616 376 -155 386 -1716 386 -	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 	3375 3398 3520 3597 3636 3654 3700 3726 3730 3793 3793 3793 Daily D Control Co	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1592 -1618 -1622 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1585 49 20 ' FWL 0W 1585 49 20 218' 17-2610 0 0 0 0 0 0 0 0 0 0 0 0 0	3286 3375 3396 3422 3546 3620 3664 3694 NP 3747 3758 3799 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Congl. Sand Pre-Cambrian Total Depth Company: Operator Contact Gene Davis Ben Jackson Wellsite Geologis Drilling Contractor DATE 4/10/2017 4/11/2017 4/13/2017	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3790 3804 3804 3865 3805 3804 3865 3805 3805 3804 3865 3805 3804 3865 3700 3804 3805 3804 3865 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3805 3805 3700 3804 3805 3805 3700 3804 3805 3700 3805 390 3015 3	-1163 330 -1251 339 -1273 344 -1297 344 -1497 366 -1497 366 -1511 366 -1571 372 -1616 376 -1655 386 -1655 386 -1655 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 387 -1716 388 -17295 384-9481 ing Co. Rig #8 62 931 9 934-9481 ing Co. Rig #8 62 931 9 931 9 931 9 931 9 931 9 931 <t< td=""><td>28 -1279 42 -1293 38 -1419 38 -1539 27 -1578 36 -1617 30 -1641 30 -1655 33 -1714</td><td>3375 3398 3520 3398 3520 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3793 Daily D C REP Loc Ele' Fiel April Pusher: S Sur Pusher: S brs. 5/8" surface ut @ 1200 l loc @ 2150</td><td>-1247 -1267 -1290 -1412 -1489 -1528 -1546 -1592 -1592 -1592 -1618 -1622 -1618 -1622 -1685 -1</td><td>-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3</td><td>2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1sas 49 20 20 ' FWL 0W 1sas 49 0 218' 17-2610 0 0 0 0 0 0 0 0 0 0 0 0 0</td><td>3286 3375 3396 3620 3664 3694 NP 3732 NP 3747 3758 3799</td><td>-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1616 -1627 -1668</td><td>-12 -8 -8 -8 -25 -28 -48</td><td>-2 -4 -3 -6 -15 -15 -28 -25 -28 -46</td></t<>	28 -1279 42 -1293 38 -1419 38 -1539 27 -1578 36 -1617 30 -1641 30 -1655 33 -1714	3375 3398 3520 3398 3520 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3793 Daily D C REP Loc Ele' Fiel April Pusher: S Sur Pusher: S brs. 5/8" surface ut @ 1200 l loc @ 2150	-1247 -1267 -1290 -1412 -1489 -1528 -1546 -1592 -1592 -1592 -1618 -1622 -1618 -1622 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1sas 49 20 20 ' FWL 0W 1sas 49 0 218' 17-2610 0 0 0 0 0 0 0 0 0 0 0 0 0	3286 3375 3396 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -15 -28 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth Company: Operator: Opera	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3765 3765 3770 3804 3804 3865 3804 3865 3865 3865 3865 3865 3865 3865 3865	-1163 330 -1251 339 -1273 344 -1297 344 -1497 366 -1497 366 -1511 366 -1571 372 -1616 376 -1655 386 -1655 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 384 inergy, LLC 3678 3678 Cell: 720-27 3678 Cell: 303-93 urdavant 37-2295 384-9481 384 ing Co. Rig #8 62 91 Move in, rig WOC: set 5 j down @ 031: 07 Drilling ahea 031 Drilling ahea 01 mud 6000000000000000000000000000000000000	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 	3375 3398 3520 3398 3520 3597 3636 3654 3700 3700 3700 3726 3730 3726 3730 3726 3730 3793 Daily D C REP Loc C REP Loc Elev Fiel API Sur Pusher: S R Dhrs. 5/8" surface ut @ 1200 I loc @ 2150 530', Rec: S	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1618 -1622 -1618 -1622 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -7 -3 -11 -32 -25 -23 -33 -29 -23 -33 -29 -23 -33 -29 -23 -33 -29 -21 -25 -23 -33 -29 -21 -25 -23 -33 -29 -21 -25 -23 -33 -29 -21 -25 -23 -33 -29 -21 -25 -23 -33 -29 -29 -21 -25 -23 -29 -21 -25 -23 -29 -29 -21 -29 -21 -29 -21 -29 -21 -29 -29 -21 -29 -29 -29 -20 -29 -29 -20 -29 -29 -20 -29 -29 -20 -29 -20 -29 -29 -20 -29 -20 -29 -20 -29 -20 -29 -29 -29 -20 -29 -29 -29 -20 -29 -20 -29 -20 -29 -20 -20 -29 -20 -20 -20 -20 -29 -20 -20 -20 -20 -20 -20 -20 -20	3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Congl. Sand Pre-Cambrian Total Depth Company: Operator: Operator: Operator Contact Gene Davis Ben Jackson Wellsite Geologis Drilling Contracto DATE 4/10/2017 4/12/2017 4/12/2017 4/13/2017 4/16/2017	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3770 3804 3804 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3700 3804 3804 3804 3805 3700 3804 3804 3805 3700 3700 3804 3804 3805 3700 3700 3804 3805 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3804 3805 3700 3700 3805 3700 3700 3700 3805 3700 3700 3805 3700 3805 3700 3700 3700 3700 3700 3700 3700 37	-1163 330 -1251 333 -1273 344 -1297 344 -1497 366 -1497 366 -1511 366 -1571 372 -1616 376 -1616 376 -1616 376 -1655 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 387 -1716 386 -1718 2001 nergy, LLC 3678 384-9481 303-93 ing Co. Rig #8 62 93 PTH Move in, rig WOC: set 5 j down @ 031 Drilling ahea 031 Drilling ahea </td <td>28 -1279 42 -1293 38 -1419 38 -1539 27 -1578 36 -1617 30 -1641 30 -1641 33 -1714</td> <td>3375 3398 3520 3398 3520 3397 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3793 Daily D Construction G REP Loc Elet Fiel April Sur Pusher: Si Sur Ince @ 2150 530', Rec: § % oil, 20% r drilling @ 3570'-3670' % oil, 30% r</td> <td>-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1528 -1592 -1592 -1618 -1622 -1618 -1622 -1685 -1685 -1685 -1685 -1685 -1685 -1502 -1685 -1685 -1685 -1685 -1502 -1685 -1592 -1685 -1592 -1685 -1685 -1592 -1685 -1685 -1685 -1592 -1685 -1685 -1685 -1592 -1685 -1</td> <td>-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3</td> <td>2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -29 1592 -23 -33 -29 20 -28 -29 20 -28 -29 20 -29 -29 -29 -29 -29 -29 -29 -29</td> <td>3286 3375 3396 3620 3664 3694 NP 37372 NP 3747 3758 3799 XP 3747 3758 3799</td> <td>-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1627 -1668</td> <td>-12 -8 -8 -8 -25 -28 -48</td> <td>-2 -4 -3 -6 -15 -15 -28 -25 -28 -46</td>	28 -1279 42 -1293 38 -1419 38 -1539 27 -1578 36 -1617 30 -1641 30 -1641 33 -1714	3375 3398 3520 3398 3520 3397 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3793 Daily D Construction G REP Loc Elet Fiel April Sur Pusher: Si Sur Ince @ 2150 530', Rec: § % oil, 20% r drilling @ 3570'-3670' % oil, 30% r	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1528 -1592 -1592 -1618 -1622 -1618 -1622 -1685 -1685 -1685 -1685 -1685 -1685 -1502 -1685 -1685 -1685 -1685 -1502 -1685 -1592 -1685 -1592 -1685 -1685 -1592 -1685 -1685 -1685 -1592 -1685 -1685 -1685 -1592 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -29 1592 -23 -33 -29 20 -28 -29 20 -28 -29 20 -29 -29 -29 -29 -29 -29 -29 -29	3286 3375 3396 3620 3664 3694 NP 37372 NP 3747 3758 3799 XP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -15 -28 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Congl. Sand Pre-Cambrian Total Depth Cherokee Shale Conglomerate Congl. Sand Pre-Cambrian Total Depth Company: Operator: Operator: Operator Contact Gene Davis Ben Jackson Wellsite Geologis Drilling Contractor DATE 4/10/2017 4/12/2017 4/12/2017 4/15/2017 4/16/2017 4/16/2017 4/17/2017	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3790 3804 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 10 10 10 10 10 10 10 10 10 10 10 10 10	-1163 330 -1251 333 -1273 344 -1297 344 -1297 344 -1497 366 -1497 366 -1541 366 -1571 372 -1616 376 -1617 366 -1618 376 -1655 386 -1655 386 -1655 386 -1716 386 207-2295 384-9481 ing Co. Rig #8 62 2771 3678 Cell: 720-27 3678 Cell: 303-93 urdavant 307-2295 384-9481 309 ing Co. Rig #8 62 2771 Move in, rig WOC: set 5 j WOC: set 5 j 308 Drilling ahea Drilling ahea Drilling ahea Conducting mud), 62' MC SIP: 1087-10 Tripping in h mud), 62' MC Services. Co Geologist of	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 30 -1641 34 -1655 33 -1714	3375 3398 3520 3597 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3793 Daily D Loc Elev Fiel API Sur Pusher: S 530', Rec: S % oil, 20% r ohrs 0 hrs	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1592 -1592 -1618 -1592 -1618 -1622 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1583 -29 20 ' FWL 0W 1583 -29 -218' 17-2610 -20 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' -25 -25 -27 -29 -218' -25 -27 -29 -218' -25 -27 -29 -218' -25 -27 -27 -27 -27 -27 -27 -27 -27	3286 3375 3396 3422 3546 3694 NP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 3799 XP 3747 3758 3799 XP 379	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -28 -25 -28 -46
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Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Congl. Sand Pre-Cambrian Total Depth Cherokee Shale Congl. Sand Pre-Cambrian Total Depth Coperator: Operator: Operator: Operator: Operator Contact Gene Davis Ben Jackson Wellsite Geologis Drilling Contracto DATE 4/10/2017 4/11/2017 4/12/2017 4/15/2017 4/16/2017 4/16/2017 4/17/2017	3004 3124 3250 3312 3400 3312 3400 3422 3446 3576 3646 3690 3720 3765 3790 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3804 3865 3790 3804 3865 3790 3804 3865 3790 3804 3865 3790 3790 3804 3865 3790 3790 3804 3865 3790 3790 3804 3865 3790 3804 3865 3790 3804 3865 3790 570 3700 3804 3865 3790 570 3700 3804 3865 3790 570 3700 3804 3865 3790 3804 3865 3790 3804 3865 3790 570 3700 3804 3865 3790 3700 3804 3865 3790 3804 3865 3700 3804 3865 3700 3804 3865 3700 3804 3865 3700 3804 3865 3700 3804 3865 3700 3804 3865 3700 3804 3865 3700 3700 3804 3865 3700 3700 3804 3865 3700 3700 3804 3865 3700 3700 3804 3865 3700 3700 3700 3804 3853 10 3670 ft. 3853 ft. 3853 ft.	-1163 330 -1251 333 -1273 344 -1297 344 -1297 344 -1497 366 -1541 366 -1571 372 -1616 376 -1616 376 -1655 366 -1716 386 -1655 366 -1716 386 -1678 Cell: 720-27 3678 Cell: 720-27 3678 Cell: 303-93 urdavant 07-2295 384-9481 364 Ing Co. Rig #8 62 PTH Move in, rig WOC: set 5 j down @ 0315 Drilling ahea Drilling ahea Drilling ahea Conducting mud), 62' MC SIP: 1087-10 Tripping in h mud), 62' MC SIP: 1087-10 Tripping in h mud), 62' MC SIP: 1087-10 Tripping ahea Services. Co Geologist of Geologist of	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 30 -1641 34 -1655 33 -1714	3375 3398 3520 3597 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 0 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700 3700	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1592 -1592 -1618 -1592 -1618 -1622 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -11 -32 -25 -23 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1583 -29 20 ' FWL 0W 1583 -29 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' 17-2610 -218' -218' 17-2610 -218' -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -218' -25 -25 -25 -25 -27 -27 -27 -27 -27 -27 -27 -27	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799 3747 3758 3799 3747 3758 3799 4 2 2 2 2 2 2 2 2 2 2 2 2 2	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -28 -25 -28 -46
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Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth Company: Operator Contact Gene Davis Ben Jackson Wellsite Geologis Drilling Contractor DATE 4/10/2017 4/11/2017 4/12/2017 4/15/2017 4/16/2017 4/16/2017 4/17/2017	3004 3124 3250 3312 3400 3312 3400 3422 3446 3576 3646 3690 3720 3765 3770 3765 3770 3804 3804 3804 3804 3805 3804 3805 3804 3805 3700 Cynosure E S: O: 720-476-3 O: 720-476-3	-1163 330 -1251 339 -1273 344 -1297 344 -1497 366 -1497 366 -1511 366 -1571 372 -1616 376 -1616 376 -1655 386 -1655 386 -1716 386 -16678 Cell: 720-27 3678 Cell: 720-27 3678 Cell: 720-27 3678 Cell: 303-93 urdavant Drosulting reet 80401 nergy, LLC 3678 3678 Cell: 202-27 3678 Cell: 303-93 urdavant Drosulting b77-2295 384-9481 ing Co. Rig #8 62 PTH Move in, rig WOC: set 5 j down @ 0318 Drilling ahea Drilling ahea Drilling ahea Services.co Geologist of Services.co Services.co Geologist of Well Ty	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 30 -1641 34 -1655 33 -1714 DAVE PORILLIN OUTION OUTION	3375 3398 3520 3398 3520 3597 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3793 Daily D Construction Construction Construction Solor, Rec: 9 % oil, 20% r drilling @ 3570'-3670' 0 hrs </td <td>-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1592 -1618 -1622 -1618 -1622 -1685 -1</td> <td>-2 -4 -6 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -25 -24 -23 -33 -31 -25 -54 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -24 -23 -33 -31 -21 -24 -24 -23 -24 -23 -24 -24 -24 -25 -15 -25 -24 -26 -26 -26 -26 -26 -26 -26 -26 -26 -26</td> <td>2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1583 -29 20 ' FWL 0W 17-2610 0f 80/20 poz 6 gas, 15% oil, 19 5% oil, 15 Pioneer Energ</td> <td>3286 3375 3396 3422 3546 3620 3664 3694 NP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 4 XP A XP A XP A XP A XP A XP A XP A XP A XP A XP A XP A XP A XP A</td> <td>-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1627 -1668</td> <td>-12 -8 -8 -8 -25 -28 -48</td> <td>-2 -4 -3 -6 -15 -28 -25 -28 -46</td>	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1592 -1618 -1622 -1618 -1622 -1685 -1	-2 -4 -6 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -25 -24 -23 -33 -31 -25 -54 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -33 -31 -21 -24 -23 -24 -23 -33 -31 -21 -24 -24 -23 -24 -23 -24 -24 -24 -25 -15 -25 -24 -26 -26 -26 -26 -26 -26 -26 -26 -26 -26	2 0 -12 -3 -7 -3 -11 -32 -25 1592 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1583 -29 20 ' FWL 0W 17-2610 0f 80/20 poz 6 gas, 15% oil, 19 5% oil, 15 Pioneer Energ	3286 3375 3396 3422 3546 3620 3664 3694 NP 3747 3758 3799 XP 3747 3758 3799 XP 3747 3758 3799 XP 4 XP A XP A XP A XP A XP A XP A XP A XP A XP A XP A XP A XP A XP A	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1601 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -28 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokee Shale Conglomerate Conglomerate Congl. Sand Pre-Cambrian Total Depth Cherokee Shale Congl. Sand Pre-Cambrian Total Depth Company: Operator: Operator: Operator Contact Gene Davis Ben Jackson Wellsite Geologis Drilling Contractor DATE 4/10/2017 4/12/2017 4/12/2017 4/15/2017 4/15/2017 4/16/2017 4/17/2017	3004 3124 3250 3312 3400 3422 3446 3576 3646 3690 3720 3765 3765 3765 3765 3765 3765 3765 3765	-1163 330 -1251 339 -1273 344 -1297 344 -1497 366 -1497 366 -1511 366 -1571 377 -1616 376 -1655 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 386 -1716 387 -1716 387 -1716 387 -1716 387 -1716 387 -1716 387 -1718 303-93 Indexant -7-2295 384-9481	28 -1279 42 -1293 38 -1419 41 -1492 38 -1539 27 -1578 36 -1617 	3373 3398 3520 3398 3520 3398 3520 3398 3520 3398 3520 3398 3520 3398 3398 3398 3398 3398 3398 3398 3398 3398 3398 3398 3398 3398 3398 3636 3636 3700 <t< td=""><td>-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1618 -1622 -1618 -1622 -1685 CONT Well: Leiker cation: 1235'F Sec. 2 Ellis C Well: Leiker cation: 1235'F Sec. 2 Ellis C vation: GL: 21 d: Post F No.: 15-051 face casing: 8 hane Downs EMARKS e csg. Cement hrs. hrs. 3005'. 960' GIP, 30' O mud), 248' MG 1301 hrs. Frec: 30' O&C 1301 hrs. CO-ORDI CO-ORDI UTRACTOR</td><td>-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3</td><td>2 0 -12 -3 -7 -3 -7 -3 -11 -32 -25 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1583 49 20 ' FWL 0W 1583 49 -218' 17-2610 -218' -2 8'</td><td>3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799 3747 3758 3799 4 8 8 8 8 8 8 8 8 8 8 8 8 8</td><td>-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1616 -1627 -1668</td><td>-12 -8 -8 -8 -25 -28 -48</td><td>-2 -4 -3 -6 -15 -25 -28 -46</td></t<>	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1618 -1622 -1618 -1622 -1685 CONT Well: Leiker cation: 1235'F Sec. 2 Ellis C Well: Leiker cation: 1235'F Sec. 2 Ellis C vation: GL: 21 d: Post F No.: 15-051 face casing: 8 hane Downs EMARKS e csg. Cement hrs. hrs. 3005'. 960' GIP, 30' O mud), 248' MG 1301 hrs. Frec: 30' O&C 1301 hrs. CO-ORDI CO-ORDI UTRACTOR	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -7 -3 -11 -32 -25 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1583 49 20 ' FWL 0W 1583 49 -218' 17-2610 -218' -2 8'	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799 3747 3758 3799 4 8 8 8 8 8 8 8 8 8 8 8 8 8	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -25 -28 -46
Bottom Anhyd. Tarkio Topeka King Hill Queen Hill Heebner Toronto Lansing Muncie Creek Stark Base/KC Marmaton Pawnee Cherokkee Shale Conglomerate Congl. Sand Pre-Cambrian Total Depth Corrent Company: Operator: Operato	3004 3124 3250 3312 3400 3312 3400 3422 3446 3576 3646 3690 3720 3765 3790 3790 3804 3804 3804 3865 3804 3865 3790 3790 3804 3804 3865 3790 3790 3790 3700 3700 3700 3700 3700	-1163 330 -1251 339 -1273 344 -1297 344 -1497 366 -1497 366 -1511 366 -1571 372 -1616 376 -1655 386 -1655 386 -1655 386 -1655 386 -1616 377 -1655 386 -1716 386 -1716 386 -1678 Cell: 720-27 3678 Cell: 720-27 367 Cell: 720-27 367 <td>28 -1279 42 -1293 38 -1419 38 -1539 27 -1578 36 -1617 30 -1641 34 -1655 33 -1714 DAVE PORILLIN OUTORIZED OUTOR OUTOR <</td> <td>3375 3398 3520 3398 3520 3397 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3700 3726 3700 3726 3700 3720 3793 Daily D Control Eley Fiel API Sur Pusher: Si Not (20% r drilling @ 3570: 3670' % oil, 20% r ohrs 530', Rec: Si % oil, 20% r ohrs 0 hrs JRFACE 60 1 Control <td< td=""><td>-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1618 -1592 -1618 -1622 -1685 -1</td><td>-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3</td><td>2 0 -12 -3 -7 -3 -11 -32 -25 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1585 49 20 ' FWL 0W 1585 49 20 (gas, 15% oil, 15 7 10 10 10 10 10 10 10 10 10 10</td><td>3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799</td><td>-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1616 -1627 -1668</td><td>-12 -8 -8 -8 -25 -28 -48</td><td>-2 -4 -3 -6 -15 -28 -28 -46</td></td<></td>	28 -1279 42 -1293 38 -1419 38 -1539 27 -1578 36 -1617 30 -1641 34 -1655 33 -1714 DAVE PORILLIN OUTORIZED OUTOR OUTOR <	3375 3398 3520 3398 3520 3397 3636 3654 3700 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3730 3726 3700 3726 3700 3726 3700 3720 3793 Daily D Control Eley Fiel API Sur Pusher: Si Not (20% r drilling @ 3570: 3670' % oil, 20% r ohrs 530', Rec: Si % oil, 20% r ohrs 0 hrs JRFACE 60 1 Control <td< td=""><td>-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1618 -1592 -1618 -1622 -1685 -1</td><td>-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3</td><td>2 0 -12 -3 -7 -3 -11 -32 -25 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1585 49 20 ' FWL 0W 1585 49 20 (gas, 15% oil, 15 7 10 10 10 10 10 10 10 10 10 10</td><td>3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799</td><td>-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1616 -1627 -1668</td><td>-12 -8 -8 -8 -25 -28 -48</td><td>-2 -4 -3 -6 -15 -28 -28 -46</td></td<>	-1247 -1267 -1290 -1412 -1489 -1528 -1528 -1546 -1592 -1618 -1592 -1618 -1622 -1685 -1	-2 -4 -6 -7 -7 -15 -8 -13 -25 -24 1592 -23 -33 -31 -31 -31 -31 -31 -31 -31 -31 -3	2 0 -12 -3 -7 -3 -11 -32 -25 -23 -33 -29 1592 -23 -33 -29 20 ' FWL 0W 1585 49 20 ' FWL 0W 1585 49 20 (gas, 15% oil, 15 7 10 10 10 10 10 10 10 10 10 10	3286 3375 3396 3422 3546 3620 3664 3694 NP 3732 NP 3747 3758 3799	-1265 -1291 -1415 -1489 -1533 -1563 -1601 -1616 -1627 -1668	-12 -8 -8 -8 -25 -28 -48	-2 -4 -3 -6 -15 -28 -28 -46



ELEVATIONS

		+ + + P + + ↑ + + + P + + + + + + + + + + + + + + +	Limestone: It tan, recrystallized bioclastic grainstone, bryozoans, fusulinids, pyritized fossil frag, no shows.	
	-		Shale: black, carbonaceous, dolomitic, brittle. Limestone: tan, micro-xln mudstone, tight, no shows.	
	3320		Limestone: tan, f-xln, bioclastic grainstone, fair inter-xln porosity, no	
	- 3330 -		Bioclastic limestone as above w/ an abundance of chalk, no shows.	
	3340		Limestone: grayish-tan to tan, f-xln, bioclastic grainstone, fair inter-xln	
	3350		porosity, no shows; chert: It gray to gray w/ fossil frags, frosted to vitreous.	
			Limestone: grayish-tan to tan, micro-xln mudstone to wackestone, fusulinids, spicules, crinoids, tight, no shows. Chert, crypto-xln, lt gray, frosted, uniform texture.	
8	3360		Limestone: tan, f-xln w/ random larger fossil frags, tr spicules, one pisolite, tr white to It gray chert, fair inter-xln porosity, no shows.	
	- 3370 -		Limestone: tan, f-xln bioclastic grainstone, fusulinids, good inter-xln	
	3380		Limestone: tan to It brown, f-xln bioclastic grainstone w/ larger frags of	
	- - - - - - - - 		tan to lt gray, fossiliferous w/ fusulinids, tighter than rocks above, no shows.	
			Limestone: as above w/ irregular grayish-brown shale laminations and stylolites, tr coral, no shows. Heebner 3400 (-1251)	
0 BOP (mmm) 5 0 Galans (42) 150 5 Cal (in) 16	3400		Shale: black, carbonaceous, calcareous, easily combustible, brittle and flakey. Limestone: brown, crypto-xln micrite.	
	3410		Shale: It gray, soft and mushy, calcareous.	
	3420		Toronto 3422 (-1273)	
	3430		Limestone: white to It gray, crypto-xIn micrite w. spots of finely disseminated pyrite, tight, no shows.	
	-		Shale: vari-colored, maroon, It green, gray, non-calc, soft to mushy. Sample washes red.	
	-		Lansing 3446 (-1297)	
	3450		limestone, exposure surface w/ irregular It green and maroon shale fill of void spaces, spotty secondary pinpoint porosity w/ spotty oil show, good cut to poor cut, depending on perm.	
	3460		Limestone: tan to grayish-tan, recrystallized former grainstone, now very tightly-cemented w/ no shows. Sample washes red. Red shale?	
Lan C	- 3470		Limestone: mottled gray and tan, bioclastic grainstone, well-cemented, f-xln w/ larger fusulinids, spotty secondary pinpoint porosity w/ sso, slow to no out requiring pruping to fluoroace	DST @ 1: 3450-3530', Rec: 960' GIP, 30' O&GCM (5% gas, 15%
	-		Limestone: It tan, oolitic grainstone, oil sheen on water, strong oil aroma, oil saturated excellent oomoldic porosity, instant streaming cut. Rest is	oil, 80% mud), 62' MGO (20% gas, 60%
S T			Limestone: It tan, med-gr oolitic grainstone, fusulinids, brach., more cemented than above, but w/ inter-xln porosity (cement porosity) and oil	on, 20% mu0), 248' MGO (20% gas, 70% oil, 10% mud), SIP:
Lan D #	3490		staining, strong aroma, instant streaming cut. Chert: white to tan, vitreous, some is fossiliferous.	1087-1083#
	3500		Demostorie: it tail, conflic grainstone, excellent inter-xin and comoldic porosity, oil staurated porosity, strong aroma, instant streaming cut. Limestone: It tan to brown colitic grainstone, some os comoldic and fully	Strap: 5.02' short to
	3510		saturated w/ oil, some has secondary pinpoint porosity w/ spotty oil, instant streaming cut to slow cut. Limestone: white, recrystallized former grainstone, sparry calaite	Juaru. Devioation: 1- 1/8 degrees.
CES @	3520		patches, micro-xln matrix. White chert, vitreous, very fossiliferous. Lt tan oolitic grainstone w/ oil-saturated cement around oolites, strong aroma.	3530' : Limestone: It tan to white, med- to f-xln, oolitic grainstone. oomoldic porosity
3525' CFS @ 3530'			3525', 30/60 min: Limestone: It tan to It brown, tightly, recrystallized oolitic grainstone, spotty secondary pinpoint porosity w/ oil staining, strong aroma, claw out to be set to provide a strong to be set to be se	to tightly-cemented, oil saturated in porosity, fair oil aroma, pores to 0.5 mm,
	-		strong aroma, slow cut to no cut requiring crusning to release oil. Olitic- bioclastic chert, white to It gray. Limestone: It tan, micro-xln mudstone, no porosity, no shows.	instant streaming cut.
Lan G	3540		Limestone: white to vy It gray, well-cemented oolitic grainstone to massive micro-xln mudstone. tr sparry calcite, tight, no shows. Tr snow	Mud-Co, Mud check 3530' @ 0730 hrs. 4/15/2017
	3550		white chert, vitreous to eroded oolitic. Limestone: very It gray, micro-xln, clean mudstone, massive, no	VIS. 50, WI. 9.2 PV 15, YP 24 WL 6.0, Cake 1/32" pH 11.0 Ca Tr
	3560		Limestone: vy lt gray, f-xln, recrystallized oolitic grainstone, tr sparry calcite, mixed w/ micro-xln mudstone, tr lt gray spicular, vitreous chert.	CHL 2,600 ppm Sol 6.4, LCM 2 DMC: \$85.55
	3570		Limestone: brown to gray, f-xln, fragmental, tr pelloids, tr larger brachiopod frags, recrystallized, sparry calcite, tr argillaceous,	CMC: \$7,567.57
			calcareous. Limestone: It tan to tan, f- to med-xln, oolitic to bioclastic grainstone,	
Lan H			recrystallized, spotty secondary inter-xln, micro-vuggy, and pinpoint porosity w/ spotty oil staining, instant streaming cut to a slow bleed.	
	3590		Limestone: It gray to tan, recrystallized former grainstone, ghost fossils,	
CFS @ 3600' 0 / ROP (minit) 3 0 Gamma (API) 150	3600		Shale: gray to It gray, tr crinoids embedded in shale, calcareous, hard, brittle	DST # 2: 3570'-3670', GTS 5 min into 2nd flow, Bec: 30' O&GCM
	3610		Limestone: vy lt gray to tan to cream, recrystallized former grainstone to mudstone, nodules at the erosional surface and spotty pinpoint porosity	(5%gas, 5% oil, 90% mud), 62' MGO (30%
	3620		w/ minor on show, weak aroma, light rock, poor reservoir, good cut.	gas, 40% oil, 30% mud), 62' MGO (30% gas, 55% oil, 15%
			Shale: gray to maroon to greenish-gray, firm, calcareous. Limestone: vy It gray to It tan, recrystallized grainstone, ghost fossils, verv-well cemented, spotty secondary pinpoint porosity at the erosional	mud), 1302 CLEAN OIL. 1st FP: 273-414#,
Lan J	-		surface, cemented nodules, rare micro-vugs, spotty show of oil, no cut, frags need to be crushed to release oil. Tr honey-colored vitreous chert.	200 FP: 444-540#, SIP: 622-617#.
	3640 -			Ceiker #3 dst 2, P.10001.j
CFS @ 3650'	3650 -		Shale: black, carbonaceous, firm, calcareous. Limestone: It tan, oolitic grainstone w/ oomoldic and inter-xln porosity, oil saturated, weak odor, good cut, Tr crinoids near the top in a nodular	3670' @ 0745 hrs. 4/16/2017 Vis 47 Wt 9 1
Lan K	3660		eroded surface. Tr white oolitic vitreous chert. Oolitic grainstone, very-well cemented, oolites to 0.7mm in dia, no	PV 18, YP 24 WL 6.0, Cake 1/32" pH 10.5, Ca Tr
CFS @ 3670'	3670		shows. Ir honey-colored vitreous chert.	CHL 2,700 ppm Sol 5.8, LCM 2 DMC: \$969.85
	-		Limestone: tan, oolites and coated grains (psiolites?) to 2.4 mm in dia, finely-xln matrix, recrystallized, sparry calcite patches, thin, irregular strake of brown shale and podules at the arcsional surface fair inter-	CMC: \$8,537.42
	-		xIn porosity, no shows. White oolitic chert.	
	3690 - -		Shale: gray to It gray to It green, calcareous, soft to firm.	
	3700		nodules w/ green clay in-fill, no shows.	
	3710		Shale: maroon, soft to mushy, sample washes red, calcareous, tr silty, gray shale, calcareous, firm.	
	3720		Marmaton 3720 (-1571)	
	3730		Surface. Geolograph jumped off the gear. 16' was drilled in 40 minutes. Drill time was supraced	
CFS @ 3735'	-		A few free coarse- to f-gr sub-rounded to well-rounded quartz grains on bottom of tray. Vari-colored chert, yellowish-tan w/ maroon staining, white w/ pippoint porceity and eil atein area that	
	3740		Mixed lithologies: conglomerate? vari-colored chert, limestone frags w/ pinpoint por and slight oil staining, soft and mushy red and gray shales,	
	3750		tree qtz sand grains. Weathered limestone, vari-colored shale, limited chert of various colors, and free qtz sand grains.	
	3760		Vari-colored shales, maroon, It gray, gray, greenish-gray, brick, dolomitic to non-calc, tr vari-colored chert, weathered and vitreous.	
CFS @	3770		60 min @ 3770: Cherty conglomerate, dominated by various shades of orange-salmon, vitreous. Chertty conglomerate, vari-colored, vitreous to frosted, conchoided	
5/10	3780		fractures, some dead oil onsome porous frags, no fluor no cut. 30 min @ 3790: One frag of quartzite, dominated by vari-colored cherty	
CFS @ 3790'	-		intact sandstone was found w/ spotty oil stain, fluor and good cut. Fair oil aroma.	
	3790 - -	C C C C	Sandstone: loose qtz sand grains in the bottom of the tray, f- to vf-gr, well-rounded, well-sorted, oil aroma. A few frags of quartzite. 60 min: a few frags of qtz sandstone w/ spotty heavy oil stain, slow cut, no aroma.	
0 ROP (min/ft) 5 0 Garmer (AP) 150	3800		One trag of biotite granite. Pre-Cambrian Granite 3804 (-1655)	
	3810		Granite: biotite-bearing, orange-colored orthoclase, quartz. Coarsely-xln.	
	3820	$\begin{array}{c c} \circ & \circ & \circ \\ \circ & \circ & \circ \\ \circ & \circ & \circ \\ \circ & \circ &$	Granite: biotite, ortoclase, quartz, plagioclase.	
422		$\begin{array}{c c} \circ & \circ & \circ \\ \circ & \circ & \circ \\ \circ & \circ & \circ \\ \circ & \circ &$		Mud-Co Mud check
	3830	$\diamond \diamond \diamond \diamond$	Biotite granite.	3861' @ 0735 hrs. 4/17/2017
	3830	$\begin{array}{c c} \circ \circ \circ \circ \\ \hline \circ \circ \circ \circ \\ \hline \circ \circ \circ \circ \circ \\ \hline \circ \circ \circ \circ$		Vis. 60, Wt. 9.2
	3830 			Vis. 60, Wt. 9.2 PV 14, YP 25 WL 6.0, Cake 1/32" pH 10.5, Ca Tr
	3830 3840 		Biotite granite.	Vis. 60, Wt. 9.2 PV 14, YP 25 WL 6.0, Cake 1/32" pH 10.5, Ca Tr CHL 3,900 ppm Sol 6.3, LCM 3 DMC: \$721.41 CMC: \$9.258.83
RTD 3865	3830 3840 3850 3850 3860		Biotite granite RTD 3865 (-1716)	Vis. 60, Wt. 9.2 PV 14, YP 25 WL 6.0, Cake 1/32" pH 10.5, Ca Tr CHL 3,900 ppm Sol 6.3, LCM 3 DMC: \$721.41 CMC: \$9,258.83
RTD 3865	3830 3840 3850 3860 3860 3870		Biotite granite. RTD 3865 (-1716) RTD 3865' @ 0827 hrs, 4/17/2017 Pioneer Energy Services LTD 3863'	Vis. 60, Wt. 9.2 PV 14, YP 25 WL 6.0, Cake 1/32" pH 10.5, Ca Tr CHL 3,900 ppm Sol 6.3, LCM 3 DMC: \$721.41 CMC: \$9,258.83
RTD 3865	3830 3840 3850 3860 3860 3870 3870 3870 3880		Biotite granite. RTD 3865 (-1716) RTD 3865' @ 0827 hrs, 4/17/2017 Pioneer Energy Services LTD 3863' Completed Logging Operations @ 1710 hrs 4/17/2017 Geologist: Charlie Sturdayant off location	Vis. 60, Wt. 9.2 PV 14, YP 25 WL 6.0, Cake 1/32" pH 10.5, Ca Tr CHL 3,900 ppm Sol 6.3, LCM 3 DMC: \$721.41 CMC: \$9,258.83
RTD 3865	3830 3840 3850 3850 3860 3870 3880		Biotite granite. RTD 3865 (-1716) RTD 3865' @ 0827 hrs, 4/17/2017 Pioneer Energy Services LTD 3863' Completed Logging Operations @ 1710 hrs 4/17/2017 Geologist: Charlie Sturdavant off location @ 1800 hrs 4/17/2017	Vis. 60, Wt. 9.2 PV 14, YP 25 WL 6.0, Cake 1/32" pH 10.5, Ca Tr CHL 3,900 ppm Sol 6.3, LCM 3 DMC: \$721.41 CMC: \$9,258.83
RTD 3865	3830 3840 3850 3850 3860 3880 3880 3880 3880		Biotite granite. RTD 3865 (-1716) RTD 3865' @ 0827 hrs, 4/17/2017 Pioneer Energy Services LTD 3863' Completed Logging Operations @ 1710 hrs 4/17/2017 Geologist: Charlie Sturdavant off location @ 1800 hrs 4/17/2017	Vis. 60, Wt. 9.2 PV 14, YP 25 WL 6.0, Cake 1/32" pH 10.5, Ca Tr CHL 3,900 ppm Sol 6.3, LCM 3 DMC: \$721.41 CMC: \$9,258.83

	Coachman Energy Oper.Co LLC		25-15s-20	wEllis	
ESTING , INC.	1125 17th St		Leiker 3-2	25-15-20	
	Suite 410 Denver Co 80202		Job Ticket:	64137	D ST# : 1
	ATTN: Deb Smith,Charlie St		Test Start: 1	2017.04.15 @	03:50:55
GENERAL INFORMATION:					
Formation: IKC A-F					
Deviated: No Whipstock:	ft (KB)		Test Type:	Conventiona	l Bottom Hole (Initial)
Time Tool Opened: 06:07:35			Tester:	Ray Schwag	ger -
Time Test Ended: 10:34:34			Unit No:	77	
Interval: 3450.00 ft (KB) To 35	30.00 ft (KB) (TV D)		Reference I	Bevations:	2148.00 ft (KB)
Hole Diameter: 7.85 inchesHole	2 D) e Condition: Fair		KE	to GR/CF:	2141.00 ft (CF) 7.00 ft
Serial #: 8360 Inside	A 2402 00 # 2425		0		0000.00
Hress@RunDepth: 195.21 psig Start Date: 2017.04.15	(2) 3452.00 ft (KB) End Date:	2017 04 15	Capacity: Last Calib		8000.00 psig 2017.04.15
Start Time: 03:50:55	End Time:	10:34:34	Time On Btm:	2017.04.15 (@ 06:05:35
Laurenteen Charlos 2010 2010			Time Off Btm:	2017.04.15 (@ 08:28:19
TEST COMMENT: 15-IFP-wkto BC	B in 8min				
30-ISIP-surface	bibk				
30-FFP-BOB in 2 60-ESIP-surface	!min blok				
Pressure vs. 7	ime لعا		PRESSU	JRE SUMM	ARY
5.500 Prozestano 1.200	5303 fampaniura	Time (Min.)	Pressure Temp	Annotatio	n
		0	1701.95 104.0) 1 Initial Hydro	o-static
		2	56.64 103.9	9 Open To Fi	ow (1)
500 J		18	142.49 105.1	8 Shut-In(1)	- (4)
		47	142.95 106.8	6 Open To Fi	n(1) ow (2)
		78	195.21 109.3	5 Shut-In(2)	(_)
		140	1083.07 111.0	2 End Shut-In	n(2)
	7	143	1665.44 111.4	2 Final Hydro	-static
	-66				
	- 09				
tala E SalAu 2017 Tine (Huus)	1942				
Recovery			·	as Rates	
Length (ft) Description	Volume (bbl)		Choke	(inches) Pressu	re (psig) Gas Rate (Mcf/d)
248.00 MGO 20%G10%N70%O	3.48				
62.00 MGO 20%G20%M60%O	0.87				
30.00 O&GCM 5%G15%O80%	0.42				
0.00 960' GIP	0.00				
Trilohita Tasting Inc.	Ref No: 6/137	1	Printo	- 2017 DA 15	@ 10.12.20

Leiker #3 dst 2, P.10001.jpg

ans-		DRILL STEM TES	DRILL STEM TEST REPORT							
	RILUBITE	Coachman Energy Oper.Co LLC		25-	15 s-20w	Ellis				
	ESTING , INC	1125 17th St		Lei	ker 3-2	5-15-20				
		Suite 410 Denver Co 80202		doL	Ticket: 64	138	DST#:2			
		ATTN: Deb Smith, Charlie St		Tes	t Start: 20)1 7.04 .16 @	02:35:14			
						200	05			
Formation:										
Deviated: Time Tool Oper	No Whipstock: ned: 04:44:24	ft (KB)		Tes	t Type: (ter:	Conventiona Ray Schwe	al Bottom Hol ger	ə (Reset)		
Time Test Ende	id: 10:00:23			Unit	No:	77		107 872223		
Interval: Total Denth:	3570.00 ft (KB) To 36 3670.00 ft (KB) (T)	570.00 ft (KB) (TVD)		Ref	erence Be	vations:	2148.00	ft (KB) ft (CE)		
Hole Diameter:	7.85 inchesHole	e Condition: Fair			KBt	o GR/CF:	7.00	ft		
Sorial # 8	360 Inside									
Press@RunDe	pth: 540.86 psig	@ 3576.00 ft (KB)		Capacity	:		8000.00	psig		
Start Date:	2017.04.16	End Date:	2017.04.16	Last Cali	b.:		2017.04.16	1711 DOMON		
Start Ime:	02:35:14	End lime:	10:00:23	Time On Time Off	Birn: 2	2017.04.16	@ 04:42:24			
TEST COM	TEST COMMENT: 15-IFP-BOB in 45 sec 30-ISIP-BOB BL BK in 6min 15-FFP-BOB Thru-out 60-FSIP-BOB GTS in 5min									
	Pressure vs. 1	ॉग्राट िरा		PI	RESSUF	RE SUMM	ARY			
1,80	SEO Hasura	199 Imposius	Time (Min.)	Pressure (psia)	Temp (dea F)	Annotati	on			
-			Ó	1713.13	105.57	initial Hydr	o-static			
	₹A	N	2	273.68	105.21	Open To F Shut-b(1)	1ow (1)			
1270			48	622.67	118.22	End Shut-	h(1)			
2 1000			48	444.39	118.14	Open To F	łow (2)			
a. 190			64 123	540.86 617.31	119.52	Shut-In(2) End Shut-	h(2)			
			129	1673.45	118.02	Final Hydr	o-static			
20					9					
	Recovery		2. 2.	55 9J	Ga	s Rates				
Langth (ft)	Description	Volume (bbl)			Choke (i	nchas) Press	ure (psig) Ge	s Rate (Mcf/d)		
0.00	Gas to Surface	0.00								
1302.00	00	18.26								
62,00	MGO 30%G15%M55%O	0,87								
30.00		0.87								
30.00		1 U.42								
Recovery from mul	tipe tests	¥								
Tri lobite Tes	sting, Inc	Ref. No: 64138			Printed:	2017.04.18	i @ 14:10:01			



Contact: CYNOSURE ENERGY LLC Address/Job Location:

1125 17th Street, Suite 410 **DENVER CO 80113**

Reference: LEIKER 3-25-15-20

Description of Work: SURFACE JOB

Net 30

APPROVED

Taxable

No

Yes

Yes

Yes

No

No

Yes

No

By Bob Plante at 9:55 pm, Apr 19, 2017

ltem

Quantity

Price

Taxable

Services / Items Included:	Quantity	y Price	
Labor		\$	489.84
Common-Class A	136	\$	1,487.36
Calcium Chloride	7	\$	258.26
POZ Mix-Standard	34	\$	156.80
Bulk Truck Matl-Material Service Charge	180	\$	118.59
Pump Truck Mileage-Job to Nearest Camp	22	\$	65.22
Premium Gel (Bentonite)	3	\$	57.32
Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$	50.73

Invoice Terms: SubTotal: \$ 2.684.11 Discount Available ONLY if Invoice is Paid & Received \$ (67.10)within listed terms of invoice: SubTotal for Taxable Items: \$ 1,910.74 SubTotal for Non-Taxable Items: \$ 706.27 Total: \$ 2.617.01 Tax: \$ 133.75 7.00% Ellis County Sales Tax **Thank You For Your Business!** Amount Due: \$ 2,750.76 **Applied Payments:** Balance Due: \$ 2,750.76

Past Due Invoices are subject to a service charge (annual rate of 24%) This does not include any applicable taxes unless it is listed. ©2008-2013 Straker Investments, LLC. All rights reserved.

QUALI		ELL C	EMENT 2886107	ING, IN	C.		
Phone 785-483-2025 Cell 785-324-1041	Home Office	P.O. Box 32 R	ussell, KS 67665	No.	148		
Sec.	Twp. Range	County	State	On Location	Finish		
Date 4-11-17 25	1520	Ellis	KS		3.1579m		
2.)	5-15-20	Location Ship	ino w180 53	J'ZW 1	Into		
Lease Leiker	Well No.	Owner					
Contractor DIKe		To Quality	Oilwell Cementing, Inc	cementing equipment	and furnish		
Type Job Sunfare		cementer a	ind helper to assist ow	ner or contractor to do	work as listed.		
Hole Size 1214	T.D. 218	Charge To	Elhon	- 10 -			
Csg. 35/8	Depth 212	Street					
Tbg. Size	Depth	City	waters of the .	State			
Tool	Depth	The above v	vas done to satisfaction a	nd supervision of owner	agent or contractor.		
Cement Left in Csg. 10	Shoe Joint	Cement Ar	nount Ordered / 20	80/20 3.1.6	C 2-1.6EL		
Meas Line	Displace 1336						
EQUIP	MENT	Common	100 136				
Pumptrk 20No. Cementer Helper	2.0	Poz. Mix	Poz. Mix and 34				
Bulktrk No. Driver Driver	#	Gel. 3	/ V /				
Bulktrk 2 No. Driver	Calcium	Calcium 7					
JOB SERVICES	& REMARKS	Hulls					
Remarks:		Salt	Salt				
Rat Hole		Flowseal	Flowseal				
Mouse Hole		Kol-Seal	Kol-Seal				
Centralizers		Mud CLB 4	Mud CL B 48				
Baskets		CEL-117 O	CEL-117 or CD110 CAE 38				
D/V or Port Collar		CFL-117 U	Cert-117 of CD110 CAF 38				
\$5/10 h	EN AL.	Jan & Handling					
Dirit 12 - 10 Them	I E PT- CITLO RT	Milonoo	00				
INTA TO SP	7	ivileage					
			OSTO 6				
ament or		and since of o swage					
C. C	To P Print De Ville Internet and an annual and	Centralizer					
		Baskets					
	AFU Insert	AFU Inserts					
		Float Shoe	<u> </u>				
		Latch Down					
· · · · · · · · · · · · · · · · · · ·					T 11		
	<u>~// [[[</u>	Pumptrk Ø	harge Surtuc	e			
		Mileage	2				
				Tax			
- 1 A/ 1				Discount			
Signature No 1 Quin	· · · · · · · · · · · · · · · · · · ·			Total Charge			



SP DECEIVE APR 2 5 2017

QUALITY OILWELL CEMENTING, INC.

PO Box 32 - 740 WEST WICHITA AVE, RUSSELL KS 67665 PHONE:785-324-1041 FAX:785-483-1087 EMAIL: cementing@ruraltel.net

Invoice

1473 Date: 4/18/2017 Invoice # 205

P.O.#:

Due Date: 5/18/2017 Division: Russell

Contact: CYNOSURE ENERGY LLC Address/Job Location:

1125 17th Street, Suite 410 DENVER CO 80113

APPROVED By Bob Plante at 8:49 pm, Apr 25, 2017

Reference: LEIKER 3-25-15-20

Description of Work: PROD STRING

Services / Items Included:	Quantity		Price	Taxable	ltem	Quantity	Price	Taxab
Labor	-	\$	601.97	No	Pump Truck Mileage-Job to Nearest Camp	22	\$66.80	No
Common-Class A	200	\$	2,240.00	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	22	\$51.95	No
Cement Port Collar, 5 1/2"	1	\$	1,754.22	Yes				
Gilsonite	900	\$	910.84	Yes				
5 1/2" Basket	3	\$	566.75	Yes				
5 1/2" Turbolizer	11	\$	534.36	Yes				
Mud Clear	500	\$	249.64	Yes				
Auto Fill Float Shoe, 5 1/2"	1	\$	226.70	Yes				
Latch Down Plug & Baffle, 5 1/2"	1	\$	179.47	Yes				
Salt (Fine)	17	\$	150.26	Yes				
Bulk Truck Matl-Material Service Charge	226	\$	152.48	No				
Invoice Terms:						SubTotal:	\$ 7,685.43	
Net 30			Discou	unt Ava	ilable <u>ONLY</u> if Invoice is Paid & within listed terms	& Received of invoice:	\$ (192.14)	
					SubTotal for Ta	axable Items:	\$ 6,641.93	-
SubTotal for Non-Taxable Items				axable Items:	\$ 851.37			
						Total:	\$ 7,493.29	•
				7.00%	Ellis County Sales Tax	Tax:	\$ 464.94	
Thank You For Your Business!				Am Applied	ount Due: Payments:	\$ 7,958.23	•	
					Bal	ance Due:	\$ 7,958.23	
Past Due Invoices are subject to a ser	vice charge	(ann	ual rate o	of 24%)			-	

Past Due Invoices are subject to a service charge (annual rate of 24% This does not include any applicable taxes unless it is listed. ©2008-2013 Straker Investments, LLC. All rights reserved.

QUALITY OILWELL CEMENTING, INC. Federal Tax 1.D.# 20-2886107

Phone 785-483-2025 Cell 785-324-1041	н	ome Office	P.O. Box 32 R	ussell, KS 67665	No.	205		
Sec.	Twp.	Range	County	State	On Location	Finish		
Date 4-18-17 25	15	20	FIS	K5		4:15 Am		
m start in a calific or in a las m	510.0-		Location Scho	orchan 91/2.	w Ninto	and the first state of the		
Lease Leiker 3-25-1	5.20	Well No.	Owner					
Contractor DJKC #8			To Quality	To Quality Oilwell Cementing, Inc.				
Type Job Production 5	cementer a	- You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.						
Hole Size 77/8	T.D.	3865	Charge To	Charge Rich man				
Csg. 51/2	Csg. 51/Z Depth 3861							
Tbg. Size	Tbg. Size				State			
Tool fort Collar	Depth	1385	The above v	was done to satisfaction	and supervision of owner	r agent or contractor.		
Cement Left in Csg. 20,4	Shoe Jo	oint 20.47	Cement Ar	mount Ordered 2004	om 10% Sult 5	1. Gilsonite		
Meas Line	Displac	·911/2	BL	1. S.	Deg	I muddler		
EQUIP	MENT	,	Common	00				
Pumptrk 20 No. Cementer Helper	raig		Poz. Mix	Poz. Mix				
Bulktrk No. Driver			Gel.	Gel.				
Bulktrk 3 No. Driver Da	s.d		Calcium	Calcium				
JOB SERVICES	S& REMA	RKS	Hulls	Hulls				
Remarks:	le uuu		Salt 17	Salt 17				
Rat Hole 30514				Flowseal				
Mouse Hole 153K				Kol-Seal 900 #				
Centralizers				Mud CLR 48 500 gal				
Baskets				CFL-117 or CD110 CAF 38				
D/V or Port Collar	Sand	Sand						
512 Set@ 336	el. In	501@ 38	40,5 Handling	26				
Est. Cincolation	umps	Degal M	Mileage					
Clar + 10Bi Spo	rich.			FLOAT EQUIPN	fent	•		
Cament Ratifica	Guide Sho	Guide Shoe						
Cement 51/2 W	th 1	55 5K	Centralizer	Centralizer				
Clear Jones & D	5 Slace	Pla	Baskets	Baskets 3				
Plantantel Que #				AFWinsens Part Collar				
L. F. Desser 9004				Float Shoe				
				Latch Down				
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