CORRECTION #1

Kansas Corporation Commission OIL & GAS CONSERVATION DIVISION

1243667

Form ACO-1 August 2013 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. 15
Name:	Spot Description:
Address 1:	SecTwpS. R 🔲 East 🗌 West
Address 2:	Feet from North / South Line of Section
City:	Feet from _ East / _ West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	□NE □NW □SE □SW
CONTRACTOR: License #	GPS Location: Lat:, Long:
Name:	(e.g. xx.xxxxx) (e.gxxx.xxxxx) Datum: NAD27 NAD83 WGS84
Wellsite Geologist:	
Purchaser:	County:
Designate Type of Completion:	Lease Name: Well #:
☐ New Well ☐ Re-Entry ☐ Workover	Field Name:
☐ Oil ☐ WSW ☐ SWD ☐ SIOW	Producing Formation:
Gas D&A ENHR SIGW	Elevation: Ground: Kelly Bushing:
☐ OG ☐ GSW ☐ Temp. Abd.	Total Vertical Depth: Plug Back Total Depth:
CM (Coal Bed Methane)	Amount of Surface Pipe Set and Cemented at: Feet
Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used? Yes No
If Workover/Re-entry: Old Well Info 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 ENHR ☐ Conv. to SWD	Drilling Fluid Management Plan
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer	(Data must be collected from the Reserve Pit)
Commingled Permit #:	Chloride content:ppm Fluid volume:bbls
Dual Completion Permit #:	Dewatering method used:
SWD Permit #:	Location of fluid disposal if hauled offsite:
ENHR Permit #:	
GSW Permit #:	Operator Name:
	Lease Name: License #:
Spud Date or Date Reached TD Completion Date or	QuarterSecTwpS. R East West
Recompletion Date Recompletion Date	Countv: 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

Confidentiality Requested:

Yes No

KCC Office Use ONLY
Confidentiality Requested
Date:
Confidential Release Date:
Wireline Log Received
Geologist Report Received
UIC Distribution
ALT I II III Approved by: Date:



Operator Name:				Lease N	lame: _			Well #:		
Sec Twp	S. R	East	West	County:						
open and closed, flow	ow important tops of for ring and shut-in pressu o surface test, along w	res, whether	shut-in pre	ssure reach	ned stati	c level, hydrost	atic pressures, b			
	g, Final Logs run to obed in LAS version 2.0 o					gs must be em	ailed to kcc-wel	l-logs@kcc.ks.gov	v. Digital e	electronic log
Drill Stem Tests Taker (Attach Additional		Yes	☐ No		L		on (Top), Depth			ample
Samples Sent to Geo	logical Survey	Yes	☐ No		Nam	е		Тор	D	atum
Cores Taken Electric Log Run		Yes Yes	☐ No ☐ No							
List All E. Logs Run:										
			CASING	RECORD	☐ Ne	ew Used				
		Report al				ermediate, produc	tion, etc.			
Purpose of String	Size Hole Drilled	Size Ca Set (In		Weigl Lbs./		Setting Depth	Type of Cement	# Sacks Used		nd Percent Iditives
		Δ.	DDITIONAL	CEMENTIN	10 / 201		\			
Purpose:	Depth	Type of C		# Sacks		JEEZE RECORD		d Percent Additives		
Perforate	Top Bottom	1,500 01 0	Joinion	" odoko				a i orodin / tadiavoo		
Plug Back TD Plug Off Zone										
1 lug On Zone										
	ulic fracturing treatment or					Yes	=	skip questions 2 ar	nd 3)	
	otal base fluid of the hydra ing treatment information	•			•	?		skip question 3) fill out Page Three	of the ACO	-1)
	PERFORATIO					Acid Fr		ent Squeeze Record		
Shots Per Foot		ootage of Each					Amount and Kind of			Depth
TUBING RECORD:	Size:	Set At:		Packer At:	:	Liner Run:	Yes	No		
Date of First, Resumed	Production, SWD or ENH	IR. Pr	oducing Meth	nod:	,	Gas Lift	Other (Explain)			
Estimated Production Per 24 Hours	Oil B	bls.		Mcf	Wate		Bbls.	Gas-Oil Ratio		Gravity
DISPOSITIO	ON OF GAS:		- N	METHOD OF	COMPLE	TION:		PRODUCTIO)N INTERV	ΔΙ:
Vented Solo		Oper	n Hole	Perf.	Dually	Comp. Co	mmingled	1110000110	ZIN IIN I LITV	
(If vented, Sui	bmit ACO-18.)	Othe	r (Specify)		(Submit A	4CO-5) (Su	bmit ACO-4)			

Form	ACO1 - Well Completion			
Operator	H & C Oil Operating Inc.			
Well Name	North Fork Farms 20-1			
Doc ID	1243667			

All Electric Logs Run

Microresistivity log
Dual induction log
Dual Compensated Porosity log
Sonic Cement Bond log

Form	ACO1 - Well Completion			
Operator	H & C Oil Operating Inc.			
Well Name	North Fork Farms 20-1			
Doc ID	1243667			

Tops

Name	Тор	Datum
Top Anhydrite	1944	+427
Base Anhydrite	1974	+397
Topeka	3484	-1113
Heebner	3707	-1336
Toronto	3728	-1357
LKC	3740	-1369
ВКС	3979	-1608
Marmaton	4092	-1721
Cherokee Shale	4146	-1775
Cong. Sand	4223	-1852
Mississippi/Osage	4263	-1892
Gilmore City	4293	-1922

Form	ACO1 - Well Completion			
Operator	H & C Oil Operating Inc.			
Well Name	North Fork Farms 20-1			
Doc ID	1243667			

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
surface	12.25	8.625	23	223	common		3%cc, 2% gel
production	7.875	5.5	14	4328	QMDC	435	
production	7.875	5.5	14	4328	QProC		10% salt, 5% gilsonite

Summary of Changes

Lease Name and Number: North Fork Farms 20-1

API/Permit #: 15-195-22970-00-00

Doc ID: 1243667

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Approved By	Rene Stucky	NAOMI JAMES
Approved Date	02/04/2015	02/24/2015
Save Link	//kcc/detail/operatorE ditDetail.cfm?docID=12	//kcc/detail/operatorE ditDetail.cfm?docID=12
Well Type	33124 GAS	43667 OIL



Confidentiality Requested:

Yes No

Kansas Corporation Commission Oil & Gas Conservation Division

1233124

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

CONFIDENTIAL WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #	API No. 15
Name:	Spot Description:
Address 1:	SecTwpS. R 🔲 East 🗌 West
Address 2:	Feet from North / South Line of Section
City:	Feet from _ East / _ West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	□NE □NW □SE □SW
CONTRACTOR: License #	GPS Location: Lat:, Long:
Name:	(e.g. xx.xxxxx) (e.gxxx.xxxxx) Datum: NAD27 NAD83 WGS84
Wellsite Geologist:	
Purchaser:	County:
Designate Type of Completion:	Lease Name: Well #:
☐ New Well ☐ Re-Entry ☐ Workover	Field Name:
☐ Oil ☐ WSW ☐ SWD ☐ SIOW	Producing Formation:
Gas D&A ENHR SIGW	Elevation: Ground: Kelly Bushing:
☐ OG ☐ GSW ☐ Temp. Abd.	Total Vertical Depth: Plug Back Total Depth:
CM (Coal Bed Methane)	Amount of Surface Pipe Set and Cemented at: Feet
Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used? Yes No
If Workover/Re-entry: Old Well Info 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 ENHR ☐ Conv. to SWD	Drilling Fluid Management Plan
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer	(Data must be collected from the Reserve Pit)
Commingled Permit #:	Chloride content:ppm Fluid volume:bbls
Dual Completion Permit #:	Dewatering method used:
SWD Permit #:	Location of fluid disposal if hauled offsite:
ENHR Permit #:	
GSW Permit #:	Operator Name:
	Lease Name: License #:
Spud Date or Date Reached TD Completion Date or	QuarterSecTwpS. R East West
Recompletion Date Recompletion Date	Countv: 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
Geologist Report Received
UIC Distribution
ALT

KOLAR Document ID: 1233124

Page Two

Operator Name: _				Lease Name:			Well #:	
Sec Twp.	S. R.	E	ast West	County:				
	flowing and shu	ut-in pressures, v	vhether shut-in pre	ssure reached st	atic level, hydrosta	tic pressures, bot		val tested, time tool erature, fluid recovery,
Final Radioactivity files must be subm						iled to kcc-well-lo	gs@kcc.ks.gov	v. Digital electronic log
Drill Stem Tests Ta			Yes No			on (Top), Depth ar		Sample
Samples Sent to 0	Geological Surv	/ey	Yes No	Na	me		Тор	Datum
Cores Taken Electric Log Run Geologist Report / List All E. Logs Ru	_		Yes No Yes No Yes No					
		B	CASING eport all strings set-c		New Used	ion, etc.		
Purpose of Strir		Hole illed	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
			ADDITIONAL	CEMENTING / SO	UEEZE RECORD			
Purpose:		epth T Bottom	ype of Cement	# Sacks Used	d Type and Percent Additives			
Perforate Protect Casi Plug Back T								
Plug Off Zor								
Did you perform a Does the volume Was the hydraulic	of the total base f	fluid of the hydrauli		_	=	No (If No, sk	ip questions 2 an ip question 3) out Page Three	,
Date of first Product Injection:	tion/Injection or R	esumed Production	Producing Meth	nod:	Gas Lift 0	Other (Explain)		
Estimated Production Per 24 Hours	on	Oil Bbls.					Gas-Oil Ratio	Gravity
DISPOS	SITION OF GAS:		N	METHOD OF COMP	LETION:			DN INTERVAL: Bottom
	Sold Used	I on Lease	Open Hole			mmingled mit ACO-4)	Тор	BOROTT
,	,			B.11 B1				
Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid,	Fracture, Shot, Cer (Amount and Kind	menting Squeeze I of Material Used)	Record
TUBING RECORD:	: Size:	Set	Δ+-	Packer At:				
TODING RECORD:	. 3126.	Set	n.	i donei Al.				

Form	ACO1 - Well Completion			
Operator	H & C Oil Operating Inc.			
Well Name	North Fork Farms 20-1			
Doc ID	1233124			

All Electric Logs Run

Microresistivity log
Dual induction log
Dual Compensated Porosity log
Sonic Cement Bond log

Form	ACO1 - Well Completion			
Operator	H & C Oil Operating Inc.			
Well Name	North Fork Farms 20-1			
Doc ID	1233124			

Tops

Name	Тор	Datum
Top Anhydrite	1944	+427
Base Anhydrite	1974	+397
Topeka	3484	-1113
Heebner	3707	-1336
Toronto	3728	-1357
LKC	3740	-1369
ВКС	3979	-1608
Marmaton	4092	-1721
Cherokee Shale	4146	-1775
Cong. Sand	4223	-1852
Mississippi/Osage	4263	-1892
Gilmore City	4293	-1922

Form	ACO1 - Well Completion			
Operator	H & C Oil Operating Inc.			
Well Name	North Fork Farms 20-1			
Doc ID	1233124			

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3925-3929'	1750 gal 15% MCA	3929'
4	3906-3914'	2000 gal 20% MCA	3914'

Form	ACO1 - Well Completion			
Operator	H & C Oil Operating Inc.			
Well Name	North Fork Farms 20-1			
Doc ID	1233124			

Casing

		Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
surface	12.25	8.625	23	223	common		3%cc, 2% gel
production	7.875	5.5	14	4328	QMDC	435	
production	7.875	5.5	14	4328	QProC		10% salt, 5% gilsonite

Marc A. Downing Geologic Report	Drilling Contractor Commenced 11-18-14 Completed 11-27-14 Samples Saved From 2450 To DED				22 B. 23 S. 24 S. 24 S. 25 S. 25 S. 26 S.		
Consulting Petroleum Geologist Drilling Time and Sample Log	Drilling Time Kept From 3350 To RTD Samples Examined From 3450 To DTD	NN 2	IARKS		33 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	# 5 1152 30-30	
Geologist	Geological Supervision From 3350 To RTD	1/1/	NEW SERVICE STATES OF THE SERVICE STATES OF		S S S S S S S S S S S S S S S S S S S	12 x 8 + 3 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
Operator H&C Oil Operating, Inc. Elevation KB 2371					五五 3 3 1 3 3 1 3 3 1 3 3 3 1 3 3 3 1 3	一	The state of the s
Lease North Fork Farms No. 20-1		A A A A A A A A A A A A A A A A A A A	CHOWS		HE HEGS	H r. H r. 2 3 4 0	
API # 15-195-22970-0000 Casing Record Surface		0000 8	SHOWS				
Field Wildcat 8 5/8" @ 223' Production	Summary and Recommendations	00000	88	美 中 经 是 是 是		第52 年 第 第 第 第 第 章	新 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Location 480' FNL & 2130' FEL 5 1/2" @ 4334' Electrical Surveys	to set 5 1/2" production casing for completion.	HHH #	OFT States	Trong 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	() () () () () () () () () ()	中央 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Sec. 20 Twp. 11s Rge. 23w CNL/CDL, DIL,			SCR 5 %	1	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
County Trego State Kansas MEL, SONIC	Perforate:	Z DE 4	THE PARTY OF THE P	一一年到日午前年到 五年 五年 一年 下京年至七五十五 五	1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Formation Sample tops Log Tops Datum Struct Comp	LKC J: 3925-3929	G G	AMP SAMP	20 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	古書 + 子	4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 -
Base Anhydrite 1976 1974 +397 +4		ale ale	2 2 3	公司 2000 2000 2000 2000 2000 2000 2000 20	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	25 24 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	五十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二十二
Topeka 3484 3484 -1113 +5		Sh	HOLOGY IIIIII		_{\\\\\\=\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
Heebner 3707 3707 -1336 +7 Toronto 3728 3728 -1357 +8		stone					ON TALL LIBERAL TO THE FEED ON THE
LKC 3741 3740 -1369 +9		Sand	34kg	34.68	30.08	8 2 2	8
Marmaton 4091 4092 -1721 +17		a a a a a a a a a a a a a a a a a a a					
Cherokee Sh 4148 4146 -1775 +20 Cong. Sand 4223 4223 -1852 Absent							
Miss/Osage 4264 4263 -1892 +41 Gilmore City 4294 4293 -1922 +42	Respectfully Submitted	THITHIH THITHIH THITHIH Anhydrite					
Viola 4315 NA -1944 +68	Respectfully Submitted, Marc A. Downing	A BESSE				######################################	1
Total Depth 4335 4336 -1965	Marc A. Downing				a Tild A more and and a more a man and a more and a mor	mind my my from from from a my a man	
Reference Well For Structural Comparison Jay Boy Oil Miller "A" 1 SE SE SW Sec. 20-11s-23w			was a second war with the second war with the second war with the second war war was a second with the second war	WANT AM AND AM AND AM AND	AMAMA IN THE AMAMA		
DESERVE AND SECTION SECTION	<u> </u>						



Prepared For: **H&C Oil Operating Inc.**

PO Box 86 Planville, KS 67663

ATTN: Marc Downing

20-11s-23w Trego,KS

North Fork Farms #20-1

Start Date: 2014.11.22 @ 20:29:46 End Date: 2014.11.23 @ 06:16:46 Job Ticket #: 58410 DST #: 1

Trilobite Testing, Inc 1515 Commerce Parkway Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620



H&C Oil Operating Inc.

North Fork Farms #20-1 20-11s-23w Trego,KS

62

Tester:

Unit No:

PO Box 86

Planville, KS 67663 Job Ticket: 58410

ATTN: Marc Downing

ob Ticket: 58410 DST#:1

Test Start: 2014.11.22 @ 20:29:46

Brannan Lonsdale

2363.00 ft (CF)

GENERAL INFORMATION:

Formation: KC "I&J"

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)

Time Tool Opened: 00:12:46 Time Test Ended: 06:16:46

Interval: 3892.00 ft (KB) To 3940.00 ft (KB) (TVD) Reference ⊟evations: 2371.00 ft (KB)

Total Depth: 3940.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8655 Outside

Press@RunDepth: 493.19 psig @ 3893.00 ft (KB) Capacity: 8000.00 psig

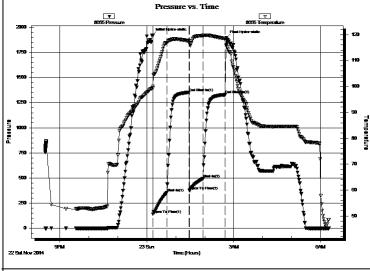
 Start Date:
 2014.11.22
 End Date:
 2014.11.23
 Last Calib.:
 2014.11.23

 Start Time:
 20:29:47
 End Time:
 06:16:46
 Time On Btm:
 2014.11.23 @ 00:11:16

 Time Off Btm:
 2014.11.23 @ 02:44:46

TEST COMMENT: 30- IF- BOB 1 min

45- ISI- BOB 16 mins 30- FF- BOB instantly 45- FSI- BOB 22 mins



	Time	Pressure	Temp	Annotation
	(Min.)	(psig)	(deg F)	
	0	1920.93	99.21	Initial Hydro-static
	2	140.09	100.04	Open To Flow (1)
	31	354.95	116.91	Shut-In(1)
	76	1352.00	117.58	End Shut-In(1)
1	77	374.63	116.84	Open To Flow (2)
	105	493.19	119.65	Shut-In(2)
•	151	1329.70	118.44	End Shut-In(2)
	154	1894.74	116.05	Final Hydro-static

PRESSURE SUMMARY

Recovery

Length (ft)	Description	Volume (bbl)	
1435.00	GO, 20%G 80%O	19.34	
0.00	1560' GIP	0.00	

Gas Rates			
	Choke (inches)	Pressure (neig)	Gas Rate (Mcf/d)



H&C Oil Operating Inc.

North Fork Farms #20-1 20-11s-23w Trego,KS

PO Box 86

Job Ticket: 58410

DST#: 1

Planville, KS 67663

ATTN: Marc Downing

Test Start: 2014.11.22 @ 20:29:46

GENERAL INFORMATION:

Formation: KC "I&J"

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)

Time Tool Opened: 00:12:46 Tester: Brannan Lonsdale

Time Test Ended: 06:16:46 Unit No: 62

Interval: 3892.00 ft (KB) To 3940.00 ft (KB) (TVD) Reference Elevations: 2371.00 ft (KB)

Total Depth: 3940.00 ft (KB) (TVD) 2363.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8651 Inside

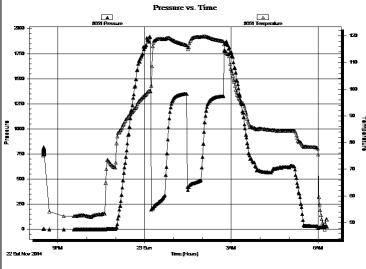
Press@RunDepth: psig @ 3893.00 ft (KB) Capacity: 8000.00 psig

Start Date: 2014.11.22 End Date: 2014.11.23 Last Calib.: 2014.11.23

Start Time: 20:29:54 End Time: 06:18:53 Time On Btm:

Time Off Btm:

TEST COMMENT: 30- IF- BOB 1 min 45- ISI- BOB 16 mins 30- FF- BOB instantly 45- FSI- BOB 22 mins



PRESSURE S	SUMMARY
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	1 1 2 3 3 1 2 3 3 1 1 1 1 1 1 1 1 1 1 1						
	Time	Pressure	Temp	Annotation			
	(Min.)	(psig)	(deg F)				
Į,							
Temperature							
2							
				i			

Recovery

Length (ft)	Description	Volume (bbl)
1435.00	GO, 20%G 80%O	19.34
0.00	1560' GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
--	----------------	-----------------	------------------



TOOL DIAGRAM

H&C Oil Operating Inc.

North Fork Farms #20-1

PO Box 86

20-11s-23w Trego,KS

Planville, KS 67663

Job Ticket: 58410 DST#: 1

ATTN: Marc Downing

Test Start: 2014.11.22 @ 20:29:46

Tool Information

Drill Pipe: Length: 3854.00 ft Diameter: Heavy Wt. Pipe: Length: ft Diameter: 3.75 inches Volume: 52.65 bbl inches Volume: - bbl

2.25 inches Volume:

Total Volume:

Tool Weight: 2000.00 lb Weight set on Packer: 25000.00 lb

Drill Collar: Length: 30.00 ft Diameter: Drill Pipe Above KB: 12.00 ft

0.15 bbl Weight to Pull Loose: 58000.00 lb Tool Chased 0.00 ft - bbl

Depth to Top Packer: 3892.00 ft String Weight: Initial 50000.00 lb

Depth to Bottom Packer: ft Interval between Packers: 48.00 ft Final 56000.00 lb

68.00 ft Tool Length:

Number of Packers: 2 Diameter: 6.75 inches

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3873.00		
Shut In Tool	5.00			3878.00		
Hydraulic tool	5.00			3883.00		
Packer	5.00			3888.00	20.00	Bottom Of Top Packer
Packer	4.00			3892.00		
Stubb	1.00			3893.00		
Recorder	0.00	8651	Inside	3893.00		
Recorder	0.00	8655	Outside	3893.00		
Perforations	10.00			3903.00		
Change Over Sub	1.00			3904.00		
Drill Pipe	32.00			3936.00		
Change Over Sub	1.00			3937.00		
Bullnose	3.00			3940.00	48.00	Bottom Packers & Anchor

Total Tool Length: 68.00



FLUID SUMMARY

H&C Oil Operating Inc.

North Fork Farms #20-1

PO Box 86

20-11s-23w Trego,KS

Planville, KS 67663

Job Ticket: 58410

DST#: 1

ATTN: Marc Downing

Test Start: 2014.11.22 @ 20:29:46

Mud and Cushion Information

Mud Type:Gel ChemCushion Type:Oil API:36 deg APIMud Weight:9.00 lb/galCushion Length:ftWater Salinity:ppm

Mud Weight:9.00 lb/galCushion Length:ftViscosity:51.00 sec/qtCushion Volume:bbl

Water Loss: 7.97 in³ Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 3000.00 ppm Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1435.00	GO, 20%G 80%O	19.341
0.00	1560' GIP	0.000

Total Length: 1435.00 ft Total Volume: 19.341 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8655

Outside H&C Oil Operating Inc.

20-11s-23w Trego,KS

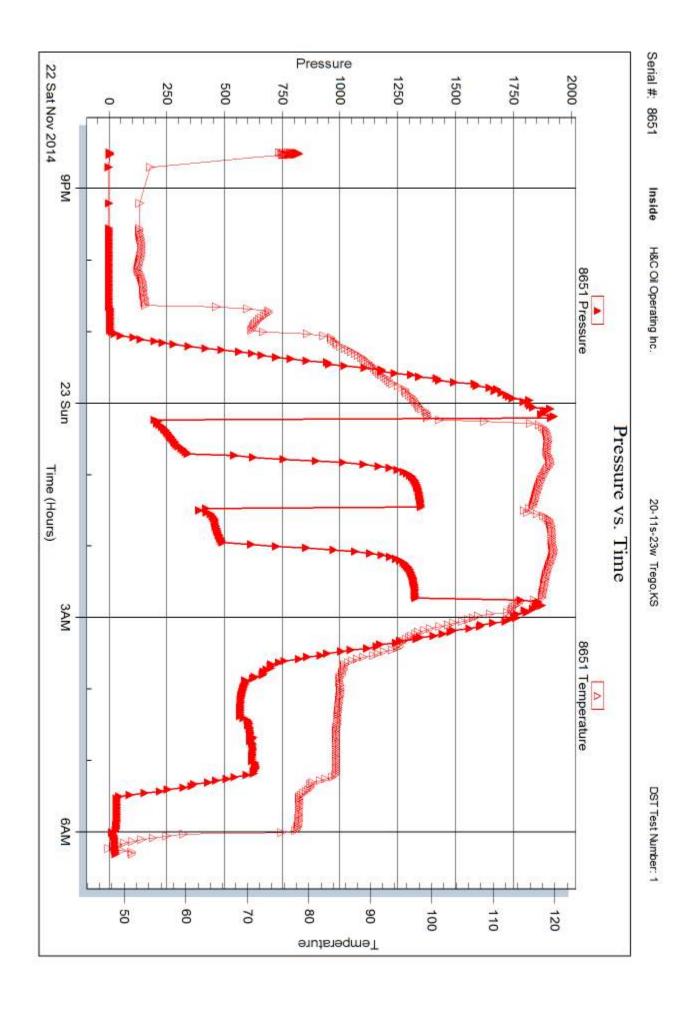
DST Test Number: 1

Trilobite Testing, Inc.

Ref. No:

58410

Printed: 2014.11.26 @ 15:42:56



Trilobite Testing, Inc.

Ref. No:

58410

Printed: 2014.11.26 @ 15:42:56



Prepared For: **H&C Oil Operating Inc.**

PO Box 86 Planville, KS 67663

ATTN: Marc Downing

20-11s-23w Trego,KS

North Fork Farms #20-1

Start Date: 2014.11.26 @ 08:39:04 End Date: 2014.11.26 @ 14:13:34 Job Ticket #: 58414 DST #: 2

Trilobite Testing, Inc 1515 Commerce Parkway Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620



H&C Oil Operating Inc.

20-11s-23w Trego,KS

North Fork Farms #20-1

PO Box 86

Job Ticket: 58414

Tester:

Unit No:

DST#: 2

Planville, KS 67663

ATTN: Marc Downing

Test Start: 2014.11.26 @ 08:39:04

62

GENERAL INFORMATION:

Formation: Marmaton

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)

Time Tool Opened: 10:20:04 Time Test Ended: 14:13:34

Interval:

4104.00 ft (KB) To 4152.00 ft (KB) (TVD)

Total Depth: 4152.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2371.00 ft (KB)

Brannan Lonsdale

2363.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8655 Outside

Press@RunDepth: 25.65 psig @ 4105.00 ft (KB) Capacity: 8000.00 psig

 Start Date:
 2014.11.26
 End Date:
 2014.11.26
 Last Calib.:
 2014.11.26

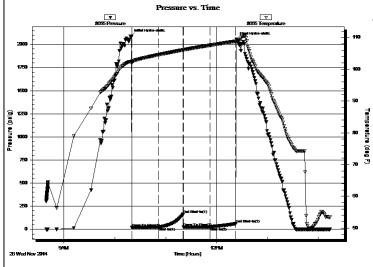
 Start Time:
 08:39:05
 End Time:
 14:13:34
 Time On Btm:
 2014.11.26 @ 10:18:34

Time Off Btm: 2014.11.26 @ 12:23:34

PRESSURE SUMMARY

TEST COMMENT: 30- IF- Built very slow ly to 3/4"

30- ISI- No blow 30- FF- No blow 30- FSI- No blow



FRESSURE SUIVIIVIART					
Time	Pressure	Temp	Annotation		
(Min.)	(psig)	(deg F)			
0	2089.17	102.36	Initial Hydro-static		
2	19.81	101.86	Open To Flow (1)		
33	21.95	104.54	Shut-In(1)		
62	161.92	106.07	End Shut-In(1)		
63	22.66	106.07	Open To Flow (2)		
94	25.65	107.50	Shut-In(2)		
124	60.06	108.76	End Shut-In(2)		
125	2056.34	109.28	Final Hydro-static		

Recovery

Length (ft)	Description	Volume (bbl)
5.00	М	0.02
* Recovery from mult	iple tests	

Gas Rates		
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



H&C Oil Operating Inc.

North Fork Farms #20-1 20-11s-23w Trego,KS

PO Box 86

Planville, KS 67663

Job Ticket: 58414 **DST#: 2**

ATTN: Marc Downing Test Start: 2014.11.26 @ 08:39:04

GENERAL INFORMATION:

Formation: Marmaton

Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)

Time Tool Opened: 10:20:04 Tester: Brannan Lonsdale

Time Test Ended: 14:13:34 Unit No: 62

Interval: 4104.00 ft (KB) To 4152.00 ft (KB) (TVD) Reference Elevations: 2371.00 ft (KB)

Total Depth: 4152.00 ft (KB) (TVD) 2363.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8651 Inside

 Press@RunDepth:
 psig
 @
 4105.00 ft (KB)
 Capacity:
 8000.00 psig

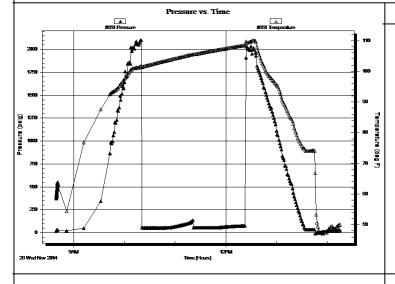
Start Date: 2014.11.26 End Date: 2014.11.26 Last Calib.: 2014.11.26

Start Time: 08:39:19 End Time: 14:14:48 Time On Btm:

Time Off Btm:

TEST COMMENT: 30- IF- Built very slow ly to 3/4"

30- ISI- No blow 30- FF- No blow 30- FSI- No blow



Time	Pressure	Temp	Annotation	
(Min.)	(psig)	(deg F)		

PRESSURE SUMMARY

Recovery

Length (ft)	Description	Volume (bbl)			
5.00	M	0.02			
* Recovery from mul	* Recovery from multiple tests				

Gas Rat	es	
Choke (inches)	Pressure (nsig)	Gas Rate (Mcf/d)



TOOL DIAGRAM

H&C Oil Operating Inc.

North Fork Farms #20-1

PO Box 86

20-11s-23w Trego,KS

Planville, KS 67663

Job Ticket: 58414 **DST#:2**

ATTN: Marc Downing

Test Start: 2014.11.26 @ 08:39:04

Tool Information

Drill Pipe: Length: 4078.00 ft Diameter:
Heavy Wt. Pipe: Length: ft Diameter:
Drill Collar: Length: 29.00 ft Diameter:

3.75 inches Volume: 55.71 bbl inches Volume: - bbl 2.25 inches Volume: 0.14 bbl

Tool Weight: 2000.00 lb Weight set on Packer: 25000.00 lb Weight to Pull Loose: 60000.00 lb

Drill Pipe Above KB: 23.00 ft
Depth to Top Packer: 4104.00 ft

Total Volume: - bbl

Tool Chased 0.00 ft

Depth to Bottom Packer: ft Interval betw een Packers: 48.00 ft

String Weight: Initial 56000.00 lb Final 56000.00 lb

Tool Length: 48.00 ft

Number of Packers: 2 Diameter: 6.75 inches

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4085.00		
Shut In Tool	5.00			4090.00		
Hydraulic tool	5.00			4095.00		
Packer	5.00			4100.00	20.00	Bottom Of Top Packer
Packer	4.00			4104.00		
Stubb	1.00			4105.00		
Recorder	0.00	8651	Inside	4105.00		
Recorder	0.00	8655	Outside	4105.00		
Perforations	10.00			4115.00		
Change Over Sub	1.00			4116.00		
Drill Pipe	32.00			4148.00		
Change Over Sub	1.00			4149.00		
Bullnose	3.00			4152.00	48.00	Bottom Packers & Anchor

Total Tool Length: 68.00



FLUID SUMMARY

H&C Oil Operating Inc.

North Fork Farms #20-1

PO Box 86

20-11s-23w Trego,KS

Serial #:

Planville, KS 67663

Job Ticket: 58414 **DST#: 2**

ATTN: Marc Downing

Test Start: 2014.11.26 @ 08:39:04

Mud and Cushion Information

Mud Type:Gel ChemCushion Type:Oil API:deg APIMud Weight:8.00 lb/galCushion Length:ftWater Salinity:ppm

Viscosity: 82.00 sec/qt Cushion Volume: bbl

Water Loss: 7.19 in³ Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psig

Salinity: 4500.00 ppm Filter Cake: inches

Recovery Information

Recovery Table

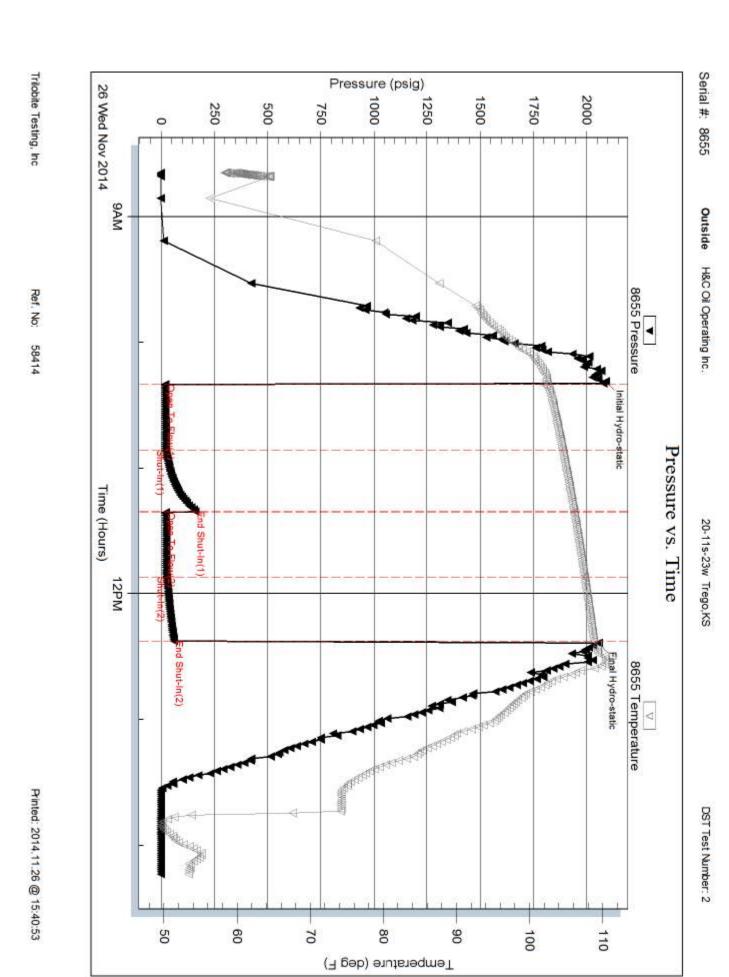
Length ft	Description	Volume bbl
5.00	M	0.025

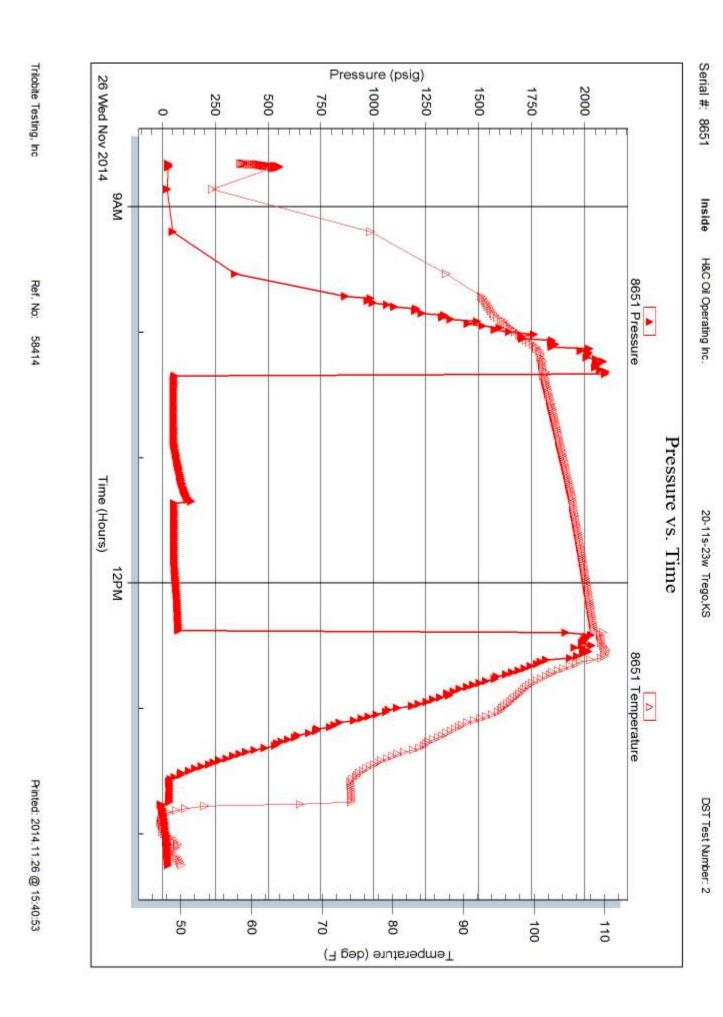
Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0

Laboratory Name: Laboratory Location:

Recovery Comments:







RILOBITE ESTING INC.

1515 Commerce Parkway - Hays, Kansas 67601

Test Ticket

NO. 58410

200				,
Well Name & No. North Fork Farm	№ €20-1 Test No.		_ Date _11/22/	14
company H+C Od Operating;			- 1	363 GL
Address PO Box 86 Parnuille				
Co. Rep/Geo. Marc Douning	,	los covery	4	
	_ Rge <u>23 w</u> co	Tr	ego State K	5
Interval Tested 3892 - 3940		+5"		
Anchor Length 481	Drill Pipe Run	3854	Mud Wt. 8.9	
Top Packer Depth 3887	Drill Collars Run	30	Vis5)	
Bottom Packer Depth 3892	Wt. Pipe Run		WL 8,0	
Total Depth 3940	Chlorides	Oppm System	LCM_11/2#	
Blow Description IF - BOB (mm)				
ISI-BOB 16 mins				
PF-BOB instant	/			
FSI-BOB 22min	2	733		
Rec 1435 Feet of 6.6	₽Ò%gas	80%oil	%water	%mud
Rec Feet of 1560' GJP	%gas	s %oil	%water	%mud
Rec Feet of	%gas	s %oil	%water	%mud
Rec Feet of	%gas	s %oil	%water	%mud
Rec Feet of	%gas	s %oil	%water	%mud
Rec Total 1435' BHT 118°	_Gravity $_{36}$ API RW $_{-}$	@°	F Chlorides	ppm
(A) Initial Hydrostatic1921	X Test1150	T-On l	$_{\text{ocation}}$	
(B) First Initial Flow	☐ Jars	T-Star	ted2030) _{(V/ -}
(C) First Final Flow 355	☐ Safety Joint		n 0014	1/23
(D) Initial Shut-In 1352	Circ Sub50		ed <u>6244</u>	
(E) Second Initial Flow375	☐ Hourly Standby	T-Out	0 1	2 0 4 2 0
(F) Second Final Flow 493	Mileage 94 RT	XL	0 21	eclour
(G) Final Shut-In 1330	□ Sampler291.40	11	123 @ 1429)
(H) Final Hydrostatic 1895	☐ Straddle	D Ri	uined Shale Packer	
	☐ Shale Packer		uined Packer	
Initial Open 3	☐ Extra Packer		ktra Copies	
Initial Shut-In45	☐ Extra Recorder		otal0	
Final Flow 30	☐ Day Standby		1491.40	
Final Shut-In 45	☐ Accessibility		ST Disc't	
	Sub Total 1491.40		, ,	
Approved By	Our Representa	itive Dram	nan Lonsula	de



RILOBITE ESTING INC. 1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

58414 NO.

4/10					
Well Name & No. North Fork Farms Company H+C Dol Operations	#20-1 Fra		/	te 11/26/15	13 GL
Address PO Box 86 Plainville,					
11 0	13 6 766	Rig Discou	Dry til		
Co. Rep/Geo. Marc buning	Rge. 23 W		/	State VS	
Location: Sec. 20 Twp. 11 3	_Rge. <u>23</u> W	Co	mego	State KS	
Interval Tested 404 - 4152	Zone Tested\	armaton			
Anchor Length	Drill Pipe Run	407	8 Mud	wt. 8,4	
Top Packer Depth 4099	Drill Collars Run	2	Vis_	82	
Bottom Packer Depth 4 164	Wt. Pipe Run		WL_	7.2	
Total Depth 4152	Chlorides	4560 ppm Sy	stem LCM	1#	
Blow Description IF-Bult very 3	1) 1 11			*	
ISI - No How	7.				
FF-No Slow					
FSJ- No blow					
Rec 5 Feet of N		%gas	%oil	%water	%mud
RecFeet of		%gas	%oil	%water	%mud
Rec Feet of		%gas	%oil	%water	%mud
RecFeet of		%gas	%oil	%water	%mud
RecFeet of		%gas	%oil	%water	%mud
Rec Total 5' BHT 169°	Gravity Al	PI RW@_	°F Chlo	orides	ppm
(A) Initial Hydrostatic 2089	▼ Test1250		T-On Locatio	n 0831	
(B) First Initial Flow 20	☐ Jars		T-Started	0839	
(C) First Final Flow 22	☐ Safety Joint		T-Open		
(D) Initial Shut-In 162	☐ Circ Sub			122]	
(E) Second Initial Flow 23	☐ Hourly Standby		T-Out	1415	
(F) Second Final Flow 26	Mileage 9	0-	Comments_		
(G) Final Shut-In	☐ Sampler				
(H) Final Hydrostatic 2556	☐ Straddle				
(1) I mai riyarostatio				Shale Packer	
Initial Open 30	☐ Shale Packer			Packer	
Initial Open 30 Initial Shut-In 30	☐ Extra Packer			pies	
	☐ Extra Recorder		150 %	0	
Final Flow 30	☐ Day Standby			395.70	-
Final Shut-In3O	☐ Accessibility		MP/DST Di	sc't	
	Sub Total 1395.70	72		1 0	
Approved By	Our F	Representative ()	muhan	LANSOYO	18

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

Phone 785-483-2025 Cell 785-324-1041

Russell, KS 67665 Home Office P.O. Box 32

725

500 The above was done to satisfaction and supervision of owner agent or contractor. Owner

To Quality Oilwell Cementing, Inc.

You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. 6:00 PM Total Charge Discount 30. On Location Red Denna C FLOAT EQUIPMENT C5 10 State (< \$ Cement Amount Ordered CFL-117 or CD110 CAF Handling 188 Wakeeney Pumptrk Charge 20 Charge H + Mud CLR 48 AFU Inserts Latch Down **Guide Shoe** Float Shoe Centralizer Mileage Common Flowsea Kol-Seal Poz. Mix Mileage Calcium Trego Sand Street Hulls County Salt Gel. City Location 20-1 3/465/ T Range 13 Well No. 724 2 JOB SERVICES & REMARKS Shoe Joint Displace Depth Depth Depth Twp. アナア 3 -T.D. EQUIPMENT No. Cementer V C K Farm Tylar 1 # Sec. ゆいす Discovery Lease North Fork 14 No. Driver
Puno Driver 20 3 Sarkeng 11-18-14 Cement Left in Csg. 12:14 D/V or Port Collar Pumptrk 20 X Signature Mouse Hole Centralizers Contractor Meas Line Hole Size Remarks: Type Job Tbg. Size Rat Hole Baskets Bulktrk Bulktrk Date Csg. Tool

QUALITY OLWELL CEMENTING, INC. Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 730

Cell 785-324-1041		
Sec. Twp. Ra	Range	State On Location Finish
Date 11-27-14 20 11 2	3 Tread	KS
	Location	IN Wakeeney HIN IN IN WIND
Lease Worth Pork Parms Well No.	5. 2d · i	Owner
14 Maro	•	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish
Production		r and helper to assist owner or
7718		Charge H & C O C C C C C C C C C C C C C C C C C
5'2	1.29	Street
Tbg. Size Depth		City State
Tool		d supervision of owner a
Cement Left in Csq. 20.65 Shoe Joint 2	O. 65	ed 160 Q-Pro C 14 Fla
	25 bhí	525 OMOC 12 FO 10th sett
EQUIPM	-	Common 160 0000 50000
Cementer	Brett	Poz. Mix
15 No. Driver Tyggo		Gel.
Bulktrk (9 No Driver LOON)		Calcium
		Hulls
Remarks:		Salt / '
Rat Hole · \$0 sv		Flowseal 300 H
		Kol-Seal そのう
	13,42,52,59	MUD CLR 48 500 Val Mad Flush
- 80		CFL-117 or CD110 CAF 38
ort Collar	1	Sand
		Handling 7/0
Ray 101 Tes 5 hat best	7,5	Mileaga
500 Cal Ma	,	S'_{Q} float equipment
Rat & Mouse		Guide Shoe
480 Sx AMDC + 1	60 d Pro-c	Centralizer - 16
placed 105 bbi		Baskets 3
ft Oregsure	96	AFU inserts
Sac		Float Shoe
h, id		Latch Down
(b mext	Late J	Pumptrk Charge
		Mileage $\cancel{45}$
		Discount
Signature Way 377 1 1.8 M.		Total Charge
		٦