

Confidentiality Requested:

Yes No

Kansas Corporation Commission Oil & Gas Conservation Division

1140509

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:			Sec	TwpS. R	East West
Address 2:			F6	eet from North /	South Line of Section
City:	State: Z	ip:+	Fe	eet from East /	West Line of Section
Contact Person:			Footages Calculated from I	Nearest Outside Section C	Corner:
Phone: ()			□ NE □ NW	V □SE □SW	
CONTRACTOR: License #			GPS Location: Lat:	, Long: _	
Name:				(e.g. xx.xxxxx)	(e.gxxx.xxxxx)
Wellsite Geologist:			Datum: NAD27	NAD83 WGS84	
Purchaser:			County:		
Designate Type of Completion:			Lease Name:	W	/ell #:
	e-Entry	Workover	Field Name:		
	_		Producing Formation:		
☐ Oil ☐ WSW ☐ D&A	☐ SWD	∐ SIOW □ SIGW	Elevation: Ground:	Kelly Bushing:	:
	GSW	Temp. Abd.	Total Vertical Depth:	Plug Back Total C	Depth:
CM (Coal Bed Methane)	dow	Temp. Abd.	Amount of Surface Pipe Se	et and Cemented at:	Feet
☐ Cathodic ☐ Other (Co	ore, Expl., etc.):		Multiple Stage Cementing	Collar Used? Yes	No
If Workover/Re-entry: Old Well I			If yes, show depth set:		Feet
Operator:			If Alternate II completion, c	cement circulated from:	
Well Name:			feet depth to:	w/	sx cmt.
Original Comp. Date:					
Deepening Re-perf	•	NHR Conv. to SWD	Drilling Fluid Managemer	nt Plan	
☐ Plug Back	Conv. to G		(Data must be collected from the		
Commingled	Pormit #:		Chloride content:	ppm Fluid volume	e: bbls
Dual Completion			Dewatering method used: _		
SWD			Location of fluid disposal if	hauled offsite	
☐ ENHR			1		
GSW	Permit #:		Operator Name:		
_ _			Lease Name:	License #:_	
Spud Date or Date R	eached 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				
Geologist Report Received				
UIC Distribution				
ALT I III Approved by: Date:				

Page Two



Operator Name:				Lease N	Name: _			Well #:		
Sec Twp	S. R	East	West	County	:					
INSTRUCTIONS: Shopen and closed, flow and flow rates if gas to	ring and shut-in pres o surface test, along	sures, whethe with final cha	er shut-in pre art(s). Attach	essure reac n extra shee	hed stati t if more	c level, hydrosta space is neede	itic pressures, bot d.	tom hole temp	erature, fluid re	ecovery,
Final Radioactivity Lo files must be submitte						ogs must be ema	ailed to kcc-well-lo	gs@kcc.ks.go	v. Digital electr	ronic log
Drill Stem Tests Taker (Attach Additional		Yes	☐ No				on (Top), Depth ar		Sampl	
Samples Sent to Geo	logical Survey	Yes	□No		Nam	е		Тор	Datum	1
Cores Taken ☐ Yes ☐ No Electric Log Run ☐ Yes ☐ No										
List All E. Logs Run:										
				RECORD	Ne					
	2	1				ermediate, product		T	I	
Purpose of String	Size Hole Drilled		Casing n O.D.)	Weig Lbs. /		Setting Depth	Type of Cement	# Sacks Used	Type and Pe Additive	
			ADDITIONAL	CEMENTIN	NG / SQL	JEEZE RECORD				
Purpose:	Depth Top Bottom	Type of	Cement	# Sacks Used Type and Percent Additives						
Perforate Protect Casing	100 20111111									
Plug Back TD Plug Off Zone										
1 lug 0 li 20 lio										
Did you perform a hydrau	ulic fracturing treatment	on this well?				Yes	No (If No, ski	ip questions 2 ar	nd 3)	
Does the volume of the t							= :	p question 3)		
Was the hydraulic fractur	ring treatment information	on submitted to	the chemical	disclosure re	gistry?	Yes	No (If No, fill	out Page Three	of the ACO-1)	
Shots Per Foot		ION RECORD Footage of Eac					cture, Shot, Cement			epth
	open,					,,				
TUBING RECORD:	Size:	Set At:		Packer A	t:	Liner Run:				
							Yes No			
Date of First, Resumed	Production, SWD or Ef	NHR. F	Producing Met	hod: Pumpin	a	Gas Lift 0	Other (Explain)			
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Wat			Gas-Oil Ratio	Gra	avity
	1									
	ON OF GAS:		en Hole	METHOD OF			mmingled	PRODUCTION	ON INTERVAL:	ļ
Vented Solo	I Used on Lease bmit ACO-18.)		en noie _	Perf.	(Submit		mmingled mit ACO-4)			

Form	ACO1 - Well Completion		
Operator	imarex Energy Co.		
Well Name	Hammer 19-4		
Doc ID	1140509		

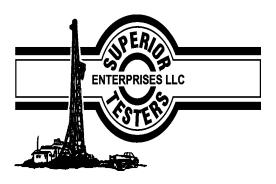
Tops

Name	Тор	Datum
Winfield	2780	+81
B/Heebner Shale	4182	-1321
Lansing	4240	-1379
Kansas City	4365	-1504
Marmaton	4862	-2001
Cherokee	5031	-2170
Atoka	5158	-2297
Morrow	5294	-2433
Chester	5465	-2604
St. Genevieve	5490	-2629

Form	ACO1 - Well Completion		
Operator	imarex Energy Co.		
Well Name	Hammer 19-4		
Doc ID	1140509		

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
3	5465-5470 Chester	1200gals 7.5% NEFE HCL w/ 101bbls 2% KCL	5465-5479
3	5472-5479 Chester		
3	5350-5352 Morrow	1000 gals 7.5% HCL NEFE w/ 1200 gals 2% KCL	5319-5352
3	5344-5346 Morrow		
3	5326-5330 Morrow		
3	5319-5321 Morrow		



Prepared For: Cimarex Energy CO

348 Rd DD satanta KS 67870

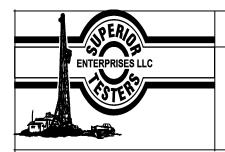
ATTN:

Hammer #19-4

19-30-31 Haskell

Start Date: 2013.02.22 @ 06:00:00 End Date: 2013.02.22 @ 23:05:00 Job Ticket #: 17388 DST #: 1

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902



Cimarex Energy CO

19-30-31 Haskell

348 Rd DD satanta KS 67870

Hammer #19-4

Job Ticket: 17388

Tester:

DST#:1

ATTN: Test Start: 2013.02.22 @ 06:00:00

GENERAL INFORMATION:

Formation: Mississippi

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

Time Tool Opened: 13:02:00 Time Test Ended: 23:05:00

Unit No: 3320-Great Bend -275

Reference Elevations:

Jared Scheck

4673.00 ft (KB) To 4715.00 ft (KB) (TVD)

2860.00 ft (KB)

Total Depth: 4715.00 ft (KB) (TVD)

2848.00 ft (CF)

Hole Diameter: 8.75 inches Hole Condition: Fair

KB to GR/CF: 12.00 ft

Serial #: 6731

Interval:

Press@RunDepth: 599.27 psia @ ft (KB) Capacity: psia

 Start Date:
 2013.02.22
 End Date:
 2013.02.22
 Last Calib.:
 1899.12.30

 Start Time:
 06:00:00
 End Time:
 23:05:00
 Time On Btm:
 2013.02.22 @ 13:00:00

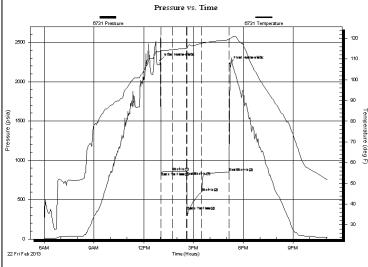
Time Off Btm: 2013.02.22 @ 17:11:00

TEST COMMENT: 1st Opening 30 Minutes-Weak blow built 3 1/2 inches into water died off 20 minutes into open

1st Shut-in 60 Minutes-No blow back

2nd Opening 60 Minutes-Weak surge flushed tool weak surge clean up went bottom of bucket in 20 minutes

2nd Shut-in 90 Minutes-No blow back



	PRESSURE SUMMARY				
1	Time	Pressure	Temp	Annotation	
	(Min.)	(psia)	(deg F)		
	0	2270.57	113.72	Initial Hydro-static	
	2	792.80	114.11	Open To Flow (1)	
	43	858.98	114.51	Shut-In(1)	
,	95	859.41	115.19	End Shut-In(1)	
Temperature	97	364.65	115.06	Open To Flow (2)	
ot to	149	599.27	117.55	Shut-In(2)	
(dea	249	849.13	119.27	End Shut-In(2)	
פ	251	2231.48	119.99	Final Hydro-static	

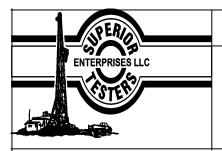
Cac Datas

Recovery

Length (ft)	Description	Volume (bbl)
1000.00	1000.00 w ater 30%mud 70%w ater	
240.00	Slightley oil cut water mud	3.37
0.00	0.00 5%oil 30%w ater 65%mud	

das riaics					
Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)			

Superior Testers Enterprises LLC Ref. No: 17388 Printed: 2013.02.22 @ 23:31:27



Cimarex Energy CO

19-30-31 Haskell

348 Rd DD satanta KS 67870

Hammer #19-4

Job Ticket: 17388

Tester:

Unit No:

DST#:1

ATTN: Test Start: 2013.02.22 @ 06:00:00

GENERAL INFORMATION:

Formation: Mississippi

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:02:00 Time Test Ended: 23:05:00

4673.00 ft (KB) To 4715.00 ft (KB) (TVD)

Total Depth: 4715.00 ft (KB) (TVD)

Hole Diameter: 8.75 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Jared Scheck

3320-Great Bend -275

Reference Elevations: 2860.00 ft (KB)

2848.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 8159

Interval:

Press@RunDepth: 849.88 psia @ ft (KB) Capacity: psia

 Start Date:
 2013.02.22
 End Date:
 2013.02.22
 Last Calib.:
 1899.12.30

 Start Time:
 06:00:00
 End Time:
 23:07:00
 Time On Btm:
 2013.02.22 @ 13:00:00

 Time Off Btm:
 2013.02.22 @ 17:10:20

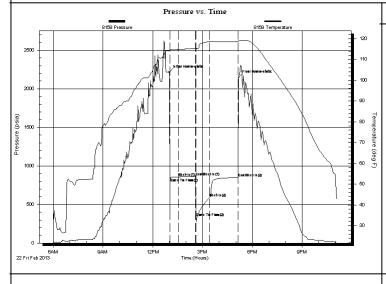
TEST COMMENT: 1st Opening 30 Minutes-Weak blow built 3 1/2 inches into water died off 20 minutes into open

Ref. No: 17388

1st Shut-in 60 Minutes-No blow back

2nd Opening 60 Minutes-Weak surge flushed tool weak surge clean up went bottom of bucket in 20 minutes

2nd Shut-in 90 Minutes-No blow back



PRESSURE SUMMARY

Time	Pressure	Temp	Annotation
(Min.)	(psia)	(deg F)	
0	2215.83	114.09	Initial Hydro-static
2	783.70	114.54	Open To Flow (1)
33	858.58	114.79	Shut-ln(1)
95	859.65	115.38	End Shut-In(1)
96	338.47	115.23	Open To Flow (2)
146	587.34	118.55	Shut-In(2)
248	849.88	118.57	End Shut-In(2)
251	2147.69	118.87	Final Hydro-static

Recovery

Description	Volume (bbl)
w ater 30%mud 70%w ater	8.11
Slightley oil cut water mud	3.37
5%oil 30%w ater 65%mud	0.00
	w ater 30%mud 70%w ater Slightley oil cut w ater mud

Gas Rates

С	hoke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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Printed: 2013.02.22 @ 23:31:27



TOOL DIAGRAM

Cimarex Energy CO

19-30-31 Haskell

348 Rd DD satanta KS 67870

Hammer #19-4

Job Ticket: 17388

DST#:1

Final 120000.0 lb

Printed: 2013.02.22 @ 23:31:27

ATTN:

Test Start: 2013.02.22 @ 06:00:00

Tool Information

Drill Pipe: Length: 4005.00 ft Diameter: 3.80 inches Volume: 56.18 bbl Tool Weight: 1000.00 lb 0.00 bbl Heavy Wt. Pipe: Length: 0.00 inches Volume: Weight set on Packer: 20000.00 lb 0.00 ft Diameter: Drill Collar: Length: 650.00 ft Diameter: 2.25 inches Volume: 3.20 bbl Weight to Pull Loose: 130000.0 lb Total Volume: 59.38 bbl Tool Chased 0.00 ft Drill Pipe Above KB: 10.00 ft String Weight: Initial 101000.0 lb

Depth to Top Packer: 4673.00 ft
Depth to Bottom Packer: ft
Interval betw een Packers: 42.00 ft
Tool Length: 70.00 ft

Number of Packers: 2 Diameter: 7.88 inches

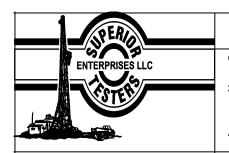
Tool Comments: Started out early for test standy by10:30A 2-20-13 picked up tool 6:00A 2-22-13 Had to make trip back to Great Bend to get 8

3/4 packer and set 4 1/2 elavators

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			4650.00		
Hydrolic Tool	5.00			4655.00		
Jars	6.00			4661.00		
Safety Joint	2.00			4663.00		
Packer	5.00			4668.00	28.00	Bottom Of Top Packer
Packer	5.00			4673.00		
Anchor	37.00			4710.00		
Recorder	1.00	6731	Inside	4711.00		
Recorder	1.00	8159	Outside	4712.00		
Bullnose	3.00			4715.00	42.00	Bottom Packers & Anchor

Ref. No: 17388

Total Tool Length: 70.00



FLUID SUMMARY

Cimarex Energy CO 19-30-31 Haskell

348 Rd DD satanta KS 67870 **Hammer #19-4**

Job Ticket: 17388 **DST#:1**

Printed: 2013.02.22 @ 23:31:27

ATTN: Test Start: 2013.02.22 @ 06:00:00

Mud and Cushion Information

Mud Type:Gel ChemCushion Type:Oil A Pl:deg A PlMud Weight:9.00 lb/galCushion Length:ftWater Salinity:ppm

Mud Weight:9.00 lb/galCushion Length:ftWater Salinity:Viscosity:41.00 sec/qtCushion Volume:bbl

Viscosity:41.00 sec/qtCushion Volume:Water Loss:14.00 in³Gas Cushion Type:

Resistivity: ohm.m Gas Cushion Pressure: psia

Salinity: 2400.00 ppm Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1000.00	w ater 30%mud 70%w ater	8.106
240.00	Slightley oil cut water mud	3.367
0.00	5%oil 30%w ater 65%mud	0.000

Total Length: 1240.00 ft Total Volume: 11.473 bbl

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

Laboratory Name: Laboratory Location:

Ref. No: 17388

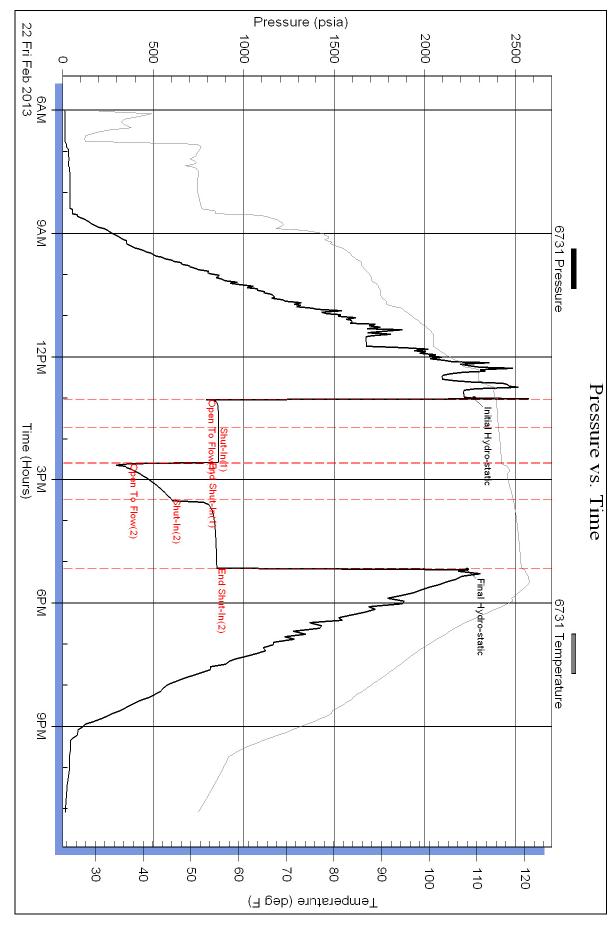
Recovery Comments: Started out early for test standy by Time 10:30A2-20-13 picked up tool 6:00a 2-22-13 had to make

a trip back to Great Bend for 8 3/4 packers and 4 1/2 elavators

Superior Testers Enterprises LLC

Printed: 2013.02.22 @ 23:31:27

Serial #: 6731



DST Test Number: 1

30

40

50

60

70

Temperature (deg F)

80

90

100

110

120

ACIO
MADIL
ENERGY SERVICES
Liberal Kansas

Cement Report

1	Libera	l, Kansas		Ti N				15	Jement Heport		
Cimarex			Lease No.				Date 2-17-13				
1 Hammer			1 /9-	1 19-4			rvice Receipt				
casing 9	asing 9 5/4 Depth			County //a	County Haskell State KS						
Job Type 9	9/4 Surfa	rec	Formation			Legal Description	n				
Pipe Data						Perforatin	g Dat	ta	Cement Data		
Casing size	95/4"-	36#	Tubing Size		Shots/Ft Lead 3/5						
Depth	18745	}			From		То		3% CC, 1/4# foly,		
Volume /4/	2.92.77	BBL	Volume		From		То		2% at A Vield - 2.40 f+3/sk		
May Drane	200083	,	Max Press		From		To		Tail in 295 sk fromflus		
Well Connec			Annulus Vol.		From		To		22CC, 14#13/4		
Plug Depth	1849		Packer Depth		From		То		Vield-1.34ft3/sk		
Time	Casing Pressure	Tubing Pressure	Bbis. Pumbed	Rate				Service Log			
2130					On L	ocation.	-5	pott;	Rigup		
2330					Sofe	y Meetix	5		J		
0010	2000				Press	line test					
00/3	200		135	4	Mix 315 sk ACon @ 12-1 PPG						
0037	200		70	4	Mix	295 sk	Pren	· Plus	@ 14.8PRG		
2058							- Z	Prop to	o plue		
0103	100		6	4	Displace						
0137	600		123	2	Slow	~ Rater					
0149	700-12	00	14/3		Bun	up Place	-				
0151	12.00-0				Release Pressure - Float Nold						
					Circa	Wate Cen	nen	t to t	he pit		
				ļ							
								111.00			
100											
						Indiana and					
Service Units 21755 38119/19919 304					7724	27808/14	184				
Driver Name	es /3.	764	Edm	30414/31 Necto	rR_	CERCY					

Customer Representative

Station Manager

Hirby Harper
Cementer Taylor Printing, Inc.

Cement Report

1	imaren	, rtarioao		Lease No.					bement neport
Sase .	•	2-27-13					27-13		
Casing Depth			17	17-9			17/7/37/24		
Casing 51/Z Depth 5600 Job Type Z412 Log 5/g Formation				County	State 15				
Job Type	142 Las	5/4				Legal Description		- 30-	3/
0	Pipe		Perforating		g Dat	а	Cement Data		
Casing size	5/2 1	4#	Tubing Size			Shots/Ft			Lead
Depth 5/	00		Depth 55 42	From		То			
Volume ,.	211 -11	5	Volume	From		То			
Max Press	SIM		Max Press		From		То		Tail in 380 s/c A42
AAGII COIIIIGI	5/2		Annulus Vol.		From		To 1.51f4		1.5143-5k
Plug Depth	5558		Packer Depth		From		То		6.646d-5k 14.8#
Time	Casing Pressure	Tubing Pressure	Bbls. Pumbed	Rate			,	Service Log	
1010					ļ	An	rice (In Loca	fon
1020								eely 1	
1030						Ris ,	Kunn	y Casi	in .
125 PM	3500		1.0	1.0		Pressure		57	
130m	3300		1.5	,5		Pressure			e
135 pm						Circular	y w	nia	
1430	400		5			Pump W			er
1448	350		12			Pump 50	nes	Flech	//
1445	300		5			Pump We			
1450	250		102			Pung Con			
1515								- Was	
1520	500		114	6.0		/ _	splace		ж ор
1540	1000		10	2.0			Doc.		
1545	1500		1			1 mil 1	1/100	Elect 1	lleld
						Land M	6	1004 M	2
							0 4	MIJIET E	
					The	ak For 16	15	eci o	my Jenices
							9 -	SIC ON	ary sorvices
Service Units	7893	8	10897-19570	10776 1	19883				
Driver Names			Eddie	EUB	. • • >				
	1 000			22 /3		1			

Kevin

Customer Representative

Sey Beth Station Manager

Taylor Printing, Inc.

Conservation Division Finney State Office Building 130 S. Market, Rm. 2078 Wichita, KS 67202-3802



Phone: 316-337-6200 Fax: 316-337-6211 http://kcc.ks.gov/

Sam Brownback, Governor

Mark Sievers, Chairman Thomas E. Wright, Commissioner Shari Feist Albrecht, Commissioner

May 31, 2013

Melissa Imler Cimarex Energy Co. 348 Rd. DD Satanta, KS 67870

Re: ACO1 API 15-081-22007-00-00 Hammer 19-4 SE/4 Sec.19-30S-31W Haskell County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully, Melissa Imler