CEMENTING TR	REPORT			DIC	MIEE	D					TREATMENT NUMBER GH2013010				DATE 7/21/2013						
					PIC	DNEE	K					GH2013010 STAGE 1				JOB TYPE longstring					
NATURAL RESOURCES											longstring										
WELL NAME AND NO.  Winger ATU 1  LOCATION (LEGAL)  221' FNLm& FWL, Sec 30, T29S, R 37W								RIG NAME:		Patter	rson UTI 190			CEMENT PUMPER: 23004							
FIELD FORMATIO							.,	WELL DATA					FT								
									BIT SIZE		CSG/Liner Size	5 1/2						_			
COUNTY			STATE API				TOTAL DEPTH		000	WEIGHT	15.5										
		Grant Co				KS			MUD TYPE			FOOTAGE	2935								
								BHST			GRADE										
RIG FORMAN D					Dave Martine	ez			BHCT			THREAD									
									MUD DENSITY			LESS FOOTAGE SHOE JOINT(S)	43.2						TOTAL:		
CEMENT SUPER				(	Gary Hesslin	ıg			MUD VISC			Disp. Capacity	68						68		
									Include Footage From Gr	round Leve	el To Head In	Disp. Capacity	1	TYPE							
								DEPTH				[00]	DEPTH								
									ë TYPE				Stage Tool	TYPE							
SPECIAL INSTRUC	CTIONS			Cement produ	ction casing				DEPTH					DEPTH							
-									Head & Plugs												
-									Double Box 6	w	VEIGHT	SIZE		T00L	DEPTH						
										_	RADE			TAIL PIPE:	<u> </u>		SIZE		DEPTH		
•									☐\$ingle ☐\$wage	_	HREADS	TUBING VOLUME BBLs									
									Knockout		New	Used CSG VOL BELOW TOOL BBLs									
LIFT PRESSURE			682	psi	i						EPTH	TOTAL BBLs									
PRESSURE LIMI					BUMP PLU	UG TO		1722	CEMENT TEMPERA			l	ANNULAR VOLUME					BBLs			
			•	NO. of Centralizers 18				WATER QUALITY:				SG				ТЕМР					
TIME	PRES	SSURE	VOLUMI	E PUMPED	JOB SCHEDULED FOR				ARRIVE ON LOCATI	ION			RIG UP				LEFT LO	OCATION			
0001 to 2400	TBG	CSG	INCR	CUM	TIME:	9:00	DATE:		TIME: 8:3	30	DATE:	7/21/2013	TIME:	9:00	DATE:	7/21/2013	13	14:00	DATE:	7/21/2013	
	-	I	1	1	RATE	FLUID T	1 PE	DENSITY													
								1													
8:30	ļ	ļ		ļ	ļ								Arriv	e on locat	ion						
	1	1		1	1	<u> </u>															
9:00									Rig up pumps and bulk equipment (7-17-13)												
7.00	1				1	1			Kig up pumps and bulk equipment (/-17-13)												
	ļ			<b> </b>	<u> </u>				1												
11:36	2000		2			H2c	)	8.34	Test pumps and lines to 2000 psi. Test good.												
11:39		175	73		4	H2c		8.34					numned 7	5 bbls 112	o obood						
11.39		1/3	13		4	H20	,	0.34					pumped 7	3 DOIS FIZE	o aneac	1.					
12:00		230	126	199	4	Cm	t					Mix and pur	np126 bbl	s ( 295 sks	s) 12.5	# lead cen	nent				
12:37		100	46	245	4	Cm	f	13.5				Mix and p	ump 46 bł	ols ( 160 sl	ks)13 5	tail cemer	nt				
12.57		100		2.0	<u> </u>	Cin		10.0				unu p	ump to ce	715 ( 100 5	10)1010	tuir ceine.					
10:05		100	67	311	4	H2c	)	8.34				Drop pl	ug and sta	rt displace	ment 6	8 bbls.					
10:05		100							Pı	ump 5	bbls fresl	h water displacei	ment/ then	pump 63b	bls KC	L displace	ement	for total of 6	8 bbls		
												-									
										Call	Loute 21	bble away 4 bpm	100 pci	12 011/01/ /	hpm 50	00 pci 64 k	ble on	ov 4 bpm 7	50		
				Call outs 21 bbls away 4 bpm 100 psi. 42 away 4 bpm 500 psi 64 bbls away 4 bpm 750																	
									finale lift 990 sent 15 bbls good cement to pit												
	-	-	1	-	}			-													
								1													
			<u></u>	<u></u>	<u></u>			<u> </u>													
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								1													
					<u> </u>																
								1													
14:00			1									1	rigged dov	n and left	locatio	on					
System Used	No.of	Yield		rigged down and left location  COMPOSITION OF SYSTEM SLURRY MIXED																	
	Sacks	ft <sup>3</sup> /sk	BBLS DENSITY																		
Lead	295	2.4					25/7	5 SDC blend	3% P20, 2% S1, 0.25#/s	sxP29, 0.2	.25#/sx P46@	@ 12.5 #/gal						126		12.5	
Surface Set	160	1.61				Surface se	et 25:75 (ı	o:G) + 2% P20	), 5 lb/sx p42, .2% S1, (	0.25 #/sx	P46, .15% i	p167, 2% p20 @ 13.5	# gal					46	1	13.5	
	1.00	1							. , ,		,										
	1	1	<u> </u>																<del>                                     </del>		
	<del>                                     </del>	<del>                                     </del>	1																1		
	<u> </u>	<u> </u>																			
CIRCULATION	Y∈	es 🗆	No .	WASHED CA	ASING DOW	VN	Yes	□No				BREAKDOWN			PSI	FINAL	_	1885	PS	SI	
								ETURNED TO	SURFACE			BEFORE PLUG BUMF									
DISPLACEMENT	VOI		68	BBLS	1			15				PRESSURE	8	00	PSI	RATE			P. BPM		

CEMENTING TREATMENT REPORT (PAGE 2)					PIC	NEE	R			TREATMENT NUM	DATE  JOB TYPE												
		NATURA	L RESOUR	CES		GH2013010 STAGE																	
WELL NAME AN	D NO.				LOCATIO	N (LEGAL)			RIG NAME:	RIG NAME:			<u> </u>				longstring CEMENT PUMP:						
FIELD	W	inger ATU	1		221' FI FORMATI	NLm& FWL, S	Sec 30, T29	9S, R 37W	RIG FOREMAN:	Patterson UTI 190						23004 CEMENT SUPERVISOR:							
									Dave Martinez						Gary Hessling  LEFT LOCATION								
COUNTY		STATE	KS	API NO.	•	ARRIVE ON LOCATION TIME: 8:30	DATE:	7/21/2013	RIG UP TIME:	9:00	DATE: 7	/21/2013	LEFT LOC. TIME:	ATION 14:00	DATE:	7/21/2013							
TIME 0001 to 2400	TIME         PRESSURE         VOLUME PUMPED           01 to 2400         TBG         CSG         INC         CUM			MPED	JOB SCHE	KS DULED FOR 9:00	DATE:	7/21/2013					COMMENT										
					RATE	FLUID T	YPE	DENSITY	1														
			<u> </u>			1																	
JOB SUMARY:																							
JOB SUMARY:																							