

Confidentiality Requested:

Yes No

## Kansas Corporation Commission Oil & Gas Conservation Division

1107017

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
Address 2:			Feet	from $\ \square$ North / $\ \square$ South Line of Section
City: St	ate: Ziŗ	D:+	Feet	from East / West Line of Section
Contact Person:			Footages Calculated from Ne	arest Outside Section Corner:
Phone: ()			□ NE □ NW	□ SE □ SW
CONTRACTOR: License #			GPS Location: Lat:	, Long:
Name:				. xx.xxxxx) (e.gxxx.xxxxx)
Wellsite Geologist:			Datum: NAD27 NAD27	
Purchaser:			County:	
Designate Type of Completion:			Lease Name:	Well #:
New Well Re-	·Fntrv	Workover	Field Name:	
	_		Producing Formation:	
☐ Oil ☐ WSW	SWD	SIOW	Elevation: Ground:	Kelly Bushing:
☐ Gas ☐ D&A ☐ OG	☐ ENHR	☐ SIGW ☐ Temp. Abd.	Total Vertical Depth:	Plug Back Total Depth:
CM (Coal Bed Methane)	G3W	iemp. Abd.	Amount of Surface Pipe Set a	and Cemented at: Feet
Cathodic Other (Core	Expl etc.)		Multiple Stage Cementing Co	
If Workover/Re-entry: Old Well Inf				Feet
Operator:				nent circulated from:
Well Name:			, ,	w/sx cmt.
Original Comp. Date:			loot doparto.	W,
	_	NHR Conv. to SWD		
Deepening Re-perf. Plug Back	Conv. to GS		Drilling Fluid Management F (Data must be collected from the	
Commingled	Permit #:		Chloride content:	ppm Fluid volume: bbls
Dual Completion	Permit #:		Dewatering method used:	
SWD	Permit #:		Location of fluid disposal if ha	uled offsite:
☐ ENHR	Permit #:		On a water Manage	
GSW	Permit #:			L'acces II
				License #:
Spud Date or Date Rea	iched TD	Completion Date or		TwpS. R
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 II Approved by: Date:											

Page Two



Operator Name:				Lease I	Name: _			Well #:		
Sec Twp	S. R	East	West	County	:					
INSTRUCTIONS: Shopen and closed, flow and flow rates if gas to	ring and shut-in press o surface test, along v	ures, whet vith final c	ther shut-in pre hart(s). Attach	essure reac extra shee	hed stati t if more	c level, hydrosta space is neede	tic pressures, bod.	ottom hole temp	erature, fluid re	ecovery,
Final Radioactivity Lo files must be submitte						gs must be ema	liled to kcc-well-	ogs@kcc.ks.go	v. Digital electi	ronic log
Drill Stem Tests Taker (Attach Additional		Ye	es No			J	on (Top), Depth		Samp	
Samples Sent to Geo	logical Survey	Ye	es No		Nam	e		Тор	Datum	1
Cores Taken Electric Log Run		☐ Ye								
List All E. Logs Run:										
				RECORD	Ne					
	0: 11.1					ermediate, product		" 0 1	T 15	
Purpose of String	Size Hole Drilled		e Casing (In O.D.)	Weig Lbs.		Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives	
			ADDITIONAL	CEMENTI	NG / SQL	JEEZE RECORD				
Purpose:	Depth Top Bottom	Туре	of Cement	# Sacks	Used		Type and	Percent Additives		
Perforate Protect Casing	Top Detterm									
Plug Back TD Plug Off Zone										
1 lug 0 li 20 lio										
Did you perform a hydrau	ulic fracturing treatment of	on this well?	•			Yes	No (If No, s	kip questions 2 a	nd 3)	
Does the volume of the t			_		-		= ` `	kip question 3)		
Was the hydraulic fractur	ing treatment information	n submitted	to the chemical of	disclosure re	gistry?	Yes	No (If No, f	ill out Page Three	of the ACO-1)	
Shots Per Foot			D - Bridge Plug Each Interval Perf				cture, Shot, Ceme			Depth
						(			_	
TUBING RECORD:	Size:	Set At:		Packer A	<del></del>	Liner Run:				
		0017111		. dono. 7		[	Yes N	0		
Date of First, Resumed	Production, SWD or EN	HR.	Producing Meth	nod:	g 🗌	Gas Lift (	Other (Explain)			
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Wat	er B	bls.	Gas-Oil Ratio	Gra	avity
DIODOCITI	01.05.040			4ETUOD 05	001451	TION		DDODUCT	ONLINITED (A)	
DISPOSITION Solo	ON OF GAS:  Used on Lease		N Open Hole	∥ETHOD OF ☐ Perf.			nmingled	PRODUCTION	ON INTERVAL:	
	bmit ACO-18.)		Other (Specify)		(Submit		mit ACO-4)			

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

January 14, 2013

Tami Troxel Citation Oil & Gas Corp. 14077 Cutten Rd PO BOX 690688 HOUSTON, TX 77269-0688

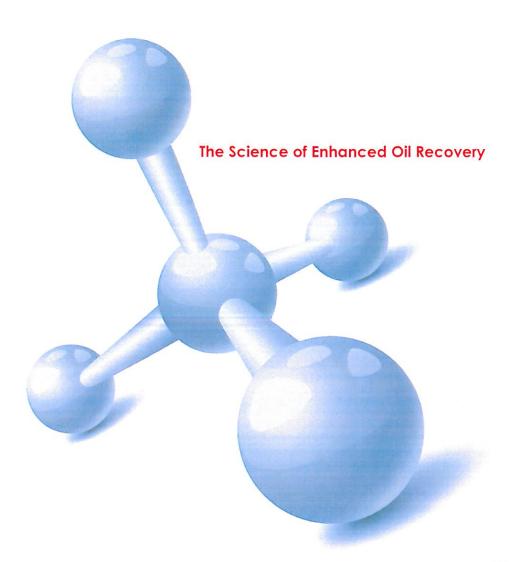
Re: ACO1 API 15-163-24088-00-00 Slansky 16 NE/4 Sec.02-09S-19W Rooks County, Kansas

### **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, Tami Troxel



**Treatment Summary For** 

# Citation Oil & Gas Corp.

MARCIT<sup>sm</sup> Gel Conformance Barry Slansky #16 Rooks County, Kansas

January 25, 2013



#### TREATMENT SUMMARY

#### **PURPOSE**

Use MARCIT<sup>sm</sup> polymer gel technology to 1) decrease water production, 2) lower producing fluid level, 3) improve draw-down on oil-saturated reservoir matrix rock, 4) improve oil recovery and well economics.

#### **TREATMENT**

TIORCO equipment and personnel arrived on location on January 14, 2013. A tailgate safety meeting was held to discuss all potential hazards specific to the job. TIORCO's Portable Unit #17 was connected to frac tanks for treatment supply water and to the wellhead for polymer solution injection. The unit was then connected to an electrical source. The treatment consisted of 6,150 BBLS of gel. The treatment started on January 14, 2013 at 14:22 and ended on January 20, 2013 at 11:41. The gel was made-up of 12,870 lbs. of EOR204 (Medium molecular weight polymer) 2,947 lbs. of EOR684 (crosslinker) and 715 lbs. of EOR50 (Low molecular weight polymer). Details for each stage of the treatment, job log, and injection charts are included.

#### MARCIT<sup>sm</sup> GEL QA/QC

Representative samples of cross-linked polymer solution were collected during all treatment stages to ensure that the intended gels would ultimately form. Pre-gel samples were stored at a temperature of 120°F in an oven onboard the TIORCO portable polymer injection unit. All samples indicated that gels formed as intended.

TIORCO is very interested in monitoring and evaluating the results of this treatment with time. If you should have questions or comments regarding the job, please do not hesitate to contact Mike Lantz in our Denver office at (303) 923-6440. We greatly appreciate the opportunity to be of service to Citation Oil & Gas Corp. and look forward to working with you again in the future.



# **TREATMENT STAGE LOG**

Stage	Date	Time	Date	Time	Polymer	BBLS /	WHP	(psi)	ВНР	(psi)		Rate od)	Comments	
3.25	Begin	Begin	End	End	ppm	Stage	Begin	End	Begin	End	Begin	End	Gammana	
1	1/14/13	2:22 PM	1/14/13	3:33 PM	0	50	0	0	866	867	1,080	1,080	Stage #1, 50 BBL Water Flush with CRO-195 & CX102w.	
2	1/14/13	3:33 PM	1/16/13	3:31 AM	3,000	1,550	0	0	867	961	1,080	1,080	Stage #2. 3,000 ppm with CX102w.	
3	1/16/13	3:31 AM	1/17/13	7:49 AM	4,500	1,250	0	0	961	1,009	1,080	1,080	Stage #3. 4,500 ppm with CX102w.	
4	1/17/13	7:49 AM	1/18/13	11:42 AM	6,000	1,250	0	0	1,009	1,028	1,080	1,080	Stage #4. 6,000 ppm with CX102w.	
5	1/18/13	11:42 AM	1/19/13	10:04 PM	8,000	1,000	0	0	1,028	1,052	1,080	1,080	Stage #5. 8,000 ppm with CX102w.	
6	1/19/13	10:04 PM	1/20/13	8:19 AM	10,000	1,000	0	0	1,052	1,072	1,080	1,080	Stage #6. 10,000 ppm with CX102w.	
7	1/20/13	8:19 AM	1/20/13	10:32 AM	30,000	100	0	0	1,072	1,233	1,080	1,080	Stage #7. 30,000 ppm with CX102w	
8	1/20/13	10:32 AM	1/20/13	11:41 AM	0	50	0	0	1,233	991	1,080	1,080	Stage #8. 50 BBL Water Flush with CRO 195 & CX 102w	
Totals						6250								

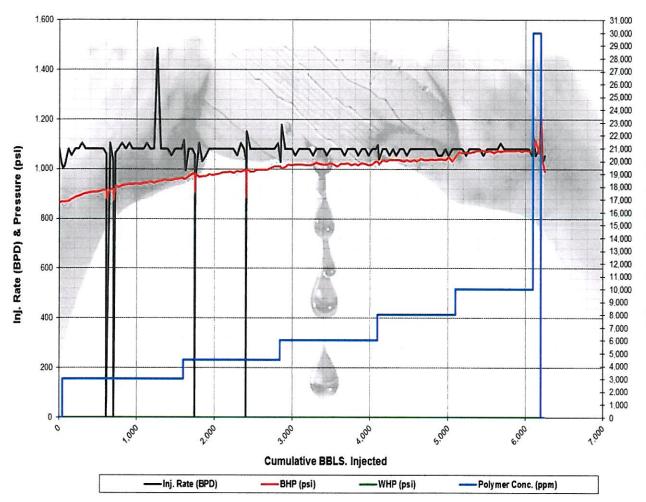
# MARCIT<sup>SM</sup> GEL QA/QC

Sample No.	Treatment Stage	Sample Date	Sample Time	Cum. Bbls.	Polymer ppm	Polymer:X- Linker Ratio	Comments
1	2	01/14/13	17:00	114	3,000	40:1	Graded 3g
2	2	01/15/13	00:00	429	3,000	40:1	Graded 3g
3	2	01/15/13	12:00	902	3,000	40:1	Graded 4g
4	2	01/16/13	02:00	1,531	3,000	40:1	Graded 4g
5	3	01/16/13	05:00	1,665	4,500	40:1	Graded 5g
6	3	01/16/13	12:00	1,973	4,500	40:1	Graded 5g
7	3	01/17/13	00:00	2,499	4,500	40:1	Graded 5g
8	3	01/17/13	06:00	2,769	4,500	40:1	Graded 5g
9	4	01/17/13	09:00	2,904	6,000	40:1	Graded 6g
10	4	01/18/13	00:00	3,576	6,000	40:1	Graded 6g
11	4	01/18/13	11:00	4,068	6,000	40:1	Graded 6g
12	5	01/18/13	13:00	4,158	8,000	40:1	Graded 8g
13	5	01/19/13	00:00	4,650	8,000	40:1	Graded 8g
14	5	01/19/13	09:00	5,052	8,000	40:1	Graded 9e
15	6	01/19/13	12:00	5,187	10,000	40:1	Graded 9e
16	6	01/20/13	00:00	5,726	10,000	40:1	Graded 9e
17	6	01/20/13	06:00	5,996	10,000	40:1	Graded 9e
18	7	01/20/13	10:00	6,175	30,000	40:1	Graded 10e



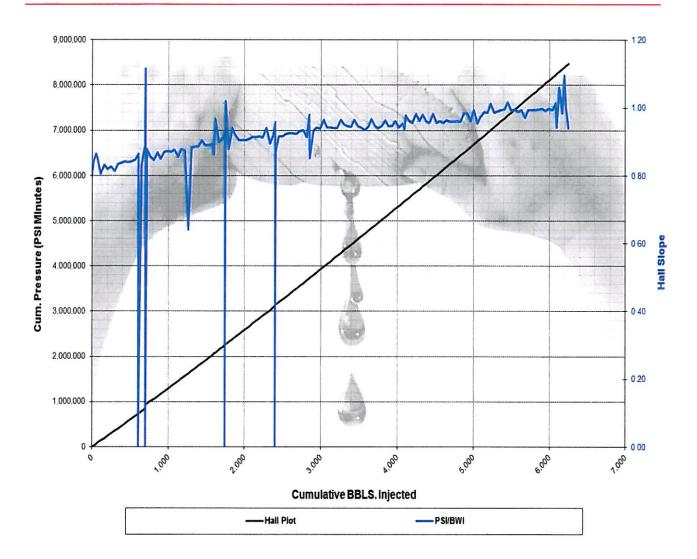
# Polymer Concentration (ppm)

# **RATE, PRESSURE, & CONCENTRATION**





## **HALL SLOPE**





# **TREATMENT JOB LOG**

DATE	TIME	INJECTION RATE		CUM, INJ BBLS	WHP	BHP	HALL	Polymer PPM	POLYMER LBS: Estimate	COMMENTS
		BPD	BPM	TALLS.			OLUFE		Loumate	学教育的 医阿里斯氏
		DID	DI W							A STATE OF THE PARTY AND ADDRESS.
14-Jan-13	14:22	1,080	0.75	0	0	866	0.80	0	0	Begin Stage #1. 50 BBL Water Flush with Baker CRO-195 & CX102w.
14-Jan-13	15:00	1,023	0.71	27	0	867	0.85	0	0	OX102W.
14-Jan-13	15:33	1,004	0.70	50	. 0	867	0.86	0	0	End Stage #1.
14-Jan-13	15:33	1,004	0.70	50	0	867	0.86	3,000	0	Begin Stage #2. 3,000 ppm with Baker CX102w
14-Jan-13	16:00	1,013	0.70	69	. 0	868	0.86	3,000	20	37 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
14-Jan-13	17:00	1,080	0.75	114	0	870	0.81	3,000	67	Took Sample #1. 3,000 ppm. Graded: 3g
14-Jan-13	18:00	1,056	0.73	158 203	0	878	0.83	3,000	113	
14-Jan-13 14-Jan-13	19:00	1,080	0.75	248	0	885 892	0.82	3,000 3,000	160 208	
14-Jan-13	21:00	1,104	0.77	294	0	897	0.83	3,000	256	
14-Jan-13	22:00	1,080	0.77	339	0	901	0.83	3,000	303	
14-Jan-13	23:00	1,080	0.75	384	0	904	0.84	3,000	350	MIN CO. 1815
15-Jan-13	0:00	1,080	0.75	429	0	908	0.84	3,000	398	Took Sample #2. 3,000 ppm: Graded 3g
15-Jan-13	1:00	1,080	0.75	474	0	907	0.84	3,000	445	
15-Jan-13	2:00	1,080	0.75	519	0	909	0.84	3,000	492	
15-Jan-13	3:00	1,080	0.75	564	0	915	0.85	3,000	539	
15-Jan-13	3:57	1,061	0.74	606	0	916	0.86	3,000	583	Generator shut down. Over Speed Indicator.
15-Jan-13	4:00	0	0.00	606	0	880	0.00	3,000	583	Restart Generator.
15-Jan-13	5:00	1,104	0.77	652	0	917	0.83	3,000	631	
15-Jan-13 15-Jan-13	6:00 6:14	1,032 823	0.72	695 703	0	917 917	0.89 1.11	3,000 3,000	677 685	Generator shut down. Over Speed
15-Jan-13	7:37	0	0.00	703	0	873	0.00	3,000	685	Indicator.
15-Jan-13 15-Jan-13	8:00	1,064	0.74	703	0	933	0.88	3,000	703	Restart Generator.
15-Jan-13	9:00	1,080	0.75	765	0	926	0.86	3,000	750	
15-Jan-13	10:00	1,104	0.77	811	0	933	0.85	3,000	798	
15-Jan-13	11:00	1,080	0.75	856	0	937	0.87	3,000	845	
15-Jan-13	12:00	1,104	0.77	902	0	938	0.85	3,000	894	Took Sample #3. 3,000 ppm: Graded 4g
15-Jan-13	13:00	1,080	0.75	947	0	939	0.87	3,000	941	
15-Jan-13	14:00	1,080	0.75	992	0	941	0.87	3,000	988	
15-Jan-13	15:00	1,080	0.75	1,037	0	940	0.87	3,000	1,035	2001. 20 20 20 20 20 20 20 20 20 20 20 20 20
15-Jan-13	16:00	1,080	0.75	1,082	0	945	0.88	3,000	1,083	
15-Jan-13	17:00	1,104	0.77	1,128	0	944	0.86	3,000	1,131	
15-Jan-13 15-Jan-13	18:00 19:00	1,080	0.75 0.75	1,173 1,218	0	948	0.88	3,000	1,178	
15-Jan-13	20:00	1,486	1.03	1,218	0	950	0.64	3,000 3,000	1,225 1,271	
15-Jan-13	21:00	1,080	0.75	1,307	0	953	0.88	3,000	1,319	
15-Jan-13	22:00	1,080	0.75	1,352	0	956	0.89	3,000	1,366	20000
15-Jan-13	23:00	1,080	0.75	1,397	0	955	0.88	3,000	1,413	
16-Jan-13	0:00	1,056	0.73	1,441	0	955	0.90	3,000	1,459	
16-Jan-13	1:00	1,080	0.75	1,486	0	960	0.89	3,000	1,506	
16-Jan-13	2:00	1,080	0.75	1,531	0	961	0.89	3,000	1,553	Took Sample #4. 3,000 ppm: Graded 4g
16-Jan-13	3:00	1,080	0.75	1,576	0	964	0.89	3,000	1,601	
16-Jan-13 16-Jan-13	3:31 3:31	1,115 1,115	0.77	1,600 1,600	0	961 96 <b>1</b>	0.86	3,000 4,500	1,626 1,626	End Stage #2. Begin Stage #3. 4,500 ppm with
16-Jan-13	4:00	993	0.69	1,620	0	961	0.97	4,500	1,657	Baker CX102w
16-Jan-13	5:00	1,080	0.75	1,665	0	970	0.90	4,500	1,728	Took Sample #5. 4,500 ppm: Graded 5g
16-Jan-13	6:00	1,080	0.75	1,710	0	981	0.91	4,500	1,799	-
16-Jan-13	6:49	1,058	0.73	1,746	0	980	0.93	4,500	1,856	Generator shut down. Over Speed Indicator.
16-Jan-13	6:54	0	0.00	1,746	0	901	0.00	4,500	1,856	Restart Generator.
16-Jan-13	7:00	960	0.67	1,750	0	980	1.02	4,500	1,862	Selection -
16-Jan-13	8:00	1,104	0.77	1,796	0	968	0.88	4,500	1,934	
16-Jan-13	9:00	1,032	0.72	1,839	0	971	0.94	4,500	2,002	18 3.55
16-Jan-13 16-Jan-13	10:00 11:00	1,056	0.73 0.75	1,883 1,928	0	970 977	0.92	4,500 4.500	2,071 2,142	
16-Jan-13 16-Jan-13	12:00	1,080	0.75	1,928	0	976	0.90	4,500	2,142	Took Sample #6, 4,500 ppm:
.0 0011-10	, 2.00	1,000	0.70	1,575	ĭ	3,0	0.00	1,000	2,210	Graded 5g



DATE	DATE TIME		TION	CUM. INJ	WHP	ВНР	HALL	Polymer	POLYMER LBS:	COMMENTS
		RA		BBLS	PSI	PSI	SLOPE	PPM	Estimate	
		BPD	ВРМ							
46 lon 42	12,00	1.000	0.75	2.040		077	0.00	4.500	0.004	
16-Jan-13 16-Jan-13	13:00 14:00	1,080	0.75	2,018 2,063	0	977 981	0.90	4,500 4,500	2,284 2,354	500 S
16-Jan-13	15:00	1,080	0.75	2,108	0	986	0.91	4,500	2,425	
16-Jan-13	16:00	1,080	0.75	2,153	0	987	0.91	4,500	2,496	
16-Jan-13	17:00	1,080	0.75	2,198	0	988	0.91	4,500	2,567	
16-Jan-13	18:00	1,080	0.75	2,243	0	984	0.91	4,500	2,638	
16-Jan-13	19:00	1,056	0.73	2,287	0	992	0.94	4,500	2,707	
16-Jan-13	20:00	1,104	0.77	2,333	0	988	0.89	4,500	2,779	
16-Jan-13	21:00	1,080	0.75	2,378	0	993	0.92	4,500	2,850	
16-Jan-13	21:32	1,035	0.72	2,401	0	991	0.96	4,500	2,886	Shut down generator to change fuel filter.
16-Jan-13	21:50	0	0.00	2,401	0	884	0.00	4,500	2,886	Resume Treatment
16-Jan-13	22:00	1,152	0.80	2,409	0	1,002	0.87	4,500	2,899	
16-Jan-13	23:00	1,080	0.75	2,454	0	988	0.91	4,500	2,970	
17-Jan-13	0:00	1,080	0.75	2,499	0	989	0.92	4,500	3,040	Took Sample #7, 4,500 ppm: Graded 5g
17-Jan-13	1:00	1,080	0.75	2,544	0	997	0.92	4,500	3,111	
17-Jan-13	2:00	1,080	0.75	2,589	0	998	0.92	4,500	3,182	
17-Jan-13	3:00	1,080	0.75	2,634	0	998	0.92	4,500	3,253	
17-Jan-13	4:00	1,080	0.75	2,679	0	997	0.92	4,500	3,324	
17-Jan-13 17-Jan-13	5:00 6:00	1,080	0.75	2,724	0	1,005	0.93	4,500	3,394	Tools Console #0, 4 500
acu resultation market				2,769		1,009	0.93	4,500	3,465	Took Sample #8. 4,500 ppm: Graded 5g
17-Jan-13	7:00	1,104	0.77	2,815	0	1,009	0.91	4,500	3,538	
17-Jan-13 17-Jan-13	7:49 7:49	1,029 1,029	0.71	2,850 2,850	0	1,009 1,009	0.98 0.98	4,500 6,000	3,593 3,593	End Stage #3.  Begin Stage #4. 6,000 ppm with
17 1 10	0.00		0.00	0.050						Baker CX102w
17-Jan-13 17-Jan-13	8:00 9:00	1,178 1,080	0.82 0.75	2,859 2,904	0	1,003 1,008	0.85	6,000	3,612 3,706	Took Sample #9. 6,000 ppm:
17-Jan-13	10:00	1,080	0.75	2,949	0	1,017	0.94	6,000	3,800	Graded 6g
17-Jan-13	11:00	1,080	0.75	2,994	0	1,014	0.94	6,000	3,895	
17-Jan-13	12:00	1,056	0.73	3,038	0	1,018	0.96	6,000	3,987	
17-Jan-13	13:00	1,080	0.75	3,083	0	1,017	0.94	6,000	4,081	
17-Jan-13	14:00	1,080	0.75	3,128	0	1,018	0.94	6,000	4,176	
17-Jan-13	15:00	1,080	0.75	3,173	0	1,015	0.94	6,000	4,270	
17-Jan-13	16:00	1,080	0.75	3,218	0	1,015	0.94	6,000	4,365	
17-Jan-13	17:00	1,056	0.73	3,262	0	1,019	0.96	6,000	4,457	
17-Jan-13	18:00	1,080	0.75	3,307	0	1,027	0.95	6,000	4,551	
17-Jan-13	19:00	1,080	0.75	3,352	0	1,021	0.95	6,000	4,646	
17-Jan-13	20:00	1,080	0.75	3,397	0	1,019	0.94	6,000	4,740	
17-Jan-13 17-Jan-13	21:00 22:00	1,056 1,080	0.73 0.75	3,441	0	1,019	0.96	6,000	4,833	
17-Jan-13 17-Jan-13	23:00	1,080	0.75	3,486 3,531	0	1,022	0.95 0.94	6,000 6,000	4,927 5,021	nifer vi
18-Jan-13	0:00	1,080	0.75	3,576	0	1,010	0.94	6,000	5,116	Took Sample #10. 6,000 ppm:
40 16 40	4.00	4.000	0.36	0.004		4.000	0.01	0.000		Graded 6g
18-Jan-13	1:00	1,080	0.75	3,621	0	1,020	0.94	6,000	5,210	
18-Jan-13 18-Jan-13	2:00 3:00	1,056	0.73	3,665	0	1,020	0.97	6,000	5,302	
18-Jan-13	4:00	1,080	0.75	3,710 3,755	0	1,022	0.95	6,000 6,000	5,397 5,491	
18-Jan-13	5:00	1,080	0.75	3,800	0	1,010	0.94	6,000	5,586	
18-Jan-13	6:00	1,056	0.73	3,844	0	1,016	0.96	6,000	5,678	
18-Jan-13	7:00	1,080	0.75	3,889	0	1,022	0.95	6,000	5,772	
18-Jan-13	8:00	1,080	0.75	3,934	0	1,021	0.95	6,000	5,867	
18-Jan-13	9:00	1,056	0.73	3,978	0	1,015	0.96	6,000	5,959	
18-Jan-13	10:00	1,080	0.75	4,023	0	1,018	0.94	6,000	6,053	20138
18-Jan-13	11:00	1,080	0.75	4,068	0	1,030	0.95	6,000	6,148	Took Sample #11. 6,000 ppm: Graded 6g
18-Jan-13	11:42	1,097	0.76	4,100	0	1,028	0.94	6,000	6,215	End Stage #4.
18-Jan-13	11:42	1,097	0.76	4,100	0	1,028	0.94	8,000	6,215	Begin Stage #5. 8,000 ppm with Baker CX102w
18-Jan-13	12:00	1,040	0.72	4,113	0	1,018	0.98	8,000	6,251	
18-Jan-13	13:00	1,080	0.75	4,158	0	1,037	0.96	8,000	6,377	Took Sample #12. 8,000 ppm: Graded 8g
18-Jan-13	14:00	1,080	0.75	4,203	0	1,031	0.95	8,000	6,503	
18-Jan-13	15:00	1,056	0.73	4,247	0	1,036	0.98	8,000	6,626	
18-Jan-13	16:00	1,080	0.75	4,292	0	1,037	0.96	8,000	6,752	
18-Jan-13	17:00	1,056	0.73	4,336	0	1,035	0.98	8,000	6,875	
18-Jan-13	18:00	1,080	0.75	4,381	0	1,036	0.96	8,000	7,001	
18-Jan-13	19:00	1,080	0.75	4,426	0	1,031	0.95	8,000	7,127	
18-Jan-13	20:00	1,056	0.73	4,470	0	1,037	0.98	8,000	7,250	
18-Jan-13	21:00	1,080	0.75	4,515	0	1,032	0.96	8,000	7,376	#5000 N



DATE	TIME	INJEC RA		CUM. INJ BBLS	WHP PSI	BHP PSI	HALL SLOPE	Polymer PPM	POLYMER LBS: Estimate	COMMENTS
		BPD	ВРМ							
18-Jan-13	22:00	1.080	0.75	4,560	0 1	1,037	0.96	8,000	7,502	
18-Jan-13	23:00	1,080	0.75	4,605	0	1,032	0.96	8,000	7,628	
19-Jan-13	0:00	1,080	0.75	4,650	0	1,041	0.96	8,000	7,753	Took Sample #13. 8,000 ppm: Graded 8g
19-Jan-13	1:00	1,080	0.75	4,695	0	1,036	0.96	8,000	7,879	
19-Jan-13	2:00	1,080	0.75	4,740	0	1,035	0.96	8,000	8,005	
19-Jan-13	3:00	1,080	0.75	4,785	0	1,038	0.96	8,000	8,131	
19-Jan-13	4:00	1,080	0.75	4,830	0	1,035	0.96	8,000	8,257	1000
19-Jan-13	5:00	1,056	0.73	4,874	0	1,039	0.98	8,000	8,380	N. 42 - 30 - 30 - 30 - 30 - 30 - 30 - 30 - 3
19-Jan-13	6:00	1,056	0.73	4,918	0	1,040	0.98	8,000	8,503	
19-Jan-13	7:00	1,080	0.75	4,963	0	1,037	0.96	8,000	8,629	
19-Jan-13	8:00	1,056	0.73	5,007	0	1,049	0.99	8,000	8,752	
19-Jan-13	9:00	1,080	0.75	5,052	0	1,030	0.95	8,000	8,878	Took Sample #14. 8,000 ppm: Graded 8g
19-Jan-13	10:00	1,080	0.75	5,097	0	1,052	0.97	8,000	9,004	
19-Jan-13	10:04	1,080	0.75	5,100	0	1,052	0.97	8,000	9,012	End Stage #5.
19-Jan-13	10:04	1,080	0.75	5,100	0	1,052	0.97	10,000	9,012	Begin Stage #6. 10,000 ppm with Baker CX102w
19-Jan-13	11:00	1,080	0.75	5,142	0	1,067	0.99	10,000	9,159	
19-Jan-13	12:00	1,080	0.75	5,187	0	1,065	0.99	10,000	9,316	Took Sample #15, 10,000 ppm: Graded 9e
19-Jan-13	13:00	1,056	0.73	5,231	0	1,069	1.01	10,000	9,470	
19-Jan-13	14:00	1,080	0.75	5,276	0	1,065	0.99	10,000	9,628	
19-Jan-13	15:00	1,080	0.75	5,321	0	1,069	0.99	10,000	9,785	
19-Jan-13	16:00	1,080	0.75	5,366	0	1,072	0.99	10,000	9,942	
19-Jan-13	17:00	1,080	0.75	5,411	0	1,074	0.99	10,000	10,100	2000 700 0 10000 0 0 0
19-Jan-13	18:00	1,056	0.73	5,455	0	1,073	1.02	10,000	10,253	
19-Jan-13	19:00	1.080	0.75	5,500	0	1,071	0.99	10,000	10,411	
19-Jan-13	20:00	1,080	0.75	5,545	0	1,074	0.99	10,000	10,568	
19-Jan-13	21:00	1,080	0.75	5,590	0	1,066	0.99	10,000	10,726	
19-Jan-13	22:00	1,080	0.75	5,635	0	1,072	0.99	10,000	10,883	
19-Jan-13	23:00	1,104	0.77	5,681	0	1,071	0.97	10,000	11,044	
20-Jan-13	0:00	1,080	0.75	5,726	0	1,072	0.99	10,000	11,201	Took Sample #16. 10,000 ppm: Graded 9e
20-Jan-13	1:00	1,080	0.75	5,771	0	1,072	0.99	10,000	11,358	
20-Jan-13	2:00	1,080	0.75	5,816	0	1,073	0.99	10,000	11,516	
20-Jan-13	3:00	1,080	0.75	5,861	0	1,074	0.99	10,000	11,673	
20-Jan-13	4:00	1,080	0.75	5,906	0	1,076	1.00	10,000	11,830	
20-Jan-13	5:00	1,080	0.75	5,951	0	1,070	0.99	10,000	11,988	11/2 12/2
20-Jan-13	6:00	1,080	0.75	5,996	0	1,076	1.00	10,000	12,145	Took Sample #17, 10,000 ppm: Graded 9e
20-Jan-13	7:00	1,080	0.75	6,041	0	1,072	0.99	10,000	12,302	
20-Jan-13	8:00	1,056	0.73	6,085	0	1,071	1.01	10,000	12,456	
20-Jan-13	8:19	1,137	0.79	6,100	0	1,072	0.94	10,000	12,509	End Stage # 6
20-Jan-13	8:19	1,137	0.79	6,100	0	1,072	0.94	30,000	12,509	Begin Stage # 7 CAPIT 30,000 ppm with Baker CX102w
20-Jan-13	9:00	1,054	0.73	6,130	0	1,116	1.06	30,000	12,823	
20-Jan-13	10:00	1,080	0.75	6,175	0	1,062	0.98	30,000	13,295	Took Sample #18. 30,000 ppm: Graded 10e
20-Jan-13	10:32	1,125	0.78	6,200	0	1,233	1.10	30,000	13,558	End Stage #7
20-Jan-13	10:32	1,125	0.78	6,200	0	1,233	1.10	0	13,558	Begin Stage #8. Water Flush with Baker CRO 195 and CX102w.
20-Jan-13	11:00	1,029	0.71	6,220	0	1,029	1.00	0	13,558	
20-Jan-13	11:41	1,054	0.73	6,250	0	991	0.94	0	13,558	End Stage #8
20-Jan-13	11:41	1,054	0.73	6,250	0	991	0.94	0	13,558	End Well Treatment
			PERSONAL PROPERTY.				STATE OF THE PARTY NAMED IN			



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-288610

Phone 785-483-2025 Cell 785-324-1041 Home Office P.O. Box 32 Russell, KS 67665

No. 6283

Finish On Location State County Twp. Range Sec. 9 19 KOOKS Date 12-21-12 KANSAS Well No. # 110 To Quality Oilwell Cementing, Inc. IKE #10 You are here requested to rent cementing equipment and furnish cementer and hen er to assist owner or contractor to do work as listed. SUPPACE OTLA GAS Hole Size 124 396 T.D. Csa. 2 % Depth State TX 77269 Depth Tbg. Size The above was done to satisfaction and supervision of owner agent or contractor. Depth Tool Cement Amount Ordered 5 Shoe Joint '70 Cement Left in Csg. Displace 84 BLK Meas Line **EQUIPMENT** Common 5000 Cementer Pumptrk Poz. Mix Helper NI Driver Gel. Driver B Driver Calcium Driver ( JOB SERVICES & REMARKS Hulls Salt Remarks: Flowseal Rat Hole Kol-Seal Mouse Hole 8,5,8,11,14,17,20,03,26, Mud CLR 48 Centralizers CFL-117 or CD110 CAF 38 Baskets Sand D/V or Port Collar Handling Mileage CIRCULATE CEMENT DIA FLOAT EQUIPMENT Guide Shoe Centralizer **Baskets AFU Inserts** Float Shoe Latch Down Milage Tax Discount Total Charge X Signature

# QUALITY OILWELL 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. 6052

Finish County State On Location Twp. Range Sec. 30pm KOOKS Location ( # Well No. Owner To Quality Oilwell Cementing, Inc. Contractor You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. Type Job Y(1) Charge To Hole Size T.D. Csg. 73 Depth Street Depth City State Tbg. Size The above was done to satisfaction and supervision of owner agent or contractor Depth Tool Cement Left in Csg. Shoe Joint Displace Meas Line **EQUIPMENT** Common Cementer Helper Poz. Mix Pumptrk 16 Driver De No. Gel. Bulktrk Driver No. Driver Calcium Driver **JOB SERVICES & REMARKS** Hulls Salt Remarks: Flowseal 6 Rat Hole Kol-Seal Mouse Hole Mud CLR 48 Centralizers CFL-117 or CD110 CAF 38 Baskets ( D/V or Port Collar Sand Handling / Mileage FLOAT EQUIPMENT Guide Shoe Centralizer Baskets AFU Inserts Float Shoe PSSUR Latch Down Pumptrk Charge Mileage Tax 7 Discount X Signature Total Charge