

# KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

Form ACO-4 Form must be typed March 2009

#### APPLICATION FOR COMMINGLING OF Commingling ID # PRODUCTION (K.A.R. 82-3-123) OR FLUIDS (K.A.R. 82-3-123a)

OPERATOR: License #		API No. 15		
Name:_		Spot Description: _		
Address	1:	<del>-</del>	_ Sec Twp	S. R East West
Address	2:		Feet from No	orth / South Line of Section
City:			Feet from Ea	st / West Line of Section
	Person:			
	()	·	Wel	l #:
_ 1.	Name and upper and lower limit of each production interval to	be commingled:		
	Formation:	(Perfs):		
2.	Estimated amount of fluid production to be commingled from e			
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
<ul><li>□ 3.</li><li>□ 4.</li></ul>	Plat map showing the location of the subject well, all other well the subject well, and for each well the names and addresses of Signed certificate showing service of the application and affide	of the lessee of record or ope	erator.	ses within a 1/2 mile radius of
For Con	nmingling of PRODUCTION ONLY, include the following:			
□ 5.	Wireline log of subject well. Previously Filed with ACO-1:	Yes No		
6.	Complete Form ACO-1 (Well Completion form) for the subject	<del>_</del>		
For Con	nmingling of FLUIDS ONLY, include the following:			
7.	Well construction diagram of subject well.			
8.	Any available water chemistry data demonstrating the compat	ibility of the fluids to be comr	mingled.	
current in mingling	VIT: I am the affiant and hereby certify that to the best of my nformation, knowledge and personal belief, this request for comistrue and proper and I have no information or knowledge, which istent with the information supplied in this application.	Sı	ubmitted Electron	ically
	C Office Use Only			t in the application. Protests must be e filed wihin 15 days of publication of

Date: \_

Approved By:

15-Day Periods Ends: \_

# **POSTROCK**



# **Current Completion**

**WELL** : Timmons, Floyd A 29-1

**FIELD** : Cherokee Basin

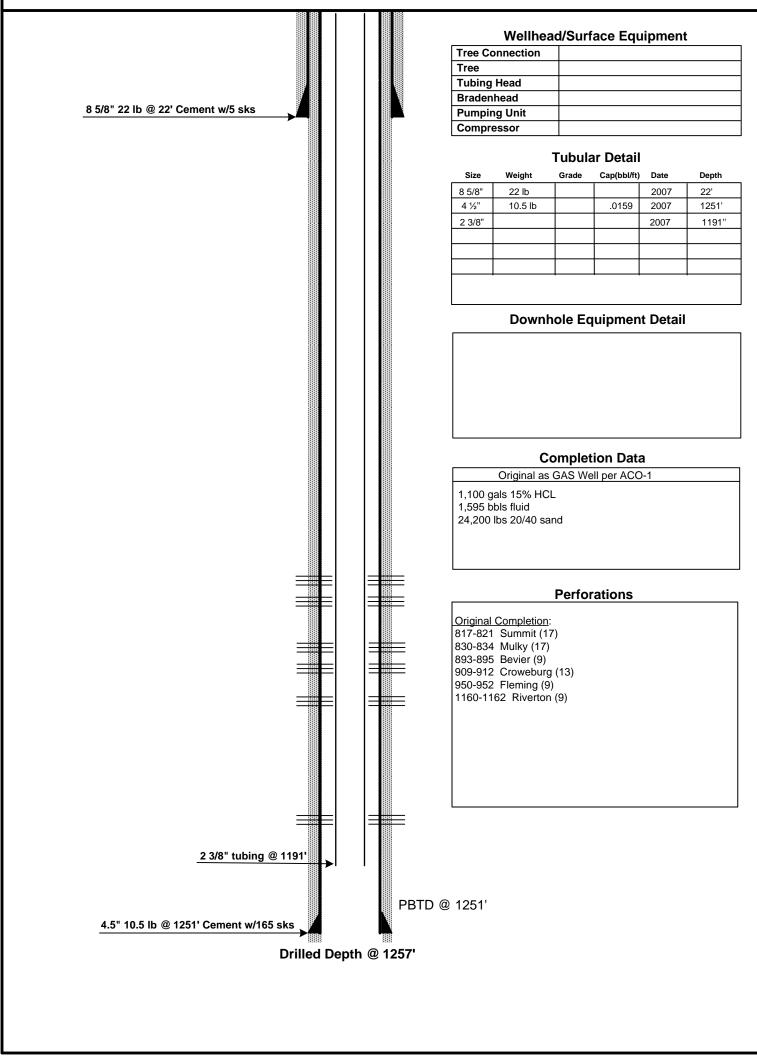
**STATE** : Kansas COUNTY : Wilson

SPUD DATE: 6/4/2007 COMP. Date: 6/14/2007

API: 15-205-27180-00-00

**LOCATION: 29-28S-15E (SW,NW)** 

**ELEVATION: 868'** 



PREPARED BY: POSTROCK

APPROVED BY: \_

**DATE:** July, 2012

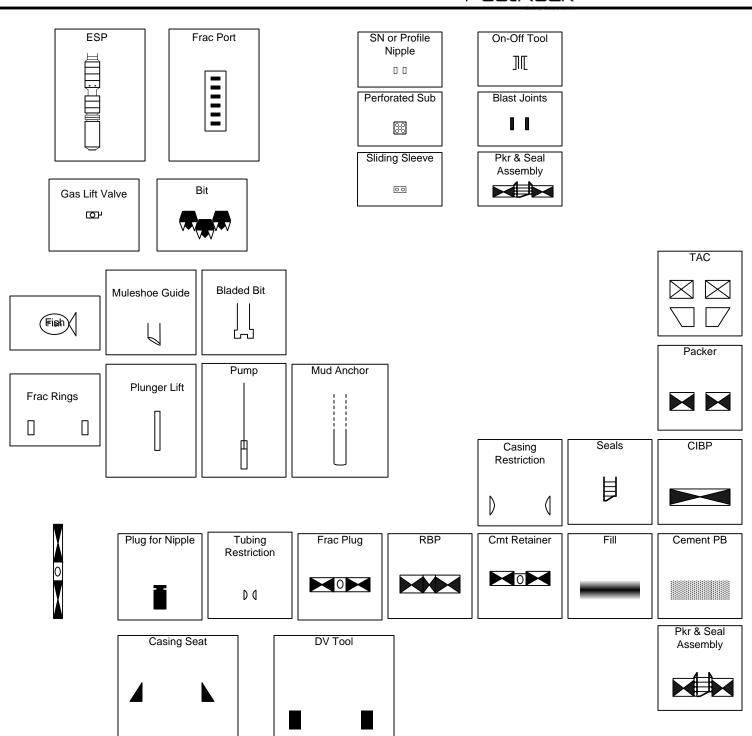
DATE:\_

# **POSTROCK**



# **LEGEND**

# PostRock<sup>®</sup>



-	Α	В	С	D	Е	F	G	Н	1		K
1	Produced Fluids #	В	1	2	3	4	5	11	•	<u> </u>	
	Parameters	Units	Input	Input	Input	Input	Input		Click he	re	Click
3	Select the brines	Select fluid		Ī		V	Ī	Mixed brine:	to run SS	-	
4	Sample ID	by checking						Cell H28 is	to ruii oc	•	Click
5	Date	the box(es),	3/19/2012	3/4/2012	3/14/2012	1/20/2012	1/20/2012	STP calc. pH.	<b>————</b>		
6	Operator	Row 3	PostRock	PostRock	PostRock	PostRock	PostRock	Cells H35-38			Click
7	Well Name		Ward Feed	Ward Feed	Clinesmith	Clinesmith	Clinesmith	are used in	Goal Seek	SSP	
8	Location		#34-1	#4-1	#5-4	#1	#2	mixed brines	0.00		Click
9	Field		CBM	CBM	Bartles	Bartles	Bartles	calculations.			
10	Na <sup>+</sup>	(mg/l)*	19,433.00	27,381.00	26,534.00	25689.00	24220.00	24654.20	Initial(BH)	Final(WH)	SI/SR
11	K <sup>+</sup> (if not known =0)	(mg/l)						0.00	Saturation Index	values	(Final-Initial)
	Mg <sup>2+</sup>	(mg/l)	1,096.00	872.00	1,200.00	953.00	858.00	995.91		lcite	
	Ca <sup>2+</sup>	(mg/l)	1,836.00	2,452.00	2,044.00	1920.00	1948.00	2040.23	-0.73	-0.60	0.13
	Sr <sup>2+</sup>		1,050.00	2,432.00	2,044.00	1720.00	1740.00				0.13
	Ba <sup>2+</sup>	(mg/l)						0.00	Da	rite	
.,		(mg/l)						0.00			
	Fe <sup>2+</sup>	(mg/l)	40.00	21.00	18.00	82.00	90.00	50.21		lite	
	Zn <sup>2+</sup>	(mg/l)						0.00	-1.77	-1.80	-0.03
18	Pb <sup>2+</sup>	(mg/l)						0.00	Gyp	sum	
19	Cl	(mg/l)	36,299.00	48,965.00	47,874.00	45632.00	43147.00	44388.44	-3.19	-3.18	0.00
20	SO <sub>4</sub> <sup>2-</sup>	(mg/l)	1.00	1.00	8.00	1.00	1.00	2.40	Hemil	ıydrate	
21	F.	(mg/l)						0.00	-3.96	-3.90	0.06
	Br'	(mg/l)						0.00		ydrite	
	SiO2	(mg/l) SiO2						0.00	-3.47	-3.36	0.12
_	HCO3 Alkalinity**	(mg/l as HCO3)	190.00	234.00	259.00	268.00	254.00	241.03		estite	0,12
	CO3 Alkalinity	(mg/l as CO3)	170.00	434.00	237,00	200.00	234.00	241.03	Cen		
_	Carboxylic acids**	(mg/l)						0.00	Inor 6	Sulfide	
27	Ammonia	(mg/L) NH3						0.00	-0.16	-0.22	-0.06
											-0.00
	Borate	(mg/L) H3BO3						0.00	Zinc	Sulfide	
	TDS (Measured)	(mg/l)	4.040	4.0=4				72781	~		
	Calc. Density (STP) CO <sub>2</sub> Gas Analysis	(g/ml)	1.038 19.97	1.051 18.76	1.050 22.41	1.048 35.53	1.045	1.047	Calcium	fluoride	
	- ,	(%)		0.0292			33.79	26.16	I C.	-l	
	H <sub>2</sub> S Gas Analysis*** Total H2Saq	(%)	0.0289	1.00	0.0296	0.0306	0.0151 0.50	0.0269	-0.74	rbonate -0.51	0.23
_	_	(mgH2S/l)	1.00 5.67	5.76	1.00 5.72	1.00 5.54	5.55	5.63		eeded (mg/L)	0.23
34	pH, measured (STP)	pH 0-CO2%+Alk,	5.07	5./6	5.72	5.54	5.55	5.03	Calcite	NTMP	
	Choose one option								Calcite	NIMI	
35	to calculate SI?	2-CO2%+pH	0	0	0	0	0				
36	Gas/day(thousand cf/day)	(Mcf/D)						0	0.00	0.00	
	Oil/Day	(B/D)	0	0	1	1	1	4	Barite	BHPMP	
	Water/Day	(B/D)	100	100	100	100	100	500	0.00	0.00	
	For mixed brines, enter val			mag in Calle (H	(40 H42)						
-	Initial T			` .		44.0	40.0	(Enter H40-H43)		Н	
		(F)	66.0	71.0	70.0	41.0	49.0	60.0	5.69	5.60	1
	Final T	(F) (F)	66.0 66.0	71.0 71.0	70.0 70.0	41.0	49.0	60.0 89.0	5.69 Viscosity (	5.60 CentiPoise)	
42	Final T Initial P	(F) (F) (psia)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0	5.69 Viscosity ( 1.196	5.60 CentiPoise) 0.826	
42 43	Final T Initial P Final P	(F) (F) (psia) (psia)	66.0 66.0	71.0 71.0	70.0 70.0	41.0	49.0	60.0 89.0	5.69 Viscosity ( 1.196 Heat Capaci	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C)	
42 43 44	Final T Initial P Final P Use TP on Calcite sheet?	(F) (F) (psia) (psia) I-Yes;0-No	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0	5.69 Viscosity ( 1.196 Heat Capaci 0.955	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C) 0.959	
42 43 44 45	Final T Initial P Final P	(F) (F) (psia) (psia)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0	5.69 Viscosity ( 1.196 Heat Capaci 0.955	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C)	
42 43 44 45 46	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav.	(F) (F) (psia) (psia) I-Yes;0-No API grav.	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor no	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C) 0.959 eeded (mg/L)	
42 43 44 45 46 47 48	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav.	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00	
42 43 44 45 46 47 48 49 50	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG//Day Conc. Multiplier H* (Strong acid) *	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) †	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH* (Strong base) † Quality Control Checks at	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP:	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH* (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP:	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP)	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH' (Strong base) * Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/l) (pH)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP)	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH* (Strong base) * Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated ECations=	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH (Strong base) * Quality Control Checks at H <sub>2</sub> S Gas Total H <sub>2</sub> Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated SCations= EAnions=	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/l) as HCO3 (equiv./I) (equiv./I)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH* (Strong base) * Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated ECations= ECations= Calc TDS=	(F) (F) (Psia) (psia) (1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I)	66.0 66.0 25.0 25.0	71.0 71.0 25.0 25.0	70.0 70.0 25.0 25.0	41.0 25.0 25.0	49.0 25.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH* (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\textit{\Sigma}\$ (STP) Exhions= \$\textit{\Sigma}\$ (STD)= Inhibitor Selection	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input	66.0 66.0 25.0 25.0 0 0	71.0 71.0 25.0 25.0	70.0 70.0 25.0 25.0	41.0 25.0 25.0	49.0 25.0 25.0	60.0 89.0 25.0 120.0 30.00 0 0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated ECations= EAnions= Calc TDS= Inhibitor Selection Protection Time	(F) (F) (Psia) (psia) (1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I)	66.0 66.0 25.0 25.0	71.0 71.0 25.0 25.0	70.0 70.0 25.0 25.0	41.0 25.0 25.0 Unit Converter	49.0 25.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\textstyle \text{Calcite}\$ acid \$\text{Lacite}\$ acid \$\text	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D)  (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0	71.0 71.0 25.0 25.0 4 1 1 2	70.0 70.0 25.0 25.0 25.0 Inhibitor NTMP BHPMP	41.0 25.0 25.0 Unit Converter From Unit	49.0 25.0 25.0 25.0 (From metric Value 80	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated 2Cations= £Anions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you?	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0 0	# 1 2 3	Inhibitor NTMP BHPMP PAA	Unit Converter From Unit C m³	49.0 25.0 25.0 25.0 (From metric Value 80 100	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00  Value 176 3,531	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\textstyle \text{Calcite}\$ acid \$\text{Lacite}\$ acid \$\text	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D)  (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0	71.0 71.0 25.0 25.0 4 1 1 2	70.0 70.0 25.0 25.0 25.0 Inhibitor NTMP BHPMP	41.0 25.0 25.0 Unit Converter From Unit	49.0 25.0 25.0 25.0 (From metric Value 80	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00  Value 176 3,531 629	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H <sub>2</sub> Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\mathbb{\text{Catluated}}\$ Alkalinity Caclulated \$\mathbb{\text{Catluated}}\$ Eanions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is:	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0 0	71.0 71.0 25.0 25.0 1 1 1 2 3 4	Inhibitor NTMP BHPMP PAA DTPMP	Unit Converter From Unit °C m³ m³ MPa	49.0 25.0 25.0 25.0 (From metric Value 80 100 1,000	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit °F ft³ bbl(42 US gal) psia	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00  Value 176 3,531 629 145,074	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH (Strong base) * Quality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated Alkalinity Caclulated Alkalinity Caclulated ECations= ZAnions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,  1st inhibitor # is:	(F) (F) (Psia) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120  1 4	0 0 0 Unit min 1-Yes;0-No #	## 1 2 3 4 5 6	Inhibitor NTMP BHPMP PAA DTPMP PPCA SPA	Unit Converter From Unit  C  m  MPa  Bar	49.0 25.0 25.0 25.0 	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit "F ft <sup>3</sup> bbl(42 US gal) psia	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00  Value 176 3,531 629 145,074 7,194	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 44 45 46 47 48 49 50 51 52 53 54 55 56 60 61 62 63 64 65 66 67 68	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H <sub>2</sub> Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated Alkalinity Caclulated ECations= EAnions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,	(F) (F) (Psia) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/l) as HCO3 (equiv./I) (equiv./I) (mg/l) Input 120  1 4 1 50	0 0 0 Unit min 1-Yes;0-No #	## 1 2 3 4 4 5 6 6 7	Inhibitor NTMP BHPMP PAA DTPMP PPCA SPA HEDP	Unit Converter From Unit  C  m³  m³  MPa  Bar  Torr	49.0 25.0 25.0 25.0 25.0 Value 80 100 1,000 496 10,000	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit °F ft³ bbl(42 US gal) psia psia psia	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00  Value 176 3,531 629 145,074 7,194 193	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 44 45 46 47 48 49 50 51 52 53 54 55 56 60 61 62 63 64 65 66 67 68 69	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH* (Strong base) * OH* (Strong base) * Ouality Control Checks at H <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated ECations= EAnions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,  1st inhibitor is: % of 1st inhibitor is:	(F) (F) (Psia) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120  1 4	0 0 0 0 Unit min 1-Yes;0-No # # %	## 1 2 3 4 5 6	Inhibitor NTMP BHPMP PAA DTPMP PPCA SPA	Unit Converter From Unit  °C  m³  m³  MPa  Bar	49.0 25.0 25.0 25.0 	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit "F ft <sup>3</sup> bbl(42 US gal) psia	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00  Value 176 3,531 629 145,074 7,194	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	

# **Saturation Index Calculations**

Champion Technologies, Inc. (Based on the Tomson-Oddo Model)

Brine 1: Ward Feed Yard 34-1
Brine 2: Ward Feed Yard 4-1
Brine 3: Clinesmith 5-4
Brine 4: Clinesmith 1
Brine 5: Clinesmith 2

			Ratio			
	20%	20%	20%	20%	20	
Component (mg/L)	Brine 1	Brine 2	Brine 3	Brine 4	Brine 5	Mixed Brine
Calcium	1836	2452	2044	1920	1948	1952
Magnesium	1096	872	1200	953	858	865
Barium	0	0	0	0	0	0
Strontium	0	0	0	0	0	0
Bicarbonate	190	234	259	268	254	253
Sulfate	1	1	8	1	1	1
Chloride	36299	48965	47874	45632	43147	43206
CO <sub>2</sub> in Brine	246	220	264	422	405	401
Ionic Strength	1.12	1.48	1.46	1.38	1.31	1.31
Temperature (°F)	89	89	89	89	89	89
Pressure (psia)	50	50	120	120	120	119

#### **Saturation Index**

Calcite	-1.71	-1.41	-1.48	-1.68	-1.69	-1.69
Gypsum	-3.71	-3.64	-2.82	-3.73	-3.72	-3.69
Hemihydrate	-3.70	-3.65	-2.83	-3.74	-3.71	-3.69
Anhydrite	-3.89	-3.79	-2.97	-3.89	-3.88	-3.85
Barite	N/A	N/A	N/A	N/A	N/A	N/A
Celestite	N/A	N/A	N/A	N/A	N/A	N/A

# PTB

Calcite	N/A	N/A	N/A	N/A	N/A	N/A
Gypsum	N/A	N/A	N/A	N/A	N/A	N/A
Hemihydrate	N/A	N/A	N/A	N/A	N/A	N/A
Anhydrite	N/A	N/A	N/A	N/A	N/A	N/A
Barite	N/A	N/A	N/A	N/A	N/A	N/A
Celestite	N/A	N/A	N/A	N/A	N/A	N/A

# --- KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

9/28/09
Form ACO-1
September 1999
Form Must Be Typed

WICHITA, KS

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

Operator: License # 33344	API No. 15 - 205-27180-0000
Name: Quest Cherokee, LLC	County: Neosho
Address: 211 W. 14th Street	
City/State/Zip: Chanute, KS 66720	1850 feet from S / N circle one) Line of Section
Purchaser: Bluestem Pipeline, LLC	870 feet from E / Wicircle one) Line of Section
Operator Contact Person: Jennifer R. Ammann	Footages Calculated from Nearest Outside Section Corner:
Phone: (620 ) 431-9500 GEP 2 8 2007	(circle one) NE SE NW SW
Contractor: Name: Michael Drilling	Lease Name: Timmons, Floyd A. Well #: 29-1
License: 33783 COMPIDENT	Field Name: Cherokee Basin CBM
Wellsite Geologist: Ken Recoy	Producing Formation: Multiple
Designate Type of Completion:	Elevation: Ground: 868 Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1257 Plug Back Total Depth: 1251.84
Oil SWD Temp. Abd.	Amount of Surface Pipe Set and Cemented at 22 Feet
Gas ENHR SIGW	Multiple Stage Cementing Collar Used? ☐ Yes ✓ No
Dry Other (Core, WSW, Expl., Cathodic, etc)	If yes, show depth setFeet
If Workover/Re-entry: Old Well Info as follows:	If Alternate II completion, cement circulated from 1251.84
Operator:	feet depth to surface w/ 165 sx cmt.
Well Name:	
Original Comp. Date:Original Total Depth:	Drilling Fluid Management Plan AH # N5 2905 (Data must be collected from the Reserve Pit)
Deepening Re-perf Conv. to Enhr./SWD	Chloride content ppm Fluid volume bbls
Plug Back Plug Back Total Depth	Dewatering method used
Commingled Docket No	
Dual Completion Docket No	Location of fluid disposal if hauled offsite:
Other (SWD or Enhr.?) Docket No	Operator Name:
6/4/07 6/5/07 6/14/07	Lease Name: License No.:
Spud Date or Date Reached TD Completion Date or Recompletion Date	Quarter Sec Twp S. R East West  County: Docket No.:
Kansas 67202, within 120 days of the spud date, recompletion, workov Information of side two of this form will be held confidential for a period of 107 for confidentiality in excess of 12 months). One copy of all wireline logs TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells	th the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, wer or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply.  12 months if requested in writing and submitted with the form (see rule 82-3-s and geologist well report shall be attached with this form. ALL CEMENTING s. Submit CP-111 form with all temporarily abandoned wells.
	KCC Office Use ONLY
Signature: Gunny H. Ammann	
Title: New Well Development Coordinator Date: 9/28/07	Letter of Confidentiality Received
Subscribed and sworn to before me this 28th day of Septemb	If Denied, Yes Date:
20 07	Wireline Log Received RECEIVED
A B	Geologist Report Received KANSAS CORPORATION COMMISS
G to TEDE	UIC Distribution OCT 0 1 2007
	A LAUVIAIV
•	CONSERVATION DIVISION

My Appt. Expires 8-4-2010

Operator Name: Que	est Cherokee, LL	<u>.                                    </u>		Leas	e Name:_	Immons, Floy	u A.	_ Well #:		
Sec Twp	8 S. R. 15	✓ Eas	t 🗌 West	Coun	ty: Neosh	10				
INSTRUCTIONS: Statested, time tool oper temperature, fluid rec Electric Wireline Logs	n and closed, flowing covery, and flow rate	g and shut s if gas to	i-in pressures, surface test, a	whether s long with	shut-in pre	essure reached	static level, hydro	static pressure	es, botton	n hole
Drill Stem Tests Taken				<b>V</b> L	og Format	ion (Top), Depth a	and Datum	s	Sample	
Samples Sent to Geological Survey					Nam See	e attached		Тор	0	)atum
Cores Taken Yes No Electric Log Run (Submit Copy)										
List All E. Logs Run:										
Compensated I Dual Induction Gamma Ray N	Log	n Log								
		Dana	CASING rt all strings set-c		_	ew Used	etion etc			
Purpose of String	Size Hole	Si	ze Casing	We	eight	Setting	Type of	# Sacks		and Percent
Surface	Drilled 12-1/4	8-5/8"	t (In O.D.)	22	s. / Ft.	Depth 22	Cement	Used 5	Ac	dditives
Production	6-3/4	4-1/2		10.5		1251.84	"A"	165		<u> </u>
				,,,,,						
(			ADDITIONAL	CEMENT	TING / SQI	JEEZE RECOR	 D			<del></del>
Purpose: Perforate Protect Casing Plug Back TD Plug Off Zone	Depth Top Bottom	Туре	of Cement	#Sack	s Used		Type and F	Percent Additives		
Shots Per Foot	PERFORATI Specify	ON RECOR	RD - Bridge Plug Each Interval Per	s Set/Type	e		acture, Shot, Cemen		·d	Depth
4	1160-1162					400gal 15%HCLwl 45 b	bis 2%kd water, 420bbis water	w/ 2% KCL, Biodde, 4700	# 20/40 sand	1160-1162
4	4 950-952/909-912/893-895					300gai 15%HCLw/ 37 b	bis 2%kd water, 514bbis water	w/ 2% KCL, Binddo, 8280		950-952/909-912
4	830-834/817-821					400ga) 15%HCLw/ 50 b	bis 2%kd water, 661bbis water v	w/ 2% KCL, Biocida, 1130		830-834/817-821
TUBING RECORD	Size	Set At		Packer n/a	At	Liner Run	Yes V No			
Date of First, Resument 8/29/07			Producing Met		Flowin	g <b>√</b> Pump			er <i>(Explain)</i>	
Estimated Production Per 24 Hours	Oil n/a	Bbls.	Gas Omcf	Mcf	Wat Obbls		Bbls. C	Gas-Oil Ratio		Gravity
Disposition of Gas	METHOD OF (	COMPLETION	ON			Production Inte	rval		i	
Vented ✓ Sold (If vented, Su	Used on Lease		Open Hole Other (Speci	<b>√</b> Pe	rf.	Dually Comp.	Commingled _			

# Michael Drilling, LLC P.O. Box 402 Iola, KS 66749 620-365-2755



060607

Company:

Quest Cherokee LLC

Address:

9520 North May Ave, Suite 300

Oklahoma City, Oklahoma 73120

Ordered By: Donnie Meyers

Date:

06/06/07

Lease:

Timmons, Floyd A.

County: wilson Well#: 29-1

API#:

15-205-27180-00-00

# **Drilling Log**

FEET	DESCRIPTION	FEET	DESCRIPTION
0-22	Overburden	635-645	Sand
22-79	Shale with Lime streaks	645-680	Shale
79-131	Lime	680-710	Sand
131-150	Sandy Shale	710-730	Shale
150-185	Lime	730-735	Lime
185-215	Shale	735-738	Coal
215-240	Lime	738-760	Lime
240-270	Shale	760-763	Black Shale
270-402	Lime	763-779	Shale
402-430	Sand	779-795	Sand
430-471	Lime	795-796	Coal
471-483	Shale	796-812	Lime
483-515	Lime	806	Gas Test 20" at 1/2" Choke
515-520	Black Shale	812-819	Black Shale
520-542	Lime	819-826	l.ime
542-545	Black Shale	821	Gas Test 20" at 1/2" Choke
545-552	Shale	826-829	Black Shale and Coal
552-555	Lime	829-887	Sandy Shale
555-584	Shale	833	Gas Test 50" at 1/2" Choke
584-592	Lime and Shale	887-888	Coal
592-607	Shale	888-938	Sandy Shale
607-622	Lime	938-940	Lime
622-625	Black Shale	940-942	Coal KANSAS CORPORATION COMMISS
625-635	Lime and Shale	942-984	Sandy Shale OCT 0 1 2007

Michael Drilling, LLC P.O. Box 402 Iola, KS 66749 620-365-2755 060607

KCC SEP 28 2007 ACMEDENTIAL

Company:

Quest Cherokee LLC

Address:

9520 North May Ave, Suite 300

Oklahoma City, Oklahoma 73120

Ordered By: Donnie Meyers

Date:

06/06/07

Lease:

Timmons, Floyd A.

County: wilson

Well#:

29-1

API#:

15-205-27180-00-00

# **Drilling Log**

FEET	DESCRIPTION	FEET	DESCRIPTION
984-987	Coal		
987-994	Shale		
994-997	Coal		
997-1008	Shale		
1008-1108	Shale and Sand		
1108-1111	Coal		
1111-1159	Shale		
1159-1161	Coal		
1161-1167	Shale		
1163	Gas Test 30" at 1/2" Choke		
1167-1257	Missippi Lime		
1182	Gas Test 30" at 1/2" Choke		
1257	Gas Test 30" at 1/2" Choke		
1257	π		
-	Surface 22'		
			RECEIVED KANSAS CORPORATION COMMISSION
			OCT 0 1 2007

# QUEST



211 W. 14TH STREET, CHANUTE, KS 66720 620-431-9500

621500

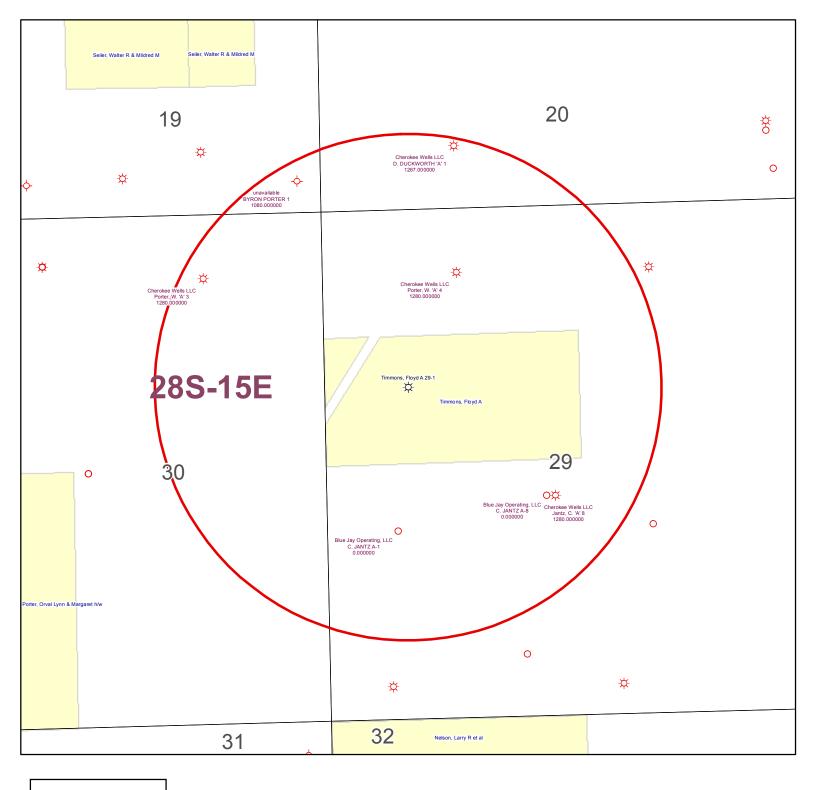
KCC SEP 28 2007

TICKET NUMBER 2237 FIELD TICKET REF # \_\_\_\_\_

FOREMAN Joe

### TREATMENT REPORT & FIELD TICKET CEMENT

DATE	/	VV⊏l	VELL NAME & NUMBER SECTION TOWN				NSHIP HANGE		
6-14-07	Timmo	<u> </u>	loyd 2	19-1	29	28	15	WL	
FOREMAN / OPERATOR	TIME IN	TIME	LESS LUNCH	TRUCK #	TRAILER #	TRUC		EMPLOYEE SIGNATURE	
50e.B	6:45	2:00		903427		7.26	5	10e Block	
Tim. A	6:45	1:00		903255		M 6.	25	Joe Ble !	
Tyler . 6	7:00		903206			6			
Paul . H	6:45		903142 932452 6		6.24	5	Paul Holy		
Gary . C 7:30 V				93150	The state of the s	5.5	;	At Copper	
CASING DEPTH 16 SLURRY WEIGHT 10 DISPLACEMENT 10	251.84 DRILL F 14.5 SLURR 7.96 DISPLA	PIPE RY VOL ACEMENT F	PSI	HOLE DEPTH _/20 TUBING WATER gal/sk MIX PSI  SK g/ #	OTHI CEM	ERENT LEFT in	CASING	٥	
				;					
	/251	84 6	f+ 41/2 Centern 41/2 floor						
ACCOUNT	/251	6	Cantral	lizers	RVICES OR PRODUC			TOTAL	
	QUANTITY or t	JNITS	Cantral	nt shoe	RVICES OR PRODUC			TOTAL AMOUNT	
903427 903255	:	JNITS	Cerstral	NESCRIPTION OF SE	RVICES OR PRODUC	CT .			
903427 903255 903206	QUANTITY or L 7. 25 6	JNITS  hr hr	Carltyn  1/1/2 f 1000  Foreman Pickup  Cement Pump Truck	NESCRIPTION OF SE	RVICES OR PRODUC	СТ			
903427 903255 903206 1104	QUANTITY or L 7. 25 6. 25	JNITS  hr hr	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement	NECRS  DESCRIPTION OF SE		DT .			
903427 903255 903206 1104	QUANTITY or L 7. 25 6	JNITS  hr hr	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend C	DESCRIPTION OF SE	31/2 # 3 "	СТ			
903427 903255 903206 1104 1124 1126	QUANTITY or L 7. 25 6. 25 6	JNITS  hr hr S SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Cement	DESCRIPTION OF SE		СТ			
903427 903255 903206 1104 1124 1126 1110	QUANTITY or L 7. 25 6. 25 6	JNITS  hr  hr  S SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Cement Gilsonite	DESCRIPTION OF SE	31/2 # 3 "	CT			
903427 903255 903206 1104 1124 1126 1110	QUANTITY or L 7. 25 6. 25 6	JNITS  hr  hr  S SK  S SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Ceme Gilsonite Flo-Seal	DESCRIPTION OF SE	31/2 # 3 "	CT CT			
903427 903255 903206 1104 1124 1126 1110 1107 1118	QUANTITY or L 7. 25 6 150 2 1,50	JNITS  hr hr S SK  6 SK  5 SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Ceme Gilsonite Flo-Seal Premium Gel	DESCRIPTION OF SE	31/2 # 3 "		RE	AMOUNT	
903427 903255 903206 1104 1124 1126 1110 1107 1118 1215A	QUANTITY or L 7. 25 6. 25 6	JNITS  hr hr 5 SK 5 SK 5 SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Ceme Gilsonite Flo-Seal Premium Gel KCL	DESCRIPTION OF SE	31/2 #3" per plug		REC	AMOUNT	
903427 903255 903206 1104 1124 1126 1110 1107 1118	QUANTITY or L 7. 25 6 1.50 2 1.60 1.50 1.60 1.60	JNITS  hr hr S SK S SK S SK J S SK	Foreman Pickup Cement Pump Truck Portland Cement 50/50 POZ Blend Ceme Gilsonite Flo-Seal Premium Gel KCL	DESCRIPTION OF SE	31/2 #3" per plug		NS CORPOR	AMOUNT  CEIVED  RATION COMMISSI	
903427 903255 903206 1104 1124 1126 1110 1107 1118 1215A 1111B 1123	QUANTITY or L 7. 25 6 150 2 1,50	JINITS  hr hr S SK S SK S SK S SK S SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Ceme Gilsonite Flo-Seal Premium Gel KCL Gedium Silicate City Water	DESCRIPTION OF SE	31/2 #3" per plug		NS CORPOR	AMOUNT  CEIVED  RATION COMMISSI	
903427 903255 903206 1104 1124 1126 1110 1107 1118 1215A 1111B	QUANTITY or L 7. 25 6 1.50 2 1.60 1.50 1.60 1.60	JNITS  hr hr S SK S SK S SK J S SK	Foreman Pickup Cement Pump Truck Portland Cement 50/50 POZ Blend Ceme Gilsonite Flo-Seal Premium Gel KCL	DESCRIPTION OF SE	31/2 #3" per plug	KANSA	OCT 0	AMOUNT	



# **KGS STATUS**

- → DA/PA
- EOR
- **⇔** GAS
- △ INJ/SWD
- OIL
- OIL/GAS
- OTHER

Timmons, Floyd A 29-1 29-28S-15E 1" = 1,000'

1 NAME & UPPE	R & LOWER LIMIT OF EACH PRO	DUCTION INT	TERVAL TO BE	COMMING	LED			
FORMATION:	RIVERTON		(PERFS):	1160 -	1162			
FORMATION:	BARTLESVILLE		(PERFS):	1035 -	1042			
FORMATION:	BARTLESVILLE		(PERFS):	1060 -	1063			
FORMATION:	BARTLESVILLE		(PERFS):	1074 -	1078			
FORMATION:	BARTLESVILLE		(PERFS):	1094 -	1098			
FORMATION:			(PERFS):					
FORMATION:			(PERFS):					
FORMATION:			(PERFS):					
FORMATION:			(PERFS):					
FORMATION:			(PERFS):					
FORMATION:			(PERFS):					
FORMATION:			(PERFS):					
2 ESTIMATED AN FORMATION:	MOUNT OF FLUID PRODUCTION	TO BE COMM	MINGLED FRON BOPD:	и EACH INT	ERVAL MCFPD:	4	BWPD:	6.67
FORMATION:	BARTLESVILLE		BOPD:	0.75	MCFPD:	0	BWPD:	5
FORMATION:	BARTLESVILLE		BOPD:	0.75	MCFPD:	0	BWPD:	5
FORMATION:	BARTLESVILLE	_	BOPD:	0.75	MCFPD:	0	BWPD:	5
FORMATION:	BARTLESVILLE		BOPD:	0.75	MCFPD:	0	BWPD:	5
FORMATION:		0	BOPD:		MCFPD:		BWPD:	
FORMATION:		0	BOPD:		MCFPD:		BWPD:	
FORMATION:		0	BOPD:		MCFPD:		BWPD:	
FORMATION:		0	BOPD:		MCFPD:		BWPD:	
FORMATION:		0	BOPD:		MCFPD:		BWPD:	
FORMATION:		0	BOPD:		MCFPD:		BWPD:	
FORMATION:		0	BOPD:		MCFPD:		BWPD:	

Affidavit of Notice Served				
Re: Application for: APPLICATION FOR COMMINGL	ING OF PRODUCTION OR FLUIDS ACO-4			
Well Name: TIMMONS, FLOYD A 29-1	Legal Location: NESWNW S29-T28S-R15E			
The undersigned hereby certificates that he / she is a duly authorized age	ent for the applicant, and that on the day ofSEPTEMBER			
	ed above was delivered or mailed to the following parties:			
Note: A copy of this affidavit must be served as a part of the application.				
	Address (Attach additional sheets if necessary)			
BLUE JAY OPERATING, LLC  Address (Attach additional sheets if necessary)  4916 CP BOWIE BLVD STE 204, FORT WORTH, TX 76				
CHEROKEE WELLS LLC	4916 CP BOWIE BLVD STE 204, FORT WORTH, TX 76107			
SEE ATTACHED				
I further attest that notice of the filing of this application was published in t	the THE WILSON COUNTY CITIZEN , the official county publication			
	county. A copy of the affidavit of this publication is attached.			
Signed this	2012			
Signed tris,	BILIAN			
	Applicant or Duly Authorized Agent			
Subscribed and sworn	to before me this day ofSEPTEMBER			
JENNIFER R. BEAL	manufacture and the second			
SEAL SEAL TO SEAL STATE OF THE SEAL SEAL SEAL SEAL SEAL SEAL SEAL SEA	Notary Public Beal  My Commission Expires:   April 20, 2016			
"Signal" AU WULL	My Commission Expires: July 20, 2016			

# 30-28S-15E

per TO dtd 5.21.07

N2NE4

Wayne E & Juliann Porter

14768 Jade RD Fredonia, KS 66736

SE4 & S2NE4 less

Roger M and Betty Jo Wambsganss

1111 Madison Fredonia, KS 66736

19-28S-15E

S2 SE4 (portion)

Wayne E & Juliann Porter

14768 Jade RD Fredonia, KS 66736

20-28S-15E

SW4 (portion)

Dorothy E. Duckworth

23617 DEER RD Toronto, KS 66777

SE4 (very small portion in SESESESE)

Robert L & Cathy J Row

15964 LANE RD Fredonia, KS 66736

29-28S-15E

N2NW

Wayne E & Juliann Porter

14768 Jade RD Fredonia, KS 66736

SW4

Cameron L & Shirley Jantz

10272 1400 RD Fredonia, KS 66736

**E2** 

Velma Douglas Trust 13419 INMAN RD Fredonia, KS 66736

# TIMMONS, FLOYD A 29-1-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

Offset Operators, Unio	eased Mineral Owners and Landow	wners acreage	
(Attach additional sheets			
	Name:	Legal Description of Leasehold:	
SEE ATTACHED			
I hereby certify that the s	atements made herein are true and co	rrect to the best of my knowledge and belief.	
		11/1/1	
		MENC	
		Applicant or Duly Authorized Agent	
	Subscribe	ed and sworn before me this day of SEPTEMBER	,2012
			- • •
	JENNIFER R. BEAL	(dennity K. Beal)	
OFFICIAL SEAL	WY COMMISSION EXPIRES	Notary Public	
The state of	7-20-2010	Notary Public R. Beal  My Commission Expires: Quely 20, 2014	
		· ·	

CURR_OPERA	SPOT	LEGAL LOCATION
Blue Jay Operating, LLC	NW SW	S29-T28S-R15E
Blue Jay Operating, LLC	NE NE SW	S29-T28S-R15E
Cherokee Wells LLC	S2 SW	S20-T28S-R15E
Cherokee Wells LLC	NE NE SW	S29-T28S-R15E
Cherokee Wells LLC	N2 NE	S30-T28S-R15E
Cherokee Wells LLC	N2 NW	S29-T28S-R15E

# 30-28S-15E

per TO dtd 5.21.07

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19-28S-15E

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SW4

Cameron L & Shirley Jantz

10272 1400 RD Fredonia, KS 66736

E2

Velma Douglas Trust 13419 INMAN RD Fredonia, KS 66736

#### AFFIDAVIT

STATE OF KANSAS

SS.

County of Sedgwick

Mark Fletchall, of lawful age, being first duly sworn, deposeth and saith: That he is Record Clerk of The Wichita Eagle, a daily newspaper published in the City of Wichita, County of Sedgwick, State of Kansas, and having a general paid circulation on a daily basis in said County, which said newspaper has been continuously and uninterruptedly published in said County for more than one year prior to the first publication of the notice hereinafter mentioned, and which said newspaper has been entered as second class mail matter at the United States Post Office in Wichita, Kansas, and which said newspaper is not a trade, religious or fraternal publication and that a notice of a true copy is hereto attached was published in the regular and entire Morning issue of said The Wichita Eagle for \_1\_ issues, that the first publication of said notice was

made as aforesaid on the 27th of

August A.D. 2012, with

subsequent publications being made on the following dates:

And affiant further says that he has personal knowledge of the statements above set forth and that they are true.

Subscribed and sworn to before me this

27th day of August, 2012

PENNY L. CASE Notary Public - State My Appt. Expires

Notary Public Sedgwick County, Kansas

Printer's Fee: \$139.60

# LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE AUGUST 27, 2012 (3203400) BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

NOTICE OF FILING APPLICATION
RE: In the Matter of Postrock Midconlinent
Production, LLC Application for
Comminguing of Production in the
Timmons, Floyd A 29-1 located in Wilson

Timmons, Floyd A 29-1 located in Wilson Counly, Kanass.
TC: All Oll & Gas Producers, Unleased Mineral Interest Owners, Landowners, and all persons whomever concerned.
You, and each of you, are hereby notified that Postrock Midcontinent Production, LLC has filled an application to commiste the Summif, Mulky, Bevier, Croweburg, Flemting, Riverton and Bartlesville producing formations at the Timmons, Floyd A 29-1; located in the NESWNW S29-T285-RISE, Approximately 1850 FML & 870 FWL, Wilson Country, Kanass.
Any persons who object to or protest this application shall be required to file their objections or protest with the Conservation

his application shall be required to file their objections or protest with the Conservation Division of the State Corporation Commission of the State of Kansas within fifteen (15) days from the date of this publication. These protests shall be filed pursuant to Commission regulations and must state specific reasons why granting the application may cause waste, included containing the application may cause waste, violate correlative rights or pollute the natural resources of the State of Kansas.

resources of the state of Kansas.

All persons interested or concerned shall take notice of the foregoing and shall govern themselves accordingly. All person and/or companies wishing to protest this application are required to file a written protest with the Conservation Division of the Kansas Oil and Gas Commission.

Gas Commission.

Upon the recelpt of any protest, the Commission will convene a hearing and protestants will be expected to enter an appearance either through proper legal counsel or as individuals, appearing on their

own behalf.
Postrock Midcontinent Production, LLC 210 Park Avenue, Suite 2750 Oklahoma City, Oklahoma 73102 (405) 660-7704

A COPY OF THE AFFIDAVIT OF PUBLICATION MUST ACCOMPANY ALL APPLICATIONS

### PROOF OF PUBLICATION

# STATE OF KANSAS Wilson County - SS

JOSEPH S. and RITA M. RELPH, of lawful age, being duly sworn upon oath that they are the Owners and Publishers of the WILSON COUNTY CITIZEN:

THAT said newspaper has been published at least weekly fifty (50) times a year and has been so published for at least five years prior to the first publication of the attached notice:

THAT said newspaper is a general circulation on a daily, or weekly, or monthly, or yearly basis in;

WILSON COUNTY, KANSAS and is NOT a trade, religious or fraternal publication and has been PRINTED and PUBLISHED in Wilson County, Kansas.

THE ATTACHED was published on the following dates in a regular issue of said newspaper:

1st publication was made on the	day or
aciqu	st. 20 12
2nd publication was made on the	
<u> </u>	. 20
3rd publication was made on the	day of
4th publication was made on the	day of
	20
5th publication was made on the	day of
6th publication was made on the	day of
	20-20
TOTAL PUBLICATION FEE; \$	36.
(Signed) July of Kelfsh	
Subscribed and sworn to before me, this	day of
auguert	_,20/2
	(Notary Public)
0 3/	2 204/

My commission expires

# **LIEGAL NOTICE**

(Published in the Wilson County Citizen on Monday, August 27, 2012.)

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

# NOTICE OF FILING APPLICATION

RE: In the Matter of Postrock Midcontinent Production, LLC Application for Commingling of Production in the Timmons, Floyd A 29-1 located in Wilson County, Kansas.

TO: All Oil & Gas Producers, Unleased Mineral Interest Owners, Landowners, and all persons

whomever concerned.

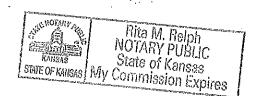
You, and each of you, are hereby notified that Postrock Midcontinent Production, LLC has filed an application to commingle the Summit, Mulky, Bevier, Croweburg, Fleming, Riverton and Bartlesville producing formations at the Timmons, Floyd A 29-1, located in the NESWNW S29-T28S-R15E, Approximately 1850 FNL & 870 FWL, Wilson County, Kansas.

Any persons who object to or protest this application shall be required to file their objections or protest with the Conservation Division of the State Corporation Commission of the State of Kansas within fifteen (15) days from the date of this publication. These protests shall be filed pursuant to Commission regulations and must state specific reasons why granting the application may cause waste, violate correlative rights or pollute the natural resources of the State of Kanses

All persons interested or concerned shall take notice of the foregoing and shall govern themselves accordingly. All person and/or companies wishing to protest this application are required to file a written protest with the Conservation Division of the Kansas Oil and Gas Commission.

Upon the receipt of any protest, the Commission will convene a hearing and protestants will be expected to enter an appearance either through proper legal counsel or as individuals, appearing on their own behalf

PostRock Midcontinent Production LLC 210 Park Avenue, Suite 275 Oklahoma City, Oklahoma 73102 (405) 660-7704 55 1 cpy.



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

September 25, 2012

Clark Edwards
PostRock Midcontinent Production LLC
Oklahoma Tower
210 Park Ave, Ste 2750
Oklahoma City, OK 73102

RE: Approved Commingling CO091207

Timmons, Floyd A. 29-1, Sec. 29-T28S-R15E, Wilson County

API No. 15-205-27180-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on September 17, 2012, has been reviewed and approved by the Kansas Corporation Commission (KCC) per K.A.R. 82-3-123. Notice was examined and found to be proper per K.A.R. 82-3-135a. No protest had been filed within the 15-day protest period.

Based upon the depth of the Riverton formation perforations, total oil production shall not exceed 100 BOPD and total gas production shall not exceed 50% of the absolute open flow (AOF).

# File form ACO-1 upon re-completion of the well to commingle.

Commingling ID number CO091207 has been assigned to this approved application. Use this number for well completion reports (ACO-1) and other correspondence that may concern this approved commingling.

Sincerely,

Rick Hestermann Production Department