

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

1097672

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)

OPERA	TOR: License #	API No. 15		
Name:_		Spot Description:	:	
Address	:1:		Sec Twp	_S. R East West
Address	s 2:		Feet from N	orth / South Line of Section
City:	State: Zip:+		Feet from E	ast / West Line of Section
Contact	Person:	County:		
Phone:	()	Lease Name:	We	ell #:
□ 1.	Name and upper and lower limit of each production interval to	be commingled:		
	Formation:	(Perfs	):	
	Formation:	(Perfs	):	
	Formation:	(Perfs	):	
	Formation:	(Perfs	):	
	Formation:	(Perfs	):	
2.	Estimated amount of fluid production to be commingled from e			
	Formation:			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 affidation	of the lessee of record or c	pperator.	ses within a 1/2 mile radius of
For Cor	mmingling of PRODUCTION ONLY, include the following:			
<u> </u>	Wireline log of subject well. Previously Filed with ACO-1:	Yes No		
6.	Complete Form ACO-1 (Well Completion form) for the subject	well.		
For Cor	mmingling 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 co	mmingled.	
current i mingling	VIT: I am the affiant and hereby certify that to the best of my nformation, knowledge and personal belief, this request for compistrue and proper and I have no information or knowledge, which sistent with the information supplied in this application.	9	Submitted Electron	nically
KCC	C Office Use Only	Protests may be filed by a	any party having a valid interes	st in the application. Protests must be
l —	enied Approved	in writing and comply with the notice of application.	h K.A.R. 82-3-135b and must l	be filed wihin 15 days of publication of
15-Da	y Periods Ends:			

\_ Date: \_\_

Approved By: \_\_\_

-	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./0	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 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 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  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	
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 Converte 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

ORIGINAL Form ACO-1
September 1999
Form Must Be Typed

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

Operator: License # 33344	API No. 15 - 133-27099-0000
Name: Quest Cherokee, LLC	County: Neosho
Address: 211 W. 14th Street  City/State/Zip: Chanute, KS 66720  Purchaser: Bluestem Pipeline, LLC	1980 feet from S /(N) circle one) Line of Section
Purchaser: Bluestem Pipeline, LLC	1980 feet from E / (circle one) Line of Section
Operator Contact Person: Jennifer R. Ammann	Footages Calculated from Nearest Outside Section Corner:
Phone: ( <u>620</u> ) <u>431-9500</u>	(circle one) NE SE (NW) SW
Contractor: Name: Michael	Lease Name: Brazle, Frank K. Well #: 17-1
icense:_33783	Field Name: Cherokee Basin CBM
Wellsite Geologist: Ken Recoy	Producing Formation: Multiple
Designate Type of Completion:	Elevation: Ground: 995 Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1086 Plug Back Total Depth: 1077.18
OilSWDSIOWTemp. Abd.	Amount of Surface Pipe Set and Cemented at 22 Feet
— Gas — ENHR — SIGW	Multiple Stage Cementing Collar Used?
	If yes, show depth set Feet
Dry Other (Core, WSW, Expl., Cathodic, etc)	If Alternate II completion, cement circulated from 1077.18
If Workover/Re-entry: Old Well Info as follows:	feet depth to surface w/_165 sx cmt.
Operator:	
Well Name:	Drilling Fluid Management Plan 44 3 3 16 39 (Data must be collected from the Reserve Pit)
Original Comp. Date:Original Total Depth:	
Deepening Re-perf Conv. to Enhr./SWD	Chloride content ppm Fluid volume bbls
Plug BackPlug Back Total Depth	Dewatering method used
Commingled Docket No	Location of fluid disposal if hauled offsite:
Dual Completion Docket No	Operator Name:
Other (SWD or Enhr.?) Docket No.	Lease Name: License No.:
8/18/07 8/19/07 8/22/07	
Spud Date or Date Reached TD Completion Date or Recompletion Date	Quarter Sec TwpS. R East West
recompletion bate	County: Docket No.:
Kansas 67202, within 120 days of the spud date, recompletion, workd Information of side two of this form will be held confidential for a period of	rith the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, over or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. If 12 months if requested in writing and submitted with the form (see rule 82-3-gs and geologist well report shall be attached with this form. ALL CEMENTING IIIs. Submit CP-111 form with all temporarily abandoned wells.
All requirements of the statutes, rules and regulations promulgated to regulation are complete and correct to the best of my knowledge.	ulate the oil and gas industry have been fully complied with and the statements
Signature: Annifu R. Ammann	KCC Office Use ONLY
Fitle: New Well Development Coordinator Date: 12/14/07	Letter of Confidentiality Received
Subscribed and sworn to before me this 14th day of	If Denied, Yes Date:
20 07.	Wireline Log Received RECEIVED KANSAS CORPORATION COMMISS Geologist Report Received
Notary Public: Dorce S-U-2010  At Commission Expires: 8-U-2010	UIC Distribution DEC 1 8 2007
Date Commission Expires: 0-4-3010	TERRA KLAUMAN conservation Division conservation Division
My Appt. E	Expires 8-4-2010 WICHITA, KS

إذ

	Intro		one	****			<b>*</b>	•
Operator Name: Qu	est Cherokee, LL	Ĉ	Lesse	Namo:	Brazle, Frank K		Well #: <u>17-1</u>	
Sec. 17 Twp. 2			County:	Neosh	10	2.)		
INSTRUCTIONS: Si tested, time tool ope temperature, fluid red	how important tops a n and closed, flowing covery, and flow rate	and base of formations p g and shut-in pressures, s if gas to surface test, a final geological well site	enetrated. I whether shalong with fire	Detail a ut-in pre	Il cores. Report	static level, hydi	rostatic pressure	es, bottom hole
Drill Stem Tests Take		☐ Yes 🗸 No		Δŗ	og Formati	on (Top), Depth	and Datum	Sample
Samples Sent to Ge		☐ Yes 🗸 No		Nam	e attached		Тор	Datum
Cores Taken Electric Log Run (Submit Copy) List All E. Logs Run:		☐ Yes ☑ No ☐ Yes ☐ No	-	000	attached			
1		CASING Report all strings set-	RECORD conductor, sur		ew Used ermediate, produc	tion, etc.		
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weig Lbs. /	ht	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4	8-5/8"	22		22	"A"	5	
Production	6-3/4	4-1/2	10.5		1077.18	"A"	165	
	-			-				
		ADDITIONAL	CEMENTIN	G / SQI	JEEZE RECORD	)		
Purpose: Perforate	Depth Top Bottom	. Type of Cement	#Sacks	Used		Type and	Percent Additives	
Protect Casing Plug Back TD Plug Off Zone						· 		
							·	
Shots Per Foot		ON RECORD - Bridge Plug Footage of Each Interval Pe				cture, Shot, Ceme		d Depth
4	984-987				400gai 15%HCLw/ 48 bbi	s 2%kcl water, 445bbis wate	er w/ 2% KCL, Błocide, 3000	# 20/40 sand 984-987
4	817-819/803-805/7	71-773/717-719/683-68	4/685-687	-	500gal 15%HCLw/ 45 bbl	s 2%kd water, 745bbis water	er w/ 2% KCL, Biocide, 8800	# 20/40 sand 817-819/803-80
			,				771-77	3/717-719 683-684/685-68
4	580-584/569-573				300gal 15%HCLw/ 49 bb	s 2%kci water, 645bbls water	er w/ 2% KCL. Blocide, 5600	# 20/40 sand 580-584/569-57
TUBING RECORD 2-3	Size 3/8"	Set At 1009	Packer At n/a		Liner Run	_Yes  ✓ N	0	
Date of First, Resumer	d Production, SWD or E	Enhr. Producing Met	_	] Flowin	g Pumpi	ng Gas L	ift 🔲 Othe	er (Explain)
Estimated Production Per 24 Hours	Oil	Bbls. Gas	Mcf	Wate	er B	bls.	Gas-Oil Ratio	Gravity
Disposition of Gas 1	n/a METHOD OF 0	9.1mcf		09.20	Production Inter			
Vented ✓ Sold	Used on Lease	Open Hole	✓ Perf.	<u> </u>	Dually Comp.	Commingled	<i>y</i>	. 1
e gant 1967 San de 1998 - Electrica N	ıbmit ACO-18.)	(		stout +		. , ,	*	•
er e		the state of the state of		<u> </u>	<u>. w</u>			



620-431-9500

# 211 W. 14TH STREET, CHANUTE, KS 66720 CONFIDENTIAL CONFID DEC 13 2001

TICKET NUMBER 21/1	!
FIELD TICKET REF #	ı
FOREMAN QUESTINE	

# TREATMENT (REPORT & FIELD TICKET CEMENT

DATE	1	WELL	NAME & NUMBE	R	SE	CTION	TOWNSHIP	RAN	GE COUNTY
8:22-07	Brazl	e FRa	nK 17-	-1	1	7	27	19	NO
FOREMAN / OPERATOR	TIME IŅ	TIME OUT	LESS LUNCH	TRUCK #	TRA		TRUCI		EMPLOYEE SIGNATURE
Duayne	7:00	10:45	No	901640		3.75 hr			way for
Maurick	7:00	1045		903197			3,75	40	
Tim A.	6:45	10'45		903140	T3:		4	11	L ager
Kevin	7:00	10:45	1/	93/300	9328	95	3,75	40	Kerm Mether
GONY C.	7:00	10:45		931500			3.75	4r 60	Al Cark
JOB TYPE Long	String HOLES	SIZE 6 3	<u> </u>	HOLE DEPTH 10°	85	_ CASIN	IG SIZE & W	EIGHT_	4= 10,5
CASING DEPTH				TUBING			R		
SLURRY WEIGHT_/				WATER gal/sk					
DISPLACEMENT_/	7.19 DISPLA	CEMENT PS	SI	MIX PSI	<del></del> .	_ RATE		15.1	UM.
REMARKS:									*
Wasi	4 +0 TO	Thon	Pump	2 Secks Prem	Ge/	and_	Sweep	70	Suntace
Then Pump	1 1 SOCK	Prem 9	el Fol	Yourd By 1 t to get lag to Bo	2 13/3	7/ Di	1 c Mai	Ker	and Stor
Cement. 1	Demp 165	Sacks	Cemen	t. to get	Dye	Mark	er 130	ck.	Flush
Pump Th	ien Dun	ns w.	: Per PI	ug to so	Hom	and	Ser F	100 7	560c
						·			<u> </u>
r	*		1.1						
<del> </del>	1077.	18		Cosing	· · ·		·		
l		<del></del>	4/2	centralizers		<del></del>	-		i
			4/2	Flor Shoe					<del></del>
ACCOUNT CODE	QUANTITY or U	INITS		DESCRIPTION OF SE	RVICES OF	PRODUC	Т		TOTAL AMOUNT
901640	3,75	_ イ/ F	oreman Pickup						
903197	3,75	4/ 0	Cement Pump True	ck					
903600	3.75	<u>ፈ</u> ለ Β	lulk Truck	f					
. 1104	<i>155</i>	Seck P	ortland Cement						'
1124	2		07502228200H	1,7100	Sal-	1-105	3"_3	j =	<u> </u>
1126			WC Blend Gen	man 4 = Wig	Den	Mug		· · <u> </u>	1
1110	16		Ailsonite			<i>O</i>			
1107		-2007	lo-Seal			<del>_</del>	· · · · · · · · · · · · · · · · · · ·	RFC	EIVED
1118 1215A	1 /		remium Gel				KANSAS	CORPO	RATION COMMISSION
1111B	1 Ga		igelium Sillicate	cal Clarical	/			nro	1 9 2007
1123	760n		City Water	a 1 (101,0)	£		<del></del>	DEC	1 8 2007
903140		-32	ransport Truck				(		ATION DIVISION
737			ransport Trailer						CHITA, KS
931500	3.		0 Vac						
Ravin 4513			<u>-</u>					-	T

081907

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

DEC 1 3 2007

**KCC** 

Company:

Quest Cherokcc LLC

Address:

9520 North May Ave, Suite 300

Oklahoma City, Oklahoma 73120

Ordered By: Donnie Meyers

Date:

08/19/07

Lease:

Brazie, Frank K.

County: Neosho

Well#:

#: <u>17-1</u>

API#: 15-133-27099-00-00

### **Drilling Log**

FEET	DESCRIPTION	FEET	DESCRIPTION
0-22	Overburden	579-585	Black Shale
22-40	Sandy Shale	585	Gas Test 44# at 3/8" Choke
40-70	Lime and Shale	585-587	Coal
70-115	Lime	587-612	Sandy Shale
115-123	Sandy Shale	612-658	Sand
123-130	Lime	658-659	Lime
130-140	Sand and Sandy Shale	659-660	Coal
140-152	Lime	660-678	Shale
152-158	Shale	678-680	Lime
158-198	Lime	680-682	Coal
198-352	Shale	682-700	Shale
352-360	Lime	700-702	Coal
360-382	Sandy Shale	702-730	Shale
382-395	Lime	730-731	Lime
395-455	Shale	731-732	Coal
455-457	Coal	732-742	Shale
457-505	Lime	742-743	Coal
505-508	Black Shale	743-751	Sand
508-541	Shale	751-762	Sandy Shale
541-542	Coal	762-770	Shale
542-565	Lime	770-771	Coal RECEIVED
557	Gas Test 44# at 3/8" Choke	771-793	Sand KANSAS CORPORATION COMMISSION
565-572	Black Shale	793-800	Shale DEC 1 8 2007
572-579	Lime -	800-801	Coal CONSERVATION DIVISION

081907

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

CONFIDENTIAL DEC 1 3 2007

KCC

Company:

Quest Cherokee LLC

Address:

9520 North May Ave, Suite 300

Oklahoma City, Oklahoma 73120

Ordered By: Donnie Meyers

Date: 08/19/07

Lease:

Brazie, Frank K.

County: Neosho

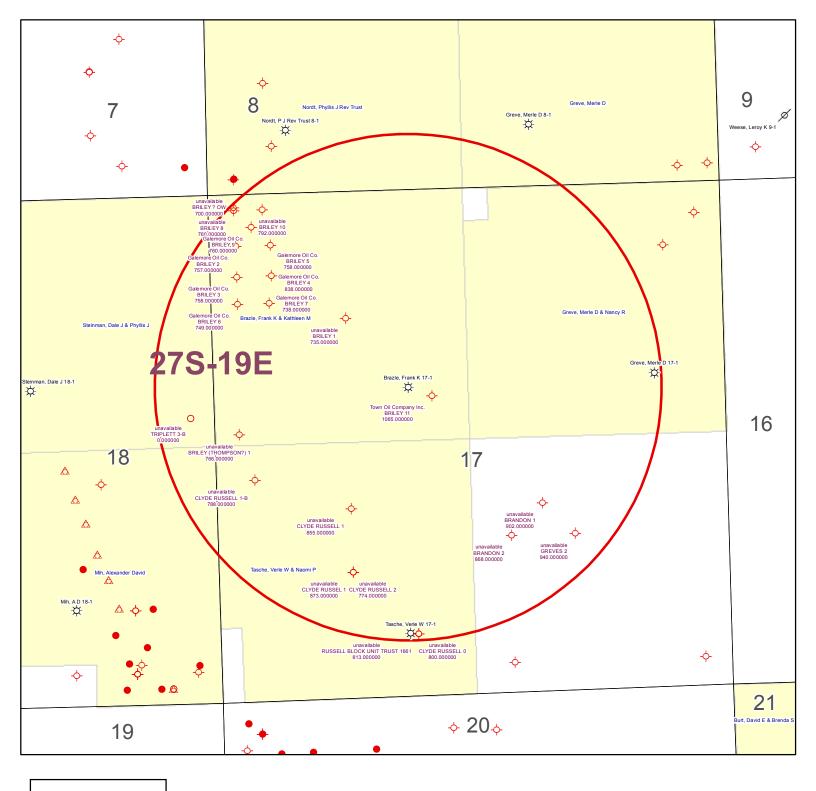
Well#:

17-1

API#: 15-133-27099-00-00

### **Drilling Log**

FEET	DESCRIPTION	FEET	DESCRIPTION
818-108	Sand		
818-819	Coal		
819-852	Shale		
852-900	Sand		
900-902	Coal		
902-916	Shale		
916-917	Coal		
917-940	Sand		
940-941	Coal		
941-958	Sand		
958-979	Shale		
979-981	Coal		
981-984	Shale		
982	Gas Test 30# at 3/4" Choke		
984-1085	Mississippi Lime		
1009	Gas Test 30# at 3/4" Choke		
1085	Gas Test 30# at 3/4" Choke		
1085	TD		
	Surface 22'		RECEIVED  KANSAS CORPORATION COMMISSION
			DEC 1 8 2007
			CONSERVATION DIVISION WICHITA, KS



#### **KGS STATUS**

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

Brazle, Frank K 17-1 17-27S-19E 1" = 1,000'

#### **POSTROCK**



### **Current Completion**

WELL : Brazle, Frank K 17-1

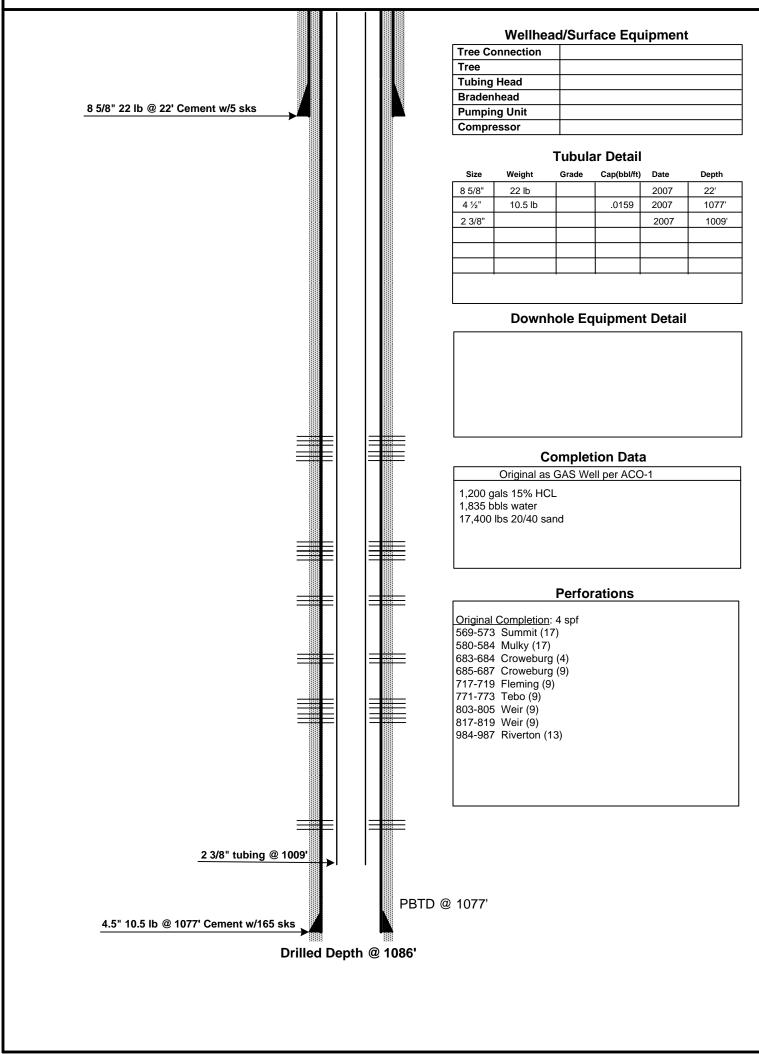
FIELD : Cherokee Basin

STATE: Kansas
COUNTY: Neosho

SPUD DATE: 8/18/2007 COMP. Date: 8/22/2007 API: 15-133-27099-00-00

**LOCATION: 17-27S-19E (SE,NW)** 

**ELEVATION: 995'** 



PREPARED BY: POSTROCK

APPROVED BY:

**DATE:** OCT, 2012

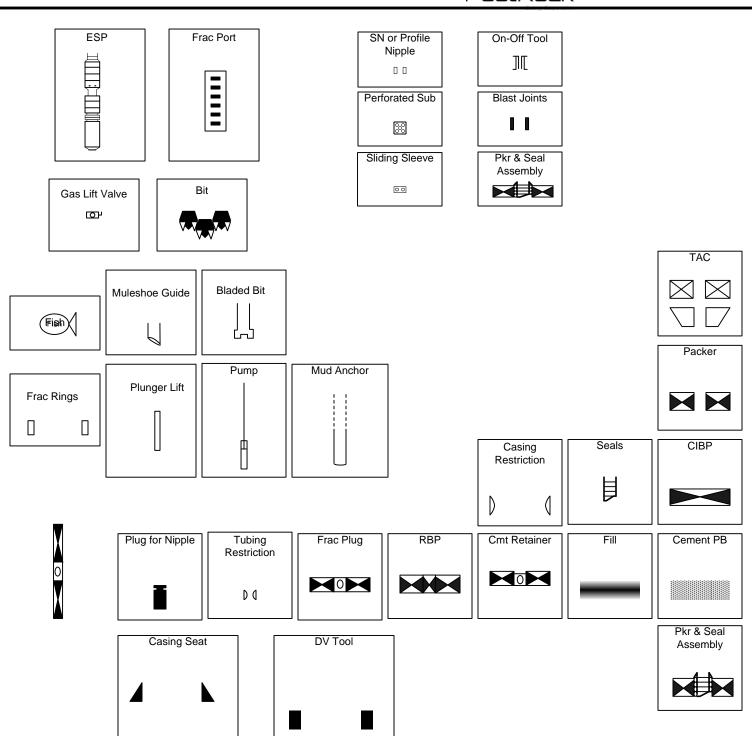
DATE:\_

## **POSTROCK**



#### **LEGEND**

### PostRock<sup>®</sup>



1 NAME & UPPE	R & LOWER LIMIT OF EACH PROD	UCTION INT	ERVAL TO BE	COMMING	_ED			
FORMATION:	TEBO	_	(PERFS):	771 -	773			
FORMATION:	WEIR	_	(PERFS):	803 -	805			
FORMATION:	WEIR	<u>_</u>	(PERFS):	817 -	819			
FORMATION:	RIVERTON	_	(PERFS):	984 -	987			
FORMATION:	BARTLESVILLE	<u></u>	(PERFS):	894 -	900			
FORMATION:		_	(PERFS):					
FORMATION:		_	(PERFS):	-				
FORMATION:		<u></u>	(PERFS):					
FORMATION:		_	(PERFS):					
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FORMATION:		<u></u>	(PERFS):					
FORMATION:		<u></u>	(PERFS):					
	MOUNT OF FLUID PRODUCTION TO	О ВЕ СОММ		_		2	0. 514455	
FORMATION:	TEBO	_	BOPD:	0	MCFPD:		0 BWPD:	4.44
FORMATION:	WEIR	_	BOPD:	0	MCFPD:	3	BWPD:	4.44
FORMATION:	WEIR	_	BOPD:	0	MCFPD:	3	BWPD:	4.44
FORMATION:	RIVERTON	_	BOPD:	0	MCFPD:	3	BWPD:	4.44
FORMATION:	BARTLESVILLE	_	BOPD:	3	MCFPD:	0	BWPD:	20
FORMATION:		<u>)</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>)</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>)</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>)</u>	BOPD:		MCFPD:		BWPD:	
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FORMATION:		<u>)</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:	(	<u>)</u>	BOPD:		MCFPD:		BWPD:	

Affida	vit of Notice Served							
Re:	Re: Application for: APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS ACO-4							
	Well Name: BRAZLE, FRANK K 17-1	Legal Location: NWSESENW S17-T27S-19E						
The unc	ersigned hereby certificates that he / she is a duly authorized a	agent for the applicant, and that on the day ofNOVEMBER_						
2012		nced above was delivered or mailed to the following parties:						
Note: A	copy of this affidavit must be served as a part of the applicatio	n.						
	Name	Address (Attach additional sheets if necessary)						
GAL	EMORE OIL CO	305 E RUTLIDGE, YATES CENTER,	KS 66783					
TOV	VN OIL COMPANY INC	16205 W 287TH ST, PAOLA, KS 6	3071					
SEE	ATTACHED							
		•						
I further attest that notice of the filing of this application was published in the THE CHANUTE TRIBUNE , the official county publication								
of NE		county. A copy of the affidavit of this publication is attached.						
Signed th	is 12th day of NOVEMBER	2012						
Ū	·	Ded Marie						
		Applicant or Duly Authorized Agent						
	Subscribed and swo	rn to before me this 12th day of NOVEMBER	, 2012					
•	JENNIFER R. BEAL OFFICIAL MY COMMISSION EXPIRES	Notary Public Propriée R. Beal						
	7-20-2016	My Commission Expires: Quela 20, 2016						
		m, common Lymon						

#### <u>17-27S-19E</u>

tract in NWNE Yvette Almanza

PO Box 299

Chanute, KS 66720

SE4

Jack A. Suit

612 S Sunset Ave Chanute, KS 66720

#### BRAZLE, FRANK K 17-1-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

	ed Mineral Owners and Lando	wners acreage		
h additional sheets if n	ecessary) Name:		Legal Description	of Leasahold:
ATTACHED	Name.		Legal Description	of Leaseriold.
MINORED				
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		<del></del>		
y certify that the stater	ments made herein are true and co	orrect to the best of my know	rledge and belief.	
			1.1	*
			Jeff Man	- Manufill surround
		Applicant or Du	ly Authorized Agent	
	0.5		124 day of NOVEMBER	2012
	Subscribe	ed and sworn before me this		
			, 02	0.
			and the second of the second o	V 3
	JENNIFFR R. BEAL	Notary Public	unific of solo	<u> </u>
OFFICIAL	JENNIFER R. BEAL MY COMMISSION EXPIRES	$\mathcal{O}$	profes alla de	0 20/10
OFFICIAL	MY COMMISSION EXPIRES	Notary Public  My Commission	nnfu R Bea Expires: July 2	0,2014
OFFICIAL	JENNIFER R. BEAL MY COMMISSION EXPIRES 7-20-2014	$\mathcal{O}$	Expires: July 2	0,2014
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OFFICIAL	MY COMMISSION EXPIRES 7-20-2016	My Commission		
OFFICIAL	MY COMMISSION EXPIRES 7-20-2016	My Commission	0 0	

#### 17-27S-19E

tract in NWNE Yvette Almanza

PO Box 299

Chanute, KS 66720

SE4

Jack A. Suit

612 S Sunset Ave Chanute, KS 66720

LEGAL LOCATION	SPOT	CURR_OPERA
S17-T27S-R19E	SW NW NW NW	Galemore Oil Co.
S17-T27S-R19E	NW SW NW NW	Galemore Oil Co.
S17-T27S-R19E	NE SW NW NW	Galemore Oil Co.
S17-T27S-R19E	SE NW NW NW	Galemore Oil Co.
517-T27S-R19E	SW SW NW NW	Galemore Oil Co.
517-T27S-R19E	SE SW NW NW	Galemore Oil Co.
517-T27S-R19E	C NW NW NW	Galemore Oil Co.
S17-T27S-R19E	SE SE NW	Town Oil Company Inc.

#### 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 9th of

#### November 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.

Fletchall

Subscribed and sworn to before me this

9th day of November, 2012

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

Notary Public Sedgwick County, Kansas

Printer's Fee: \$132.40

#### LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE NOVEMBER 9, 2012 (3216893) BEFORE THE STATE CORPORATION COMMISSION

COMMISSION
OF THE STATE OF KANSAS
NOTICE OF FILING APPLICATION
RE: In the Matter of Postrock Midconfluent
Production, LLC Application for
Comminaling of Production in the Brazte, Frank K 17-1 located in Neosho County,

Kansas.

TO: All Oil & Gas Producers, Unleased Mineral inferes! 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, Croweburg, Flemling, Tebo, Welr, Riverton and Barlesville producing formations at the Brazle, Frank K 17-1, located in he NW SE SE NW, SU-TZJS-RIPE, Approximately 2059 FNL & 2028 FWL, Neosho County, Kansas.

Any persons who object to or protest

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 Kansas.

All ipersons interested or concerned shall Any persons who object to or

resources of the State of Kansas.

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

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, Sulte 2750

Oktahoma City, Oktahoma 73102

(405) 660-7704

#### 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	0190	day of
Mouemb	er_:	20/2
2nd publication was made on the		day of
	, 2	20
3rd publication was made on the		day of
		20
4th publication was made on the		day of
	2	30
5th publication was made on the		day of
	2	20
6th publication was made on the		day of
	2	73
TOTAL PUBLICATION FEE: \$		
(Signed) Juseph & Rely	ch	<del></del>
Subscribed and sworn to before me, this _	940	day of
November	, 20 <u>.</u>	
SitaM. Rel	gh (Not	ary Public)
Manuscripton Club	13a	2014

(Published in the Wilson County Citizen on Thursday, November 8, 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 Sell Family Trust 10-2 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 Bevier, Croweburg, Fleming, Tebo, Weir, Rowe and Bartlesville producing formations at the Sell Family Trust 10-2, located in the NW SE NE SW, S10-T28S-R16E, Approximately 1975 FNL & 2096 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 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.

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 2750 Oklahoma City, Oklahoma 73102 (405) 660 7704



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

November 27, 2012

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

RE: Approved Commingling CO111208

Brazle, Frank K. 17-1 Sec. 17-T27S-R19E, Neosho County

API No. 15-133-27099-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on November 19, 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 CO111208 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