

#### 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)

OPERA	TOR: License #	API No. 15	API No. 15					
Name:_		Spot Description: _						
Address	31:		_ Sec Twp	_S. R East West				
Address	3 2:		Feet from No	orth / South Line of Section				
City:	State: Zip:+		Feet from Ea	ast / West Line of Section				
Contact	Person:	County:						
Phone:	()_	Lease Name:	Wel	II #:				
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:				
	Formation:			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 Cor	mmingling 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>						
0.	Complete Form 7000 F (World Completion Tollin) for the Subject	won.						
For Con	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 com-	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 compistrue and proper and I have no information or knowledge, which sistent with the information supplied in this application.	Sı	ubmitted Electron	nically				
KCC	C Office Use Only			it in the application. Protests must be te filed wihin 15 days of publication of				
∐ De	enied Approved	the notice of application.						

15-Day Periods Ends: \_\_ Approved By: Date: \_

	Α	В	С	D	Е	F	G	Н	1	1	K
1	Produced Fluids #	Б	1	2	3	4	5	11		<u> </u>	I IX
	Parameters	Units	Input	Input	Input	Input	Input		Click her	re	Click
3	Select the brines	Select fluid	7	Ī		V	Ī	Mixed brine:	to run SS	-	
4	Sample ID	by checking						Cell H28 is	10 1411 00	•	Click
5	Date	the box(es),	3/19/2012	3/4/2012	3/14/2012	1/20/2012	1/20/2012	STP calc. pH.			
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			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>		1,030.00	2,432.00	2,044.00	1720.00	1740.00				0.13
	Ba <sup>2+</sup>	(mg/l)						0.00	Ба	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	osum	
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	
	F	(mg/l)						0.00	-3.96	-3.90	0.06
	Br'	(mg/l)						0.00		ydrite	3.00
	SiO2	(mg/l) SiO2						0.00	-3.47	-3.36	0.12
_			100.00	224.00	250.00	200 00	254.00				0.12
	HCO3 Alkalinity**	(mg/l as HCO3)	190.00	234.00	259.00	268.00	254.00	241.03	Cele	estite	
_	CO3 Alkalinity	(mg/l as CO3)						_			
	Carboxylic acids**	(mg/l)						0.00		Sulfide	
27	Ammonia	(mg/L) NH3						0.00	-0.16	-0.22	-0.06
28	Borate	(mg/L) H3BO3						0.00	Zinc S	Sulfide	
29	TDS (Measured)	(mg/l)						72781			
30	Calc. Density (STP)	(g/ml)	1.038	1.051	1.050	1.048	1.045	1.047	Calcium	fluoride	
31	CO <sub>2</sub> Gas Analysis	(%)	19.97	18.76	22.41	35.53	33.79	26.16			
	H <sub>2</sub> S Gas Analysis***	(%)	0.0289	0.0292	0.0296	0.0306	0.0151	0.0269		rbonate	
33	Total H2Saq	(mgH2S/l)	1.00	1.00	1.00	1.00	0.50	0.90	-0.74	-0.51	0.23
34	pH, measured (STP)	pН	5.67	5.76	5.72	5.54	5.55	5.63	Inhibitor ne	eeded (mg/L)	
	Chasse one ention	0-CO2%+Alk,							Calcite	NTMP	
35	Choose one option to calculate SI?		0	0	0	0					
	Gas/day(thousand cf/day)	(Mcf/D)	•		0	U		0	0.00	0.00	
	Oil/Day	(B/D)	0	0	1	1	1	4	Barite	BHPMP	1
	Water/Day	(B/D)	100	100	100	100	100	500	0.00	0.00	
39	For mixed brines, enter val	ues for temperat	tures and pressi	res in Cells (H	(40-H43)			(Enter H40-H43)		Н	
40	Initial T	iucs for tempera						(Linco 1145)	р	п	
41		(F)	66.0	71.0	70.0	41.0	49.0	60.0	5.69	5.60	1
	Final T		66.0	71.0	70.0	41.0	49.0	60.0 89.0	5.69 Viscosity (	5.60 CentiPoise)	
	Final T Initial P	(F)	66.0 25.0	71.0 25.0	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	Initial P Final P	(F) (F) (psia) (psia)	66.0	71.0	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	Initial P Final P Use TP on Calcite sheet?	(F) (F) (psia) (psia) 1-Yes;0-No	66.0 25.0	71.0 25.0	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	Initial P Final P Use TP on Calcite sheet? API Oil Grav.	(F) (psia) (psia) 1-Yes;0-No API grav.	66.0 25.0	71.0 25.0	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 ne	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C) 0.959 eeded (mg/L)	
42 43 44 45 46	Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav.	(F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav.	66.0 25.0	71.0 25.0	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	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C) 0.959 eded (mg/L) HDTMP	
42 43 44 45 46 47	Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day	(F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D)	66.0 25.0	71.0 25.0	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	Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day	(F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav.	66.0 25.0	71.0 25.0	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	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C) 0.959 eded (mg/L) HDTMP	
42 43 44 45 46 47 48 49	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) (B/D)	66.0 25.0	71.0 25.0	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	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) (B/D)	66.0 25.0	71.0 25.0	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	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 25.0	71.0 25.0	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	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) (B/D) (N) (N) STP:	66.0 25.0	71.0 25.0	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	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)	66.0 25.0	71.0 25.0	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	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 25.0	71.0 25.0	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	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	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) (N) STP: (%) (mgH2S/I) (pH) (%)	66.0 25.0	71.0 25.0	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	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	(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	66.0 25.0	71.0 25.0	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	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 \$\textstyle{\textstyle{2}}\$\text{Control}\$	(F) (F) (psia) (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 25.0	71.0 25.0	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	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	(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	66.0 25.0	71.0 25.0	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	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 SCations= EAnions=	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/l) as HCO3 (equiv./l) (equiv./l)	66.0 25.0	71.0 25.0	70.0 25.0	41.0 25.0 25.0	49.0 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	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) (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 25.0 25.0 0 0	71.0 25.0 25.0	70.0 25.0 25.0 1nhibitor NTMP	41.0 25.0 25.0 Unit Converter	49.0 25.0 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 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	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 \$\textstyle{\textstyle{2}}\text{Collections=} \$\text{\$\	(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	66.0 25.0 25.0 0 0	71.0 25.0 25.0	70.0 25.0 25.0	41.0 25.0 25.0 Unit Converter From Unit	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 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	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,S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated E\(\text{Calculated}\) Alkalinity Caclulated E\(\text{Calculated}\) E\(\tex	(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	66.0 25.0 25.0 0 0	71.0 25.0 25.0	70.0 25.0 25.0 1nhibitor NTMP	41.0 25.0 25.0 Unit Converter	49.0 25.0 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 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 60 61 62 63	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 Have ScaleSoftPitzer	(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) (equiv./I) Input 120	66.0 25.0 25.0 0 0	71.0 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 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	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 Have ScaleSoftPitzer pick inhibitor for you?	(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) (equiv./I) (mg/I) Input 120	0 0 0 0 Unit min	# 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	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	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 SCations= EAnions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, 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) (equiv./I) (mg/I) Input 120	0 0 0 0 Unit min	# 1 2 3 4	Inhibitor NTMP BHPMP PAA DTPMP	Unit Converter From Unit °C m³ m³	49.0 25.0 25.0 25.0 (From metric Value 80 100 100	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 3,531 629	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	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 SCations= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,	(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) (mg/I) Input 120  1 4	0 0 0 0 Unit min 1-Yes;0-No #	## 1 2 3 4 5 5	Inhibitor NTMP BHPMP PAA DTPMP PPCA	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 55 56 57 58 59 60 61 62 63 64 65 66 67	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 Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,  1st 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) (mg/I) Input 120  1 4	0 0 0 0 Unit min 1-Yes;0-No #	# 1 2 3 4 5 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 43 44 45 46 47 48 49 50 51 52 53 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69	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 Have ScaleSoftPitzer pick 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/l) as HCO3 (equiv./l) (equiv./l) (mg/l) Input 120  1 4 1 50	0 0 0 0 Unit min 1-Yes;0-No # # %	## 1 2 3 4 4 5 5 6 7 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	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	

## **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 ORIGINAL OIL & GAS CONSERVATION DIVISION

September 1999
Form Must Be Typed

WELL COMPLETION FORM

# WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 33344	API No. 15 - 205-27008 - 00 - 00
Name: Quest Cherokee, LLC	County: Wilson
Address: 211 W. 14th Street	<u>ne_sw_Sec. 3</u> Twp. 28 S. R. 16
City/State/Zip: Chanute, KS 66720	1980 feet from S N (circle one) Line of Section
Purchaser: Bluestem Pipeline, LLC	1980 feet from E / (W)(circle one) Line of Section
Operator Contact Person: Jennifer R. Ammann	Footages Calculated from Nearest Outside Section Corner:
Phone: (620 ) 431-9500	(circle one) NE SE NW SW
Contractor: Name: TXD Services LP	Lease Name: Wing Living Trust Well #: 3-1
License: 33837	Field Name: Cherokee Basin CBM
Wellsite Geologist: Ken Recoy	Producing Formation: Multiple
Designate Type of Completion:	Elevation: Ground: 1032 Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1333 Plug Back Total Depth: 1328.63
Oil SIOWTemp. Abd.	Amount of Surface Pipe Set and Cemented at 22 Feet
✓ Gas ENHR SIGW	Multiple Stage Cementing Collar Used?
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 1328.63
Operator:	feet depth to surface w/ 163 sx cmt.
Well Name:	111 11 2 110 1/10
Original Comp. Date: Original Total Depth:	Drilling Fluid Management Plan AU # 2 KJR 6/18 (Data must be collected from the Reserve Pit)
Deepening Re-perf Conv. to Enhr./SWD	Chloride contentppm Fluid volumebbls
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:
	Lease Name: License No.:
11/17/06         11/22/06         11/22/06           Spud Date or         Date Reached TD         Completion Date or	Quarter Sec TwpS. R East West
Recompletion Date Recompletion Date	County: Docket No.:
Kansas 67202, within 120 days of the spud date, recompletion, workon information of side two of this form will be held confidential for a period of	th the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, ver 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 82-3-14). CEMENTING
TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged well	
All requirements of the statutes, rules and regulations promulgated to regulation are complete and correct to the best of my knowledge.	late the oil and gas industry have been fully complied with and the statements
Signature: Changer L. Commany	KCC Office Use ONLY
Title: New Well Development Coordinator Date: 3/21/07	Letter of Confidentiality Received
Subscribed and sworn to before me this 3154 day of MOUCH	If Denied, Yes Date:
20 07.	Wireline Log Received
10.00	Geologist Report Received
Notary Public: SOUTA ( Douman	ERRA KLAUMAN
Date Commission Expires: Viva Nota	rv Public - State of Kansas
My Appt. Ex	cpires 8-4-2010

Operator Name: Que	est Cherokee, LL	С	Lease Name	e: Wing Living	rust	Well #: 3-1	
Sec. 3 Twp. 28		✓ East West	County: Wi	Ison			
ested, time tool oper emperature, fluid rec	and closed, flowing covery, and flow rate	and base of formations p g and shut-in pressures, s if gas to surface test, inal geological well site	, whether shut-in along with final c	pressure reached	static level, hydr	rostatic pressure	es, bottom noie
Drill Stem Tests Take		_ Yes ✓ No		Log Format	ion (Top), Depth		Sample
Samples Sent to Geo	ological Survey	Yes No	1	ame ee attached		Тор	Datum
Cores Taken Electric Log Run (Submit Copy)		☐ Yes ☑ No ☐ Yes ☐ No					
List All E. Logs Run:							
Compensated Dual Induction	-		PECORD	New Used			
		CASING Report all strings set	G RECORD -conductor, surface		ction, etc.		
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4	8-5/8"	20	22	"A"	5	
Production	6-3/4	4-1/2	10.5	1328.63	"A"	163	
		ADDITIONA	AL CEMENTING /	SQUEEZE RECOF	PD.		
Purpose:  —— Perforate —— Protect Casing —— Plug Back TD —— Plug Off Zone	Depth Top Bottom	Type of Cement	#Sacks Used			d Percent Additives	3
Shots Per Foot	PERFORAT Specify	TION RECORD - Bridge Ply Footage of Each Interval F	ugs Set/Type Perforated		racture, Shot, Ceme Amount and Kind of		rd Depth
4	1227-1229			250gal 15%HCLw/ 36	bbis 2%kci water, 354bbis wa	ater w/ 2% KCL, Biocide, 120	10# 20/40 sand 1227-1229
4	1078-1080/103	4-1036/974-976/938	3-941/921-923	500gal 15%HCLw/ 61	bbls 2%kci water, 881bbls wat	ter w/ 2% KCL, Biocide, 1360	974–976 938-941/921-923
4	856-860/842-84			300gal 15%HCLw/ 53	bbls 2%kd water, 450bbls wa	ater w/ 2% KCL, Biocide, 900	00# 20/40 sand 856-860/842-846
TUBING RECORD 2-	Size -3/8"	Set At 1250	Packer At n/a	Liner Run	☐ Yes ✓ M	No	
Date of First, Resume	rd Production, SWD or	Enhr. Producing M		owing 📝 Pum	ping Gas	Lift Oth	ner (Explain)
Estimated Production Per 24 Hours	oii n/a	Bbls. Gas 9.9mcf	Mcf 9	Water 7.5bbls	Bbls.	Gas-Oil Ratio	Gravity
Disposition of Gas		COMPLETION		Production In	erval		
Vented ✓ Sold (If vented, S	Used on Lease ubmit ACO-18.)	Open Hol		Dually Comp.	Commingled	I	









₹IG #	101		S. 22	T. 29	R	. 16E.	n - 121 B - 20 General Market Steel	L. Destruction of the	
API#	205-27009		County:	Wilson	l		408'	no flow	
	Elev:	832'	Location	Kansa	S.		439'	no flow	
	Company of the State of the Sta			4			532'	no flow	
Operator:	Quest Chero	kee, LLC				2.52	563'	no flow	
	9520 N. May	Ave, Suite	300				626'	no flow	
7,11	Oklahoma C	ity, OK. 731	20				659'	no flow	
	22-1		Lease Name	Lovett	Augus	sto	720'	3 - 1/4"	2.92
Footage Locati	on	1980	ft from the	N	Li	ne	815'	3 - 1/4"	2.92
		1980	ft from the	Ē	Li	ne	877'	2 - 1/4"	2.37
<b>Drilling Contract</b>	tior.	TXD 8	SERVICES	P			903'	2 - 1/4"	2.37
Spud Date;	11/7/2006		Geologist:				970'	7 - 3/4"	37.4
Date Comp:	11/23/2006	Application of the second seco	Total Depth:	1162'			1001	2 - 3/4"	20
Exact spot Loc	ation	SW NE		Karlar ar Firling			1032'	2 - 3/4"	20
					John .		1063	8 - 3/4"	40
	Surface	Production					1162'	8 - 3/4"	40
Size Hole	12-1/4"	6-3/4"			*****				
Size Casing	8-5/8"	4-1/2"							
Weight	24#								
Setting Depth	20.0'								
Type Cement	portland		5	, <u> </u>		, , , , , , , , , , , , , , , , , , , ,	THE COLUMN TO SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE		
Sacks				44.	,				

and the second				14.1 W. C.				
Formation	Тор		Formation	Тор	Btm.	Formation	Top	Stm.
top soil	0	4	shale	432	433	b.shale	645	
shale	4	27	b.shale	433	435	coal	647	648
lime	27	34	lime	435	441	lime	648	658
sand	34	60	shale	441	453	shale	658	706
lime	60	65	sand	453	467	coal	708	707
shale	65	120	shale	467	521	shale	707	718
lime	120	204	lime	521	526	b.shale	718	720
b.shale	204	205	coal	526	528	shale	720	
lime	206	209	lime	528	539	coal	756	757
shale	209	236	coal	539	540	shale	757	814
lime	236	249	lime	540	559	coal	814	815
shale	249	259	b.shale	559	561	shale	815	830
sand	259	269	coal	561	562	b.shale	830	832
lime	269	336	shale	562	575	shale	832	860
shale	336	354	lime	575	601	coal	860	861
b.shale	354		coal	601	602	shale	861	878
shale	356	378	shale	602	610	coal	. 878	879
b.shale	378	380	lime	610	616	shale	879	887
lime	380	400	coal	616	617	coal	887	888
coal	400	401	lime	617	622	sand	888	
lime	401	410	coal	622		coal	901	
shale	410	422	b.shale	623		sand	902	
lime	422		lime	626	645	shale	930	
Consideral.	269-336' ad	ded water a	271' lots of oil	in pit odo	r 312-320	odor, 453-46	37' odor	d practical states and the states of the

RECEIVED KANSAS CORPORATION COMMISSION

MAR 2 3 2007

			s elle i	Lovet:	22-1	(*************************************		<b>PG2</b>
Formation	Тор	Btm.	Formation	Тор	Btm.	Formation	Тор	Btm.
sand	934	968						
b.shale	968							
coal	970							
sand	972					<u> </u>		· ·
coal	987							<u> </u>
sand	988							
coal	1018							
sand	1020					<u> </u>		
b.shale	1047				<u> </u>			
coal	1049							
sand	1051				1	No. of the latest with the lat		
chat	1056	1162		,				
						,		
		1			<u> </u>			
								1
		55(p) 48-13		1				
		ALEA CONTROL						<u> </u>
					-			
		- Application of the state of t					1	

934-968' lots of water, 944-948' odor

RECEIVED KANSAS CORPORATION COMMISSION

MAR 2 3 2007

CONSERVATION DIVISION WIGHITA, KS



Ravin 4513



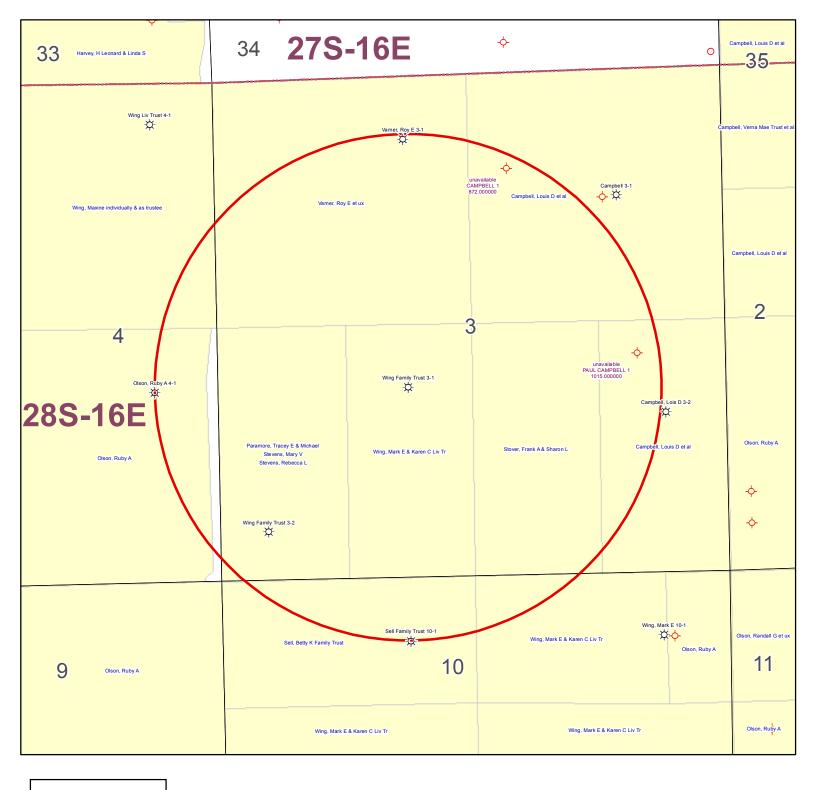
### 211 W. 14TH STREET, CHANUTE, KS 66720 620-431-9500

TICKET NUMBER 1931

FOREMAN Soe

418800

# TREATMENT REPORT & FIELD TICKET CEMENT



# **KGS STATUS**

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

Wing Family Trust 3-1 3-28S-16E 1" = 1,000'

# **POSTROCK**



# **Current Completion**

**WELL** : Wing Living Trust 3-1

**FIELD** : Cherokee Basin

**STATE** : Kansas COUNTY : Wilson

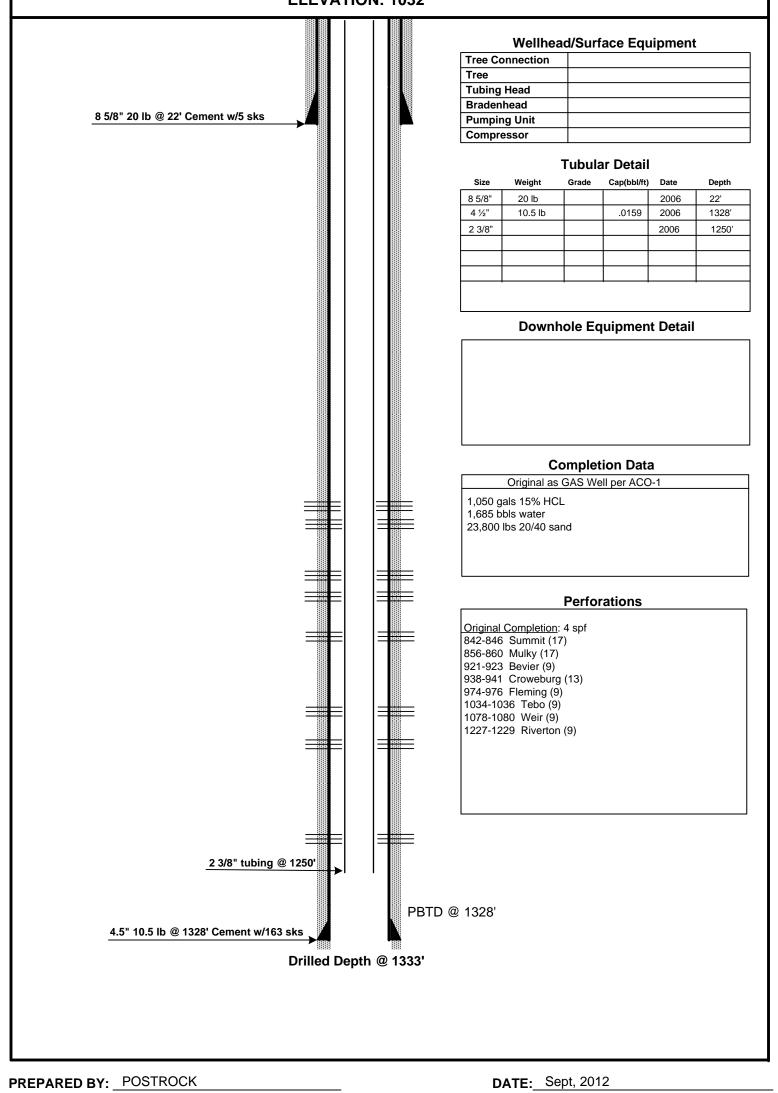
PREPARED BY: POSTROCK

APPROVED BY: \_

SPUD DATE: 11/17/2006 COMP. Date: 11/22/2006

API: 15-205-27008-00-00

LOCATION: 3-28S-16E (NE,SW) **ELEVATION: 1032'** 



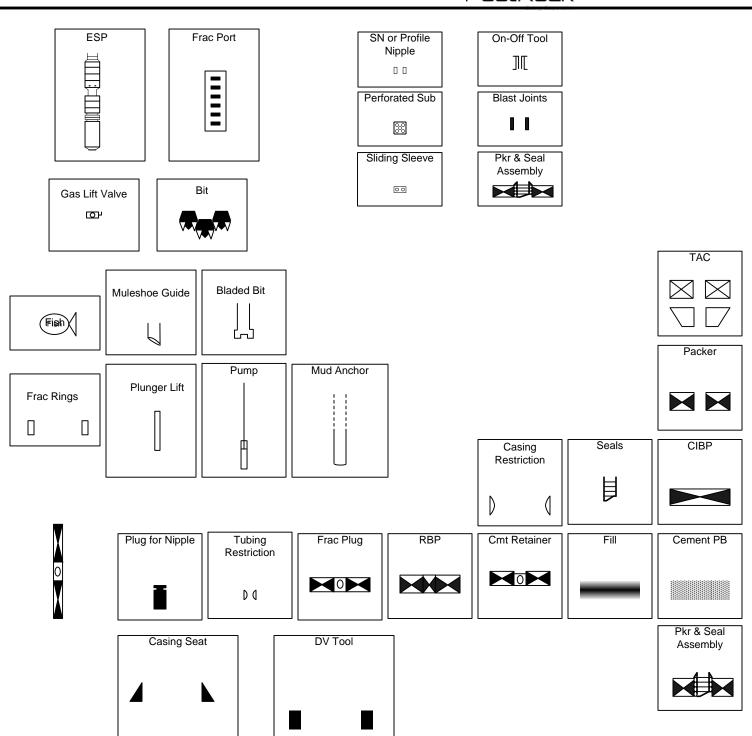
DATE:\_

# **POSTROCK**



## **LEGEND**

# PostRock<sup>®</sup>



Affidavit of Notice Served	
Re: Application for: APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS ACO-4	
Well Name: WING LIVING TRUST 3-1 Legal Location: NWSENESW S3-T28S-R	
The undersigned hereby certificates that he / she is a duly authorized agent for the applicant, and that on the day 15TH of OCTOBE	<u>R</u> .
, a true and correct copy of the application referenced above was delivered or mailed to the following parties:	
Note: A copy of this affidavit must be served as a part of the application.	
Name  Address (Attach additional sheets if necessary)	
POSTROCK MIDCONTINENT PRODUCTION, LLC 210 PARK AVENUE, SUITE 2750, OKLAHOMA C	HTY OK 73102-5641
PUSTRUCK IMIDOUNTINEINT FRODUCTION, LEG 21017 mm	1111 011 1011
WILLSON COLINTY CITIZEN The	Hastian
	e official county publication
of WILSON county. A copy of the affidavit of this publication is attached.	
Signed this 15TH day of OCTOBER , 2012	
Less Maris	
Applicant or Duly Authorized Agent	
Subscribed and sworn to before me this <u>15TH</u> day of <u>OCTOBER</u>	, 2012
Quante K. Beal	
JENNIFER R. BEAL Notary Public Notary Public NOTARY SEAL MY COMMISSION EXPIRES	i d
SEAL MY COMMISSION EXPIRES  My Commission Expires: Auly 201	<i>'</i>
V	
	1

## WING LIVING TRUST 3-1-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

Name: Legal Description of Leasehold:		
Ch additional sheets if necessary)  Name:  Legal Description of Leasehold:  POSTROCK MIDCONTINENT PRODUCTION, LLC  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  Description of Leasehold:  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2	set Operators, Unleased Mineral Owners and Landowners acreag	ge
STROCK MIDCONTINENT PRODUCTION, LLC  POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  MILE RADIUS  by certify that the statements made herein are true and correct to the best of my knowledge and belief.  Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL  MY COMMISSION EXPIRES  Notary Public  ARCHARGE IN THE 1/2  MILE RADIUS	ach additional sheets if necessary)	
by certify that the statements made herein are true and correct to the best of my knowledge and belief.  Applicant or buty Adhorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES Notary Public That are true and correct to the best of my knowledge and belief.  Applicant or buty Adhorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012	Name:	Legal Description of Leasehold:
by certify that the statements made herein are true and correct to the best of my knowledge and belief.  Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFERR BEAL  MY COMMISSION EXPIRES  Notary Public 1	STROCK MIDCONTINENT PRODUCTION, LLC	POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2
by certify that the statements made herein are true and correct to the best of my knowledge and belief.  Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFERR BEAL  MY COMMISSION EXPIRES  Notary Public 1		MILE RADIUS
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public  Applicant or Duly Authorized Agent  Authorized Agent  Agent  Authorized Agent  Agent  Authorized Agent  Authorized Agent  Agent  Agent  Authorized Agent		MELIVERO
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public  Applicant or Duly Authorized Agent  Authorized Agent  Agent  Authorized Agent  Agent  Authorized Agent  Authorized Agent  Agent  Agent  Authorized Agent		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public  Applicant or Duly Authorized Agent  Authorized Agent  Agent  Authorized Agent  Agent  Authorized Agent  Authorized Agent  Agent  Agent  Authorized Agent		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public  Applicant or Duly Authorized Agent  Authorized Agent  Agent  Authorized Agent  Agent  Authorized Agent  Authorized Agent  Agent  Agent  Authorized Agent		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Applicant or Duly Authorized Agent day of OCTOBER 2012  Notary Public  Applicant or Duly Authorized Agent day of OCTOBER 2012		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Applicant or Duly Authorized Agent day of OCTOBER 2012  Notary Public  Applicant or Duly Authorized Agent day of OCTOBER 2012		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public Notary Public 100 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public Notary Public 100 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public Notary Public 100 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public		· ·
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Applicant or Duly Authorized Agent day of OCTOBER 2012  Notary Public  Applicant or Duly Authorized Agent day of OCTOBER 2012		
Applicant or Duly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public  Notary Public  Applicant or Duly Authorized Agent  Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  Notary Public  Applicant or Duly Authorized Agent  Subscribed and sworn before me this 2012  Applicant or Duly Authorized Agent  Subscribed and sworn before me this 2012  Applicant or Duly Authorized Agent  Subscribed and sworn before me this 2012  Applicant or Duly Authorized Agent  Subscribed and sworn before me this 2012  Applicant or Duly Authorized Agent  Applicant or Duly Authorized Agent  Subscribed and sworn before me this 2012  Applicant or Duly Authorized Agent  Applicant or Duly Authori		
Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Applicant or buly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  Notary Public 3	by certify that the statements made herein are true and correct to the bes	st of my knowledge and belief.
Subscribed and sworn before me this 15TH day of OCTOBER 2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Applicant or buly Authorized Agent  Subscribed and sworn before me this 15TH day of OCTOBER 2012  Notary Public 3		
Subscribed and sworn before me this 15TH day of OCTOBER ,2012  JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public 1  Notar		
JENNIFER R. BEAL  OFFICIAL MY COMMISSION EXPIRES  Notary Public 7  Notary		
JENNIFER R. BEAL MY COMMISSION EXPIRES  Notary Public 7	Subscribed and sworn be	pefore me this 15TH day of OCTOBER , 2012
SEAL MY COMMISSION EXPIRES  Notary Public 7	The state of the s	$\sim$ . $\sim$ $\sim$ $\sim$
SEAL MY COMMISSION EXPIRES Notary Public )	JENNIFER R. BEAL	Gennder K. Deal
My Commission Expires: July, 30, 30/10	SEAL MY COMMISSION EXPIRES NO	
	1-20-2016 My	Commission Expires: Sully 20, 2016

#### **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 11th of

# October 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

11th day of October, 2012

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

Notary Public Sedgwick County, Kansas

Printer's Fee: \$132.40

#### LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE OCTOBER 11; 2012 (3211680) BEFORE THE STATE CORPORATION COMMISSION

COMMISSION
OF THE STATE OF KANSAS

NOTICE OF FILING APPLICATION
RE: In the Matter of Postrock Midcontinent
Production, LLC Application to
Commingling of Production in the Wing
Living Trust 3-1 located in Wilson County,

Living Trust 3-1 located in Wilson County, Kansas.

TO: 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 commingle the Summit, Mulky, Bevier, Croweburg, Fleming, Tebo, Welr, Riverton and Bartlesville producing formalions at the Wing Living Trust 3-1, located in the NW SE NE SW, 33-7285-RISE, Approximately 1977 FSI. a. 1982 FWJ

3-1, located in the NW SE NE SW, S3-7285-R16E, Approximately 1977 FSL & 1982 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 Ritieen (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. why granting 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 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

#### 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.

(Published in the Wilson County Citizen on Monday, October 15, 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 Wing Living Trust 3-1 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, Tebo, Weir, Riverton and Bartlesville producing formations at the Wing Living Trust 3-1, located in the NW SE NE SW, S3-T28S-R16E, Approximately 1977 FSL & 1982 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

lute 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 69 1 cpy

STATE OF KANSAS	Rita M. Relph NOTARY PUBLIC State of Kansas My Commission Expires
	man i menteratura de la companya de

PAID

f

Notary Public

My commission expires\_

Subscribed and sworn to before me, this

.30,2014

#### **WING LIVING TRUST 3-1**

1 NAME & UPPE	R & LOWER LIMIT OF EACH PROD	OUCTION INT	ERVAL TO BE	COMMING	LED			
FORMATION:	TEBO		(PERFS):	1034 -	1036			
FORMATION:	WEIR	_	(PERFS):	1078 -	1080			
FORMATION:	RIVERTON	_	(PERFS):	1227 -	1229			
FORMATION:	BARTLESVILLE	<u></u>	(PERFS):	1096 -	1102			
FORMATION:		<u></u>	(PERFS):		-			
FORMATION:		_	(PERFS):		-			
FORMATION:		_	(PERFS):		-			
FORMATION:		_	(PERFS):		-			
FORMATION:		_	(PERFS):	-	-			
FORMATION:		_	(PERFS):					
FORMATION:		_	(PERFS):		-			
FORMATION:		_	(PERFS):					
	MOUNT OF FLUID PRODUCTION T	O BE COMM						
FORMATION:	TEBO	_	BOPD:	0	MCFPD:	0	BWPD:	0
FORMATION:	WEIR	_	BOPD:	0	MCFPD:	0	BWPD:	0
FORMATION:	RIVERTON	_	BOPD:	0	MCFPD:	0	BWPD:	0
FORMATION:	BARTLESVILLE	_	BOPD:	3	MCFPD:	0	BWPD:	20
FORMATION:		<u>0</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>0</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>0</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>0</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>0</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>0</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>0</u>	BOPD:		MCFPD:		BWPD:	
FORMATION:		<u>0</u>	BOPD:		MCFPD:		BWPD:	

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

October 30, 2012

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

RE: Approved Commingling CO101210

Wing Living Trust 3-1, Sec. 3-T28S-R16E, Wilson County

API No. 15-205-27008-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on October 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 Bartlesville 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 CO101210 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