

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1103608

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)

OPERAT	OR: License #	API No. 15	API No. 15				
Name:_		Spot Description:	Spot Description:				
Address	1:		Sec Twp	_S. R East West			
Address	2:		Feet from No	orth / South Line of Section			
City:			Feet from Ea	ast / West Line of Section			
Contact	Person:	County:					
Phone:	()_	Lease Name:	We	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:	BOPD:	MCFPD:	BWPD:			
	Formation:	BOPD:	MCFPD:	BWPD:			
	Formation:	BOPD:	MCFPD:	BWPD:			
□ 3.□ 4.	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 affida	of the lessee of record or ope	rator.	ses within a 1/2 mile radius of			
For Con	nmingling of PRODUCTION ONLY, include the following:						
☐ 5.	Wireline log of subject well. Previously Filed with ACO-1:	Vas No					
☐ 6.	Complete Form ACO-1 (Well Completion form) for the subject						
0.	Complete Form ACC-1 (Well Completion form) for the subject	WGII.					
For Con	nmingling of FLUIDS ONLY, include the following:						
	Well construction diagram of subject well.						
8.	Any available water chemistry data demonstrating the compati	ibility of the fluids to be comm	ningled.				
current ir mingling	/IT: I am the affiant and hereby certify that to the best of my nformation, knowledge and personal belief, this request for comis true and proper and I have no information or knowledge, which istent with the information supplied in this application.	Su	bmitted Electror	nically			
KCC	Office Use Only			at in the application. Protests must be			
_ De	nied Approved	in writing and comply with K. the notice of application.	A.R. 82-3-135b and must b	e filed wihin 15 days of publication of			

Mail with all required attachments and files to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Date: _

Denied Approved

15-Day Periods Ends:

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.	————		
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 ⁺	(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 ⁺ (if not known =0)	(mg/l)						0.00	Saturation Index	values	(Final-Initial)
	Mg ²⁺	(mg/l)	1,096.00	872.00	1,200.00	953.00	858.00	995.91		lcite	
	Ca ²⁺	(mg/l)	1,836.00	2,452.00	2,044.00	1920.00	1948.00	2040.23	-0.73	-0.60	0.13
	Sr ²⁺		1,050.00	2,432.00	2,044.00	1720.00	1740.00				0.13
	Ba ²⁺	(mg/l)						0.00	Ба	rite	
.,		(mg/l)						0.00			
	Fe ²⁺	(mg/l)	40.00	21.00	18.00	82.00	90.00	50.21		lite	
	Zn ²⁺	(mg/l)						0.00	-1.77	-1.80	-0.03
18	Pb ²⁺	(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 ₄ ²⁻	(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	
	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 ₂ 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 ₂ 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/ ⁰ 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/ ⁰ 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/ ⁰ 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/ ⁰ 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 ₂ 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 ₂ 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 ₂ 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 ₂ 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 ₂ 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 ₂ S Gas Total H ₂ 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 ₂ 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 ₂ 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 ₂ 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 ₂ 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 ₂ 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 ₂ 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 ₂ S Gas Total H ₂ Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\mathbb{\text{Catluated}}\$ Exhions= 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 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 ₂ S Gas Total H2Saq (STP) pH Calculated Alkalinity Caclulated Alkalinity Caclulated ECations= ZAnions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed, 1st inhibitor # is:	(F) (F) (Psia) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120 1 4	0 0 0 Unit min 1-Yes;0-No #	## 1 2 3 4 5 6	Inhibitor NTMP BHPMP PAA DTPMP PPCA SPA	Unit Converter From Unit C m MPa Bar	49.0 25.0 25.0 25.0 	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit "F ft ³ 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 ₂ S Gas Total H ₂ Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated Alkalinity Caclulated ECations= EAnions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,	(F) (F) (Psia) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/l) as HCO3 (equiv./I) (equiv./I) (mg/l) Input 120 1 4 1 50	0 0 0 Unit min 1-Yes;0-No #	## 1 2 3 4 4 5 6 6 7	Inhibitor NTMP BHPMP PAA DTPMP PPCA SPA HEDP	Unit Converter From Unit C m³ m³ MPa Bar Torr	49.0 25.0 25.0 25.0 25.0 Value 80 100 1,000 496 10,000	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit °F ft³ bbl(42 US gal) psia psia psia	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00 Value 176 3,531 629 145,074 7,194 193	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 44 45 46 47 48 49 50 51 52 53 54 55 56 60 61 62 63 64 65 66 67 68 69	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH* (Strong base) * OH* (Strong base) * Ouality Control Checks at H ₂ 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 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 ³ 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

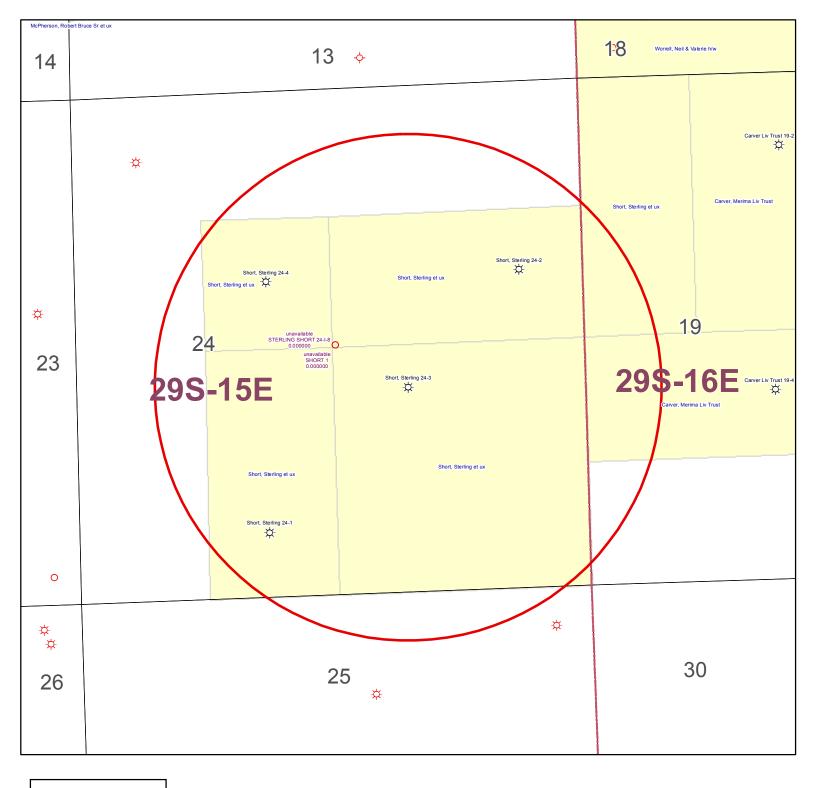
	20% 20% 20% 20							
Component (mg/L)	Brine 1	Brine 2	Brine 3	Brine 4	Brine 5	Mixed Brine		
Calcium	1836	2452	2044	1920	1948	1952		
Magnesium	1096	872	1200	953	858	865		
Barium	0	0	0	0	0	0		
Strontium	0	0	0	0	0	0		
Bicarbonate	190	234	259	268	254	253		
Sulfate	1	1	8	1	1	1		
Chloride	36299	48965	47874	45632	43147	43206		
CO ₂ 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



KGS STATUS

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

Short, Sterling 24-3 24-29S-15E 1" = 1,000' Prof

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

ORIGIN April Must Be Typed

WELL COMPLETION FORM

WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 33344	API No. 15 - 205-26535 - 00 - 00
Name: Quest Cherokee, LLC	County: Wilson
Address: 211 W. 14th Street	nenwseSec24Twp29S. R15V EastWest
City/State/Zip: Chanute, KS 66720	2130 sec. — Twp. — S. R. W East west
Purchaser: Bluestern Pipeline, LLC	4000
Operator Contact Person: Jennifer R. Ammann	leet from E) W (circle one) Line of Section
i	Footages Calculated from Nearest Outside Section Corner:
Phone: (620) 431-9500	(circle one) NE SE NW SW Short Sterling 24-3
Contractor: Name: L S Well Service, LLC	Lease Name: Short, Sterling Well #: 24-3 Field Name: Cherokee Basin CBM
License: 33374	
Wellsite Geologist: Ken Recoy	Producing Formation: Multiple
Designate Type of Completion:	Elevation: Ground: 852 Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1187 Plug Back Total Depth: 1180.46
Oil SWD SIOW Temp. Abd.	Amount of Surface Pipe Set and Cemented at 21.4 Feet
Gas ENHR SIGW Dry Other (Core, WSW, Expl., Catholic GREGRATION COMM SIGN SIGN	Multiple Stage Cementing Collar Used?
Dry Other (Core, WSW, Expl., Cathod ORPORATION COMM	If yes, show depth set Feet
If Workover/Re-entry: Old Well Info as follows: AUG 2 8 2006	Alternate II completion, cement circulated from 1180.46
Operator:CONscr	
Well Name: WICHITA, KS Original Total Depth: Original Total Depth:	Drilling Fluid Management Plan
Original Comp. Date: Original Total Depth:	(Data must be collected from the Reserve Pit)
Deepening Re-perf Conv. to Enhr./SWD	Chloride contentppm Fluid volumebbls
Plug BackPlug 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.:
4/26/06 5/2/06 5/15/06 Spud Date or Date Reached TD Completion Date or	Quarter Sec Twp S. R
Recompletion Date Recompletion Date	County: Docket No.:
INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas 67202, within 120 days of the spud date, recompletion, workover Information of side two of this form will be held confidential for a period of 12 107 for confidentiality in excess of 12 months). One copy of all wireline logs at TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. All requirements of the statutes, rules and regulations promulgated to regulationerin are complete and correct to the best of my knowledge.	or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. months if requested in writing and submitted with the form (see rule 82-3-und geologist well report shall be attached with this form. ALL CEMENTING Submit CP-111 form with all temporarily abandoned wells.
Signature: Juny 9 Commann	KCC Office Use ONLY
Title: New Well Development Coordinator Date: 8/25/06	Letter of Confidentiality Received
Subscribed and sworn to before me this 25 day of ${}$	If Denied, Yes Date:
20 () \(\(\) \(\) \(\) \(\)	Wireline Log Received
1.26	Geologist Report Received
Notary Public: Oura Flourian	UIC Distribution
Date Commission Expires: 8-4-2010	TERRA KLAUMAN
My A	Notary Public - State of Kansas opt. Expires &- 4 - 2010

E--- 1

Operator Name: Qu	est Cherokee, LL	<u>c)</u>		Leas	e Name: \(\)	Short, Sterlin	ng	Well #: 24-3	3 ,	
Sec. 24 Twp. 2		_	West		ty: Wilso					
INSTRUCTIONS: Si tested, time tool ope temperature, fluid red Electric Wireline Log	n and closed, flowing covery, and flow rate	and shut-i s if gas to s	in pressures, surface test, a	whether solong with	shut-in pre	ssure reached	static level, hydro	ostatic pressure	es, botton	n hole
Drill Stem Tests Take		_ Ye	s 📝 No			og Format	tion (Top), Depth	and Datum	s	ample
Samples Sent to Ge	ological Survey	☐ Ye:	s 🗸 No		Nam See	e attached		Тор	D	atum
Cores Taken Electric Log Run (Submit Copy)		☐ Ye. ✓ Ye.	_			and or our				
List All E. Logs Run: Comp. Density Neu Gamma Ray Neutro Dual Induction Log	itron Log									
				RECORD		_				
Purpose of String	Size Hole Drilled	Size	all strings set-or Casing (In O.D.)	W	surface, inte eight s. / Ft.	Setting Depth	Ction, etc. Type of Cement	# Sacks Used		and Percent
Surface	11	8-5/8"	<u>, , , , , , , , , , , , , , , , , , , </u>	20#		21.4	"A"	5		
Production	6-3/4	4-1/2		10.5#		1180.46	"A"	128		
			ADDITIONAL	CEMENT	TING / SQI	JEEZE RECOR	D			
Purpose: Perforate	Depth Top Bottom	Туре	of Cement	#Sacl	ks Used		Type and	Percent Additives	i	
Protect Casing Plug Back TD										
Plug Off Zone										
Shots Per Foot			O - Bridge Plug		e		acture, Shot, Cemer		rd	Death
4	1102-1104	rootage of E	ach Interval Pe	norated			Amount and Kind of Iv		0# 20/40 send	Depth 1102-1104
-	1102-1104		· · · · · ·							1102-1104
4	840-843/804-80	7				400gal 15%HCLwl 36	bbls 2%kd water, 361bbls wate	r w/ 2% KCL, Blockle, 9000	0# 20/40 sand	840-843/804-807
		. 4								
4	729-733/713-71	7				400gal 15%HCLw/ 38 t	obis 2%kci water, 460bbis water	w/ 2% KCL, Biocide, 1200	0# 2040 sand	729-733/713-717
TUBING RECORD 2-	Size 3/8"	Set At 1124.5		Packer n/a	At	Liner Run	Yes V	0		
Date of First, Resumer 6/26/06	rd Production, SWD or I	Enhr.	Producing Met	thod	Flowin	g 📝 Pum	ping Gas L	ift Oth	er (Explain))
Estimated Production Per 24 Hours	Oii	Bbis.	Gas	Mcf	Wat		Bbls.	Gas-Oll Ratio		Gravity
	n/a	COMPLETIC	149.8mcf	<u> </u>	20bt		enval			
Disposition of Gas	METHOD OF	JUMPLETIO	_		, <u>, , , , , , , , , , , , , , , , , , </u>	Production Int	-			
Uvented ✓ Sold (If vented, Sold	Used on Lease ubmit ACO-18.)		Open Hole Other (Spec	【✓ P∈ cifv)	en.	Dually Comp.	Commingled .	•		

L SWell Service, LLC #33374 543A 22000 Road Cherryvafe, Kansas 67335 620-328-4433





Quest Cherokee, LLC

Sterling Short #24-3 S24, T29,R15 Wilson Co, KS API#205-26535-00-00

0-6	CLAY
6-12'	SHALE .
12-28'	LIME
28-70	SHALE
70-80	LIME
80-97	SHALE
97-102	LIME
102-150	SHALE
	BLACK SHALE
155-195	SHALE
195-205	LIME
205-219	SHALE
219-280	LIME
280-281	SHALE
281-361	LIME
. 361-381	SHALE
381-413	LIMÉ
413-416	SHALE
416-431	LIME
431-460	SHALE
460-480	LIME
480-498	SHALE
498-513	LIME
513-520	SANDY SHALE
520-524	SAND
524-616	SHALE
616-621	LIME
621-624	SHALE
624-640	LIME
640-655	BLACK SHALE
655-681	SHALE
681-682	COAL
682-706	LIME OSWEGO
706-716	BLACK SHALE
716-724	LIME
724-729	BLACK SHALE
729-732	LIME SHALE
732-761 761-772	
772-804	BLACK SHALE SHALE
804-806	COAL
806-895	SHALE
895-910	SAND
910-915	SHALE
915-922	SANDY SHALE
922-997	SHALE
007 4040	0.44524.544.5

997-1048

SANDY SHALE

4-26-06 Drilled 11" hole and set 21.4' of 8 5/8" surface casing Set with 5 sacks Portland cement 4-27-06 Started drilling 6 3/4" hole

5-2-06 Finished drilling to T.D. 1187'

661' 4" ON 1/2" ORIFICE 912' 14" ON 3/4" ORIFICE 1062' 17" ON 3/4" ORIFICE 1112' 46" ON 3/4" ORIFICE

RECEIVED

KANSAS CORPORATION COMMISSION

AUG 2 8 2006

CONSERVATION DIVISION

WICHITA, KS

L'S Well Service, LLC #33374 543A 22000 Road Cherryvale, Kansas 67335 620-328-4433 Drill Log

Quest Cherokee, LLC

Sterling Short #24-3 S24, T29,R15 Wilson Co, KS API#205-26535-00-00

1048-1050 COAL 1050-1099 SHALE 1099-1101 COAL 1101-1108 SHALE 1108-1187 LIME

T.D. 1187'



DATE

5.15.06

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

Short

1	4	8	5
	1	14	148

RANGE

15

COUNTY

EMPLOYEE

FIELD TICKET REF #

TRUCK

TOWNSHIP

29

SECTION

24

TRAILER

TREATMENT REPORT & FIELD TICKET CEMENT

24-3

WELL NAME & NUMBER

Sterling

FOREMAN / OPERATOR	TIME	TIME	LESS LUNCH	TRUCK #	TRAILER #	TRUCK HOURS	EMPLOYEE SIGNATURE
Joe B	2:30	7:15		903388		4. 75	101 BON Lad
Tim. A		1,35		903255		4	In aga
Russell (1)	-61	6:15		903103		3.75	Rustas
DAVID C		7:15		903139	9321152	4.75	Sari Bland
Jerry . H MANEYICK . D	V	7:15		903106		4.7.5	HEA
		5:30		EXTIA			Maur Drike
JOB TYPE Lang	String HOLES	SIZE <u>63</u>	<u>//4</u> н	OLE DEPTH 118	37 casin	IG SIZE & WEIGHT	H/2 10.5
CASING DEPTH			T	UBIŅG			· · · · · · · · · · · · · · · · · · ·
SLURRY WEIGHT_			W	/ATER gal/sk	CEME	NT LEFT in CASINO	G
DISPLACEMENT_/	<u>8.82</u> displa	CEMENT F	PSI N	IIX PSI	RATE	H bpm	
REMARKS:							. ,
RAN 2 SX	S premael	Swept	to Surfa	ce. Instal	art to a m + Set	head RAN.	2 5K5 gel
4 13 4	abl due	a 13	35 JKS	of cem	ent to a	ict due to	Surface.
Flush	ump. Pu	mp u	ipek pluc	to botto	m of Set	Floo fishae	1,
	7	1.	7-7-)			2
					RECEIV		and and the same
				К	ANSAS CORPORATIO	N COMMISSION	
					Alleno	DOGO DOMINISSION	
		11/	TI NU. C		AUG 2 8		
	1180		F+ 41/2 C	_	CONSERVATION D	IVISION	
(2 1 5 1 2		5	Contralize	« S	WICHTIA, K	3	
931310	-	5 hr				,	
607253		3 //					
ACCOUNT CODE	QUANTITY or L	JNITS		DESCRIPTION OF SE	ERVICES OR PRODUC	Т	TOTAL AMOUNT
903388	4.70	5 hr	Foreman Pickup				
903255	, 4	hr	Cement Pump Truck		,		!
903103	3. 74	5 hr	Bulk Truck				
1104	/	285K	Portland Cement				
1124	2		50/50 POZ Blend Co	ement BAFFIES	3/2 4 3"		
1126	1		OWG Blend Ceme	At 41/2" wip	ex plus		
1110		3 5K	Gilsonite	· · · · · · · · · · · · · · · · · · ·			
1107	1.	5 S K	Flo-Seal				
1118		151	Premium Gel		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
1215A) acl		KCL	2 / / / /			
1111B		351		Calchleride	>		
1123	7000gol		City Water				
903139	1,		Transport Truck				<u> </u>
932452		75 hv	Transport Trailer				+
903106	4.7	5 hr	h / 80 Vac				
Ravin 4513	/		41/2" FI	loctshoe			

POSTROCK



Current Completion

WELL : Short, Sterling 24-3

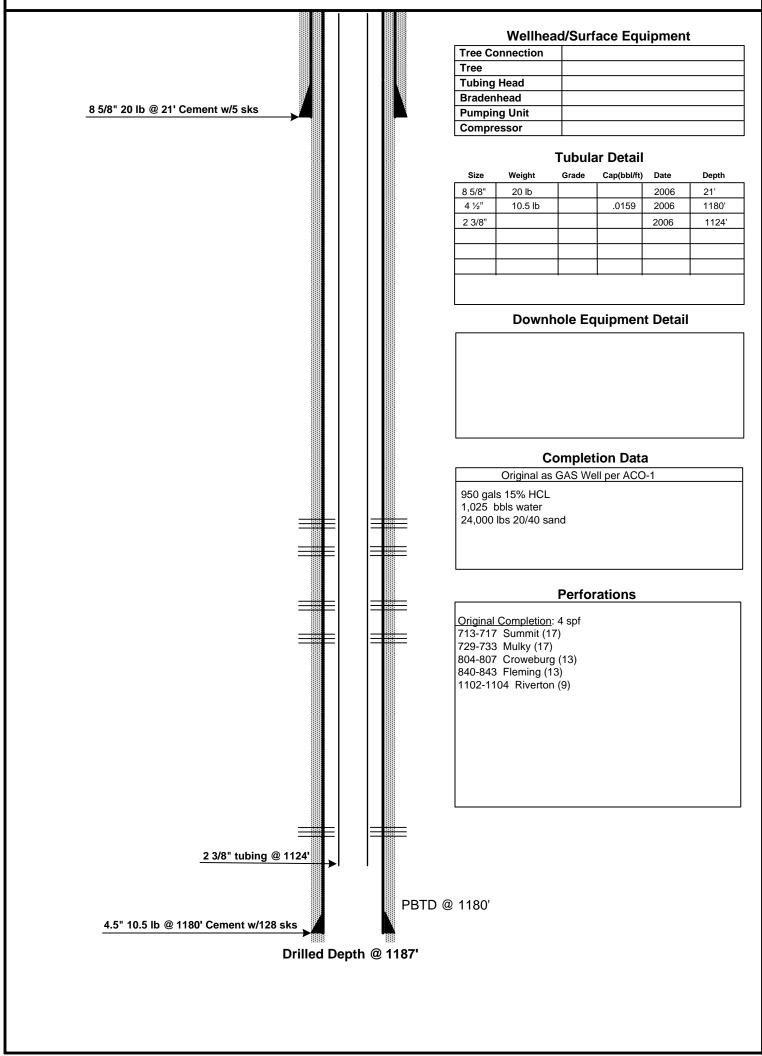
FIELD : Cherokee Basin

STATE : Kansas COUNTY : Wilson

SPUD DATE: 4-26-2006 COMP. Date: 5-15-2006 API: 15-205-26535-00-00

LOCATION: 24-29S-15E (NW,SE)

ELEVATION:852'



PREPARED BY: POSTROCK

APPROVED BY: _

DATE: Dec, 2012

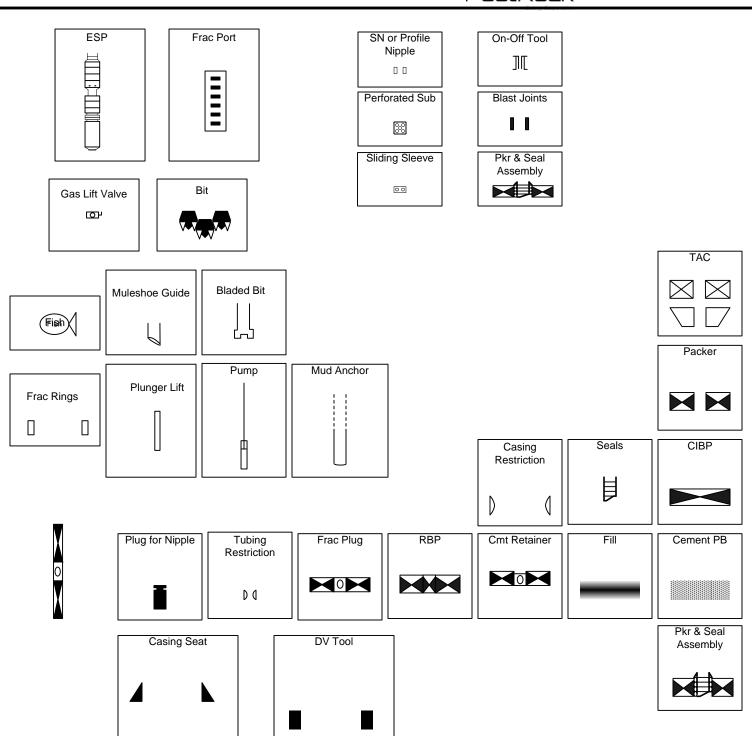
DATE:_

POSTROCK



LEGEND

PostRock[®]



SHORT, STERLING 24-3

1 NAME & UPPE	R & LOWER LIMIT OF EACH PRODUC	TION INTERVAL TO BE	COMMINGLED			
FORMATION:	CATTLEMAN	(PERFS):	676 -	678		
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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 17th of

January A.D. 2013, 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,

Islotchall

Subscribed and sworn to before me this

17th day of January, 2013

PENNY L Notary Public - State My Appt. Expires,

Notary Public Sedgwick County, Kansas

Printer's Fee: \$132.40

LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE JANUARY 17, 2013 (3227057) BEFORE THE STATE CORPORATION
COMMISSION OF THE STATE OF KANSAS
NOTICE OF FILING APPLICATION
RE: In line Malter of Postrock Midcontinent
Production, LLC Application for
Commingling of Production in the Short,

Steriing 24-3 located in Wilson County,

Sterling 24-3 Jocated in Wilson County, Kansas.

TO: All Oil & Gas Producers, Unleased Mineral Inferest 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, Croweburg, Fleming, Riverton and Cattleman producing formations at the Short, Sterling 24-3, localed in the NE NW SE, S24-T29S-R1SE, Approximately 2130-FS. & 1830-FS. Wilson Approximately 2130 FSL & 1830 FEL, Wilson

Approximately 2130 FSL & 1830 FEL, 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 filteen (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 wastle, violate correlative rights or pollute the natural resources of the State of Kansas.

All persons interested or concerned shall

of Kansas.

All persons interested or concerned shall take nolice of the foregoing and shall govern ihemselves 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 profesiants will be expected to enter an appearance either through proper legal counsel or as individuals, appearing on their own behalf.

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

PROOF OF PUBLICATION

7 HW day of

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

Jan	1ary 2013
2nd publication was made on the	day of
	. 20———
3rd publication was made on the	day of
	. 20
4th publication was made on the	day of
	. 20——
5th publication was made on the	day of
	. 20
6th publication was made on the	day of
	. 20
TOTAL PUBLICATION FEE: \$_	37.1=
(Signed)	L
Subscribed and sworn to before me, this	8HW day of
January	
Acta M. Tel	ph(Notary Public)
My commission expires and	30, 2014

(Published in the Wilson County Citizen on Thursday, January 17, 2013.

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 Short, Sterling 24-3 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, Croweburg, Fleming, Riverton and Cattleman producing formations at the Short, Sterling 24-3, located in the NE NW SE, S24-T29S-R15E, Approximately 2130 FSL & 1830 FEL, 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 96 1 cpy.



		R COMMINGLING OF PRODUCTION OR FLUIDS ACO-4
	Vell Name: SHORT, STERLING 24	0,4
	gned hereby certificates that he / she is a c	fuly authorized agent for the applicant, and that on the day of_ FEBRUARY
013	, a true and correct copy of the ap	plication referenced above was delivered or mailed to the following parties:
ote: A copy	y of this affidavit must be served as a part	of the application.
Na	ame	Address (Attach additional sheets if necessary)
SEE A	TTACHED	
		vas published in the WILSON COUNTY CITIZEN , the official county publicat
WILSO	7N	county. A copy of the affidavit of this publication is attached.
ned this	Standary day of FEBRUARY	
		CHELL
		Applicant or Duly Authorized Agent
· ·	Subsc	cribed and sworn to before me this
OFF OFF	JENNIFER R. BEAL	Dunifu K. Beal
SE SE	EAL MY COMMISSION EXPIRES	Notary Public Y. Beal My Commission Expires: Quly 20, 20/6
(7-20-2011	My Commission Expires: (fully 80, 80)

SHORT, STERLING 24-3

24-29S-15E

N2 NE & NE NW

William & Sharon Frankenberry 8736 Pratt Rd Altoona, KS 66710

W2 W2

M arjorie Frankenberry AND William & Sharon Frankenberry 8736 Pratt Rd Altoona, KS 66710

25-29S-15E

N2 NE4

Dean & Lois Harp 8731 Ottawa Rd. Altoona, KS 66710

E2 NW4

M arjorie Frankenberry c/o William Frankenberry 8736 Pratt Rd Altoona, KS 66710

19-29S-16E

S2 SW4

M arjorie Frankenberry c/o William Frankenberry 8736 Pratt Rd Altoona, KS 66710

SHORT, STERLING 24-3-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS Offset Operators, Unleased Mineral Owners and Landowners acreage (Attach additional sheets if necessary) Legal Description of Leasehold: SEE ATTACHED I hereby certify that the statements made herein are true and correct to the best of my knowledge and belief. Subscribed and sworn before me this ______ day of FEBRUARY 2013 JENNIFER R. BEAL MY COMMISSION EXPIRES My Commission Expires: __

SHORT, STERLING 24-3

24-29S-15E

N2 NE & NE NW

William & Sharon Frankenberry 8736 Pratt Rd Altoona, KS 66710

W2 W2

M arjorie Frankenberry AND William & Sharon Frankenberry 8736 Pratt Rd Altoona, KS 66710

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19-29S-16E

S2 SW4

M arjorie Frankenberry c/o William Frankenberry 8736 Pratt Rd Altoona, KS 66710 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

February 25, 2013

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

RE: Approved Commingling CO021308

Short, Sterling 24-3, Sec. 24-T29S-R15E, Wilson County

API No. 15-205-26535-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on February 11, 2013, 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 CO021308 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