

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:			
□ 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 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	_					
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.					

Date: _

Approved By:

15-Day Periods Ends: __

-	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 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 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}}\$ Alkalinity Caclulated \$\mathbb{\text{Catluated}}\$ Eanions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is:	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0 0	71.0 71.0 25.0 25.0 1 1 1 2 3 4	Inhibitor NTMP BHPMP PAA DTPMP	Unit Converter From Unit °C m³ m³ MPa	49.0 25.0 25.0 25.0 (From metric Value 80 100 1,000	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit °F ft³ bbl(42 US gal) psia	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00 Value 176 3,531 629 145,074	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 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 m³ m³ MPa Bar	49.0 25.0 25.0 25.0 	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit "F ft 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 Converte From Unit C m³ m³ MPa Bar Torr	49.0 25.0 25.0 25.0 25.0 Value 80 100 1,000 496 10,000	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit °F ft³ bbl(42 US gal) psia psia psia	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00 Value 176 3,531 629 145,074 7,194 193	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 44 45 46 47 48 49 50 51 52 53 54 55 56 60 61 62 63 64 65 66 67 68 69	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH* (Strong base) * OH* (Strong base) * Ouality Control Checks at H 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 m³ m³ MPa Bar	49.0 25.0 25.0 25.0 	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit "F ft 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

			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 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

CONFIDENTIAL

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

Form ACO-1
September 1999
Form Must Be Typed
SE

WELL COMPLETION FORM

WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 33344	API No. 15 - 133-26897-0000
Name: Quest Cherokee, LLC	County: Neasho
Address: 211 W. 14th Street	ne _se _sw _ ne Sec. 22 Twp. 28 S. R. 18
City/State/Zip: Chanute, KS 66720	2075 feet from S / (circle one) Line of Section
Purchaser. Bluestem Pipeline, LLC	1620 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) SE NW SW
Contractor: Name: TXD	Lease Name: Taylor, Wayne L. Well #: 22-3
License: 33837	Field Name: Cherokee Basin CBM
Wellsite Geologist: Ken Recoy	Producing Formation: multiple
Designate Type of Completion:	Elevation: Ground: 986 Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1145 Plug Back Total Depth: 1130.15
Oil SWD SIOW Temp. Abd.	Amount of Surface Pipe Set and Cemented at 20 Feet
✓ Gas ENHR SIGW	Multiple Stage Cementing Collar Used?
Dry Other (Core, WSW, Expl., Cathodic, etc)	If yes, show depth setFeet
	If Alternate II completion, cement circulated from 1130.15
If Workover/Re-entry: Old Well Info as follows:	feet depth to surface w/ 136 sx cmt.
Operator:	·
Well Name:	Drilling Fluid Management Plan At II NJ 2-2009 (Data must be collected from the Reserve Ph)
Original Comp. Date: Original Total Depth:	,
Deepening Re-perf Conv. to Enhr./SWD	Chloride content ppm Fluid volume bbls
Plug Back Plug Back Total Depth	Dewatering method used
Commingled Docket No.	Location of fluid disposal if hauled offsite:
Dual Completion Docket No	Operator Name:
Other (SWD or Enhr.?) Docket No	Lease Name:License No.:
4/19/07 4/23/07 4/23/07	Quarter Sec Twp S. R
Spud Date or Date Reached TD Completion Date or Recompletion Date	County: Docket No.:
	Docket No
Kansas 67202, within 120 days of the spud date, recompletion, workov Information of side two of this form will be held confidential for a period of	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-s and geologist well report shall be attached with this form. ALL CEMENTING s. Submit CP-111 form with all temporarily abandoned wells.
All requirements of the statutes, rules and regulations promulgated to regul herein are complete and correct to the best of my knowledge.	late the oil and gas industry have been fully complied with and the statements
$\alpha \cdot \alpha \cdot \alpha$	
Signature: Gunnifu K. Ammann	KCC Office Use ONLY
Title: New Well Development Coordinator Date: 8/15/07	Letter of Confidentiality Received
Subscribed and sworn to before me this 15th day of Ougust	/ If Denied, Yes Date:
- · · · · · · · · · · · · · · · · · · ·	Wireline Log Received
20 07	Geologist Report Received (ANSAS CORPORATION COMM
Notary Public: <u>Vivva Klauman</u>	UIC Distribution
B-4-2010	AUG 1 7 2007
A. IEI	RRA KLAUMAN
My Appt. Expir	Public - State of Kansas CONSERVATION DIVISION Process B- 4- 40 ID

Operator Name: Qu	est Cherokee, LL	.C	Lea	se Name:_	Taylor, Wayne	L.	Well #: _ 22-3	i	
	²⁸ S. R. 18		Cou	nty: Neosh	10				
tested, time tool ope temperature, fluid re	en and closed, flowing covery, and flow rate	and base of formations g and shut-in pressures es if gas to surface test, final geological well site	, whether along with	shut-in pre	essure reached	l static level, hydr	ostatic pressure	es, bottoi	m hole
Drill Stem Tests Take		☐ Yes 📝 No		✓ Log Formation (Top), Depth at			and Datum	;	Sample
Samples Sent to Ge	ological Survey	☐ Yes ✓ No		Nam See	e attached		Тор	(Datum
Cores Taken Electric Log Run (Submit Copy)	Electric Log Run Yes No				,				
List All E. Logs Run:									
Compensated Dual Induction Gamma Ray N		n Log							
			RECORE	_	ew Used	-1:			
Purpose of String	Size Hole Drilled	Report all strings set Size Casing Set (In O.D.)	W	Veight os. / Ft.	Setting Depth	Type of Cement	# Sacks Used		and Percent
Surface	12-1/4	8-5/8"	22	·····	20	"A"	5		
Production	6-3/4	4-1/2	10.5		1130.15	"A"	136		
		ADDITIONA	L CEMEN	TING / SQI	JEEZE RECOR	D			
Purpose: Perforate Protect Casing	Depth Top Bottom	Type of Cement	#Sac	cks Used		Type and	Percent Additives	i	
Plug Back TD Plug Off Zone									
Shots Per Foot	PERFORATI Specify	ION RECORD - Bridge Plu Footage of Each Interval Po	ugs Set/Typ erforated	pe Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) Depth					Depth
4	1041-1045/989-99	1/984-985			300gal 15%HCLw/ 24 b	obis 2%kci water, 507bbis water	w/ 2% KCL, Biocide, 9900	# 20/40 sand	1041-1045/989-991
									984-985
4	881-883/801-803/7	91-793/774-776/734-7	37		300gal 15%HCLw/ 34 b	bls 2%kci water, 515bbls water	w/ 2% KCL, Biocide, 10700	0# 20/40 sand	881-883/801-803
							······································	791-793	774-776/734-737
4	629-633/616-620				300gal 15%HCLw/ 38 b	bis 2%kci water, 516bbis water	w/ 2% KCL, Biocide, 10300	3# 20/40 sand	629-633/616-620
TUBING RECORD 2-	Size 3/8"	Set At 1083	Packe n/a	er At	Liner Run	Yes No)		
Date of First, Resume 6/7/07	rd Production, SWD or E	Enhr. Producing Me	ethod	Flowin	g 🕢 Pump	oing Gas L	ift 🔲 Othe	er (Explain,)
Estimated Production Per 24 Hours	Oil n/a	Bbls. Gas 16.9mcf	Mcf	Wat 75bbl		Bbls.	Gas-Oil Ratio		Gravity
Disposition of Gas	METHOD OF (COMPLETION		1	Production Inte	erval			
Vented ✓ Sold (If vented, S.	Used on Lease	Open Hole	ست	erf. 🔲 I	Dually Comp.	Commingled _			
			/	1 -					

TXD SERVICES LP DRILLERS LOG

3 %



TXD SERVICES LP

RIG#	101		S. 22	T. 28	R	. 1B			
	133-26897		County:	Neosh)		312'	5 - 1/2"	14.1
	Elev:	986'	Location	Kansas	3		529'	5 - 1/2"	14.1
1.5 mars of the day of the state of the stat		***************************************					560'	5 - 1/2"	14.1
Operator:	Quest Cher	okee, LLC					622'	5 - 3/4"	31.6
	9520 N. Ma	y Ave, Suite	300				653'	8 - 3/4"	40
	Oklahoma	City, OK 73	120				746'	8 - 3/4"	40
	22-3	•	Lease Name	Taylor,	Wayr	ie	808'	8 - 3/4"	40
Footage Locat	ion	2025	ft from the	N	L	ine	839'	8 - 3/4"	40
	,	1620	ft from the	Е	L	ine	901'	8 - 3/4"	40
Drilling Contract	ctor.	TXD	SERVICES	LP			932'	B - 3/4"	40
Spud Date;	NA		Geologist:				994'	8 - 3/4"	40
Date Comp:	4/21/2007		Total Depth:	1149			1056'	8 - 3/4"	40
Exact spot Loc	ation;	NE SE SW	NE	 -			1087'	8 - 3/4"	40
Washing Wash				4.			1149'	8 - 3/4"	40
AND THE RESIDENCE OF THE PARTY	Surface	Production							
Size Hole	12-1/4"	6-3/4"							
Size Casing	8-5/8"	4-1/2"						KCC	0
Weight	24#								
Setting Depth	21'							A116 1 5 20),U/
Type Cement	portland								
Sacks								CONFIDER	

Formation Top top soil Clay, shale 165 sand 215 shale 246 shale 326 shale 346 shale 406 shale 416 shale 426 shale 426 shale 426 shale 426 shale 426 shale 426 shale 427 shale 427 shale 437 shale 438 sand 448 shale 438 sand 448 shale 438 sand 448 shale 448 shale 448 sand 448 shale 448 sand 448 shale 448 sand 448	1 21 1 165 5 170 0 209 9 215	Formation sand shale lime coal	470 484 510 515	510	shale	738 740	
clay, shale 1 ime 2 shale 165 sand 170 shale 209 sand 215 lime 220 shale 24 shale 32 lime 34 shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43 shale 43	1 21 1 165 5 170 0 209 9 215	shale lime coal	510				742
ime 21 shale 165 sand 170 shale 209 sand 215 lime 220 shale 240 lime 321 lime 34 shale 322 lime 34 shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 42	1 165 5 170 0 209 9 215	lime coal		515	1		
shale 165 sand 170 shale 209 sand 215 lime 220 shale 240 lime 320 shale 320 lime 34 shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43	170 209 9 215	coal	515		COali	742	743
sand 170 shale 209 sand 219 lime 220 shale 240 lime 320 shale 320 lime 34 shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43 shale 43	209 9 215		1 313	516	shale	743	798
shale 209 sand 215 lime 220 shale 240 lime 320 shale 320 lime 340 shale 340 lime 340 shale 40 lime 41 shale 42 lime 43 shale 43 shale 43	9 215	shale	516	523	coal	798	800
sand 219 lime 220 shale 240 lime 241 shale 322 lime 34 shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43		lime	523	556	shale	800	806
lime 220 shale 241 lime 24 shale 32 lime 34 shale 38 shale 40 lime 41 shale 42 lime 43 shale 43	220	shale	556	557	coal	806	
shale 240 lime 241 shale 322 lime 34 shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43		b.shale	557	558	shale	807	A STATE OF THE PARTY OF THE PAR
shale 32 lime 34 shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43	0 247	shale	558	595	sand	813	
lime 34 shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43	7 322	coal	595	596	shale	827	
lime 34 shate 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43		shale	596	598	coal	833	
shale 34 lime 38 shale 40 lime 41 shale 42 lime 43 shale 43		lime	598	619	shale	834	
lime 38 shale 40 lime 41 shale 42 lime 43 shale 43	8 384	shale	619	622	sand	837	
lime 41 shale 42 lime 43 shale 43	4 405	b.shale	622	624	shale	853	
lime 41 shale 42 lime 43 shale 43	5 417	shale	624	628	sand	873	
shale 42 lime 43 shale 43	7 428	lime	628	631	shale	880	883
lime 43 shale 43	8 434	shale	631	633	coal	883	885
shale 43	4 430	Scoal	633	634	shale	B85	908
nand AA		shale	634	643	coal	908	909
Sanu TT		sand	643	649	shale	909	
shale 44	6 46	shale	649	715	coal -	951	
coal 46		7 coal	71!	716	shale	952	2 971
shale 46		Shale	716	738	sand	KANEAS CORPO	LEIVED984

	A STATE OF THE STA			4-14 	Bim			建设的
mation	Тор	Btm.	Formation	Тор	Btm.	Formation	Тор	Btm.
hale :	984	986						
oal	986	987						
hale	987	990		1				
oal	990	991						
hale	991	1004						
oal	1004	1005						
shale	1005							
coal	1041	1043						
shale	1043							
ime	1056	1149						
•,								
	I							
						7		

KCC AUG 1 5 2007 CONFIDENTIAL

RECEIVED KANSAS CORPORATION COMMISSION

AUG 1 7 2007

CONSERVATION DIVISION WICHITA, KS



DATE

4.23-07

FOREMAN /

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

RANGE

COUNTY

EMPLOYEE

SECTION TOWNSHIP

TRAILER

28

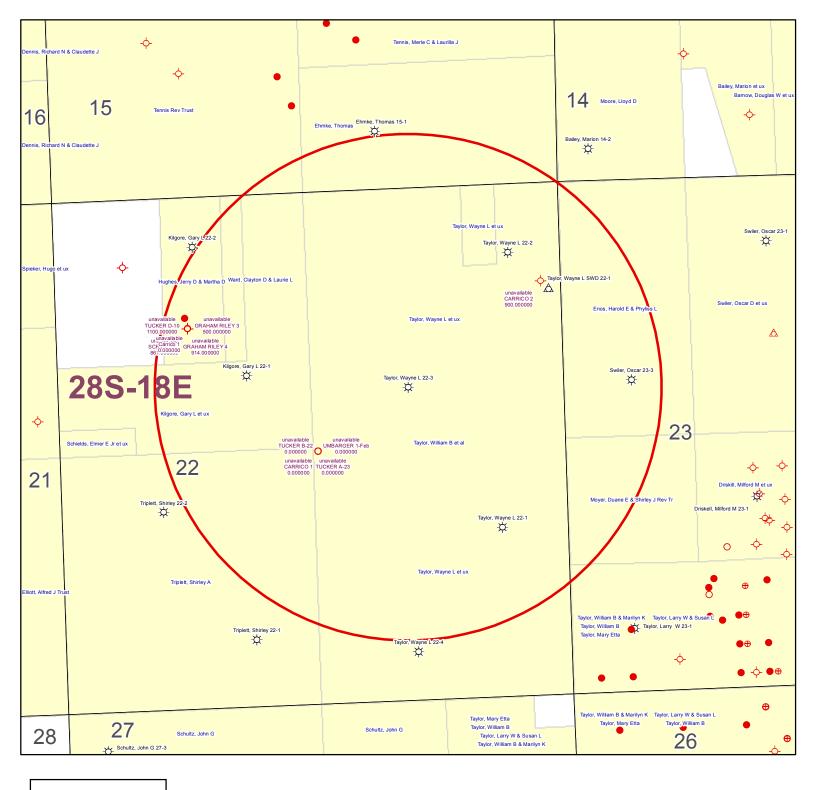
TRUCK

621030

TREATMENT REPORT & FIELD TICKET CEMENT

WELL NAME & NUMBER

OPERATOR	IN	OUT	LUNCH	#	#	HOURS	SIGNATURE
Joe B	12:00	5:15		903427		5.25	Jac Playchand
MAULVICK. D		5:00		903197		5	Man As
Tyler . 6	\downarrow	5:00		903 ttl2	932452	5	The Cords
Gary · C	2:00	5:30	\	931500		5.83	At Copas
						c	
JOB TYPE Long 5	4virs HOLES	SIZE 6	³ /4 н	OLE DEPTH 114	5 CASIN	IG SIZE & WEIGHT	4/2 16.5
SLURRY WEIGHT 17.5							
DISPLACEMENT 18							
REMARKS:						1	
TAISTAILED CE	mer it head	ו נים מ	516 sel 4	12 bbl du	4 136 sks	of coment	To get due to
INSTAlted Ce Surface. flu	sh ama. I	> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	our plus t	o bottom 9	tool that	5 hore	
			(V V V V V V V V V V V V V V V V V V V				
						000	260
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	1130	. 15	£+41/2 C	Kino			CD 0 0 8 88 80
		6	Cantralic	- R C			
		1	41/2 float				
ACCOUNT CODE	QUANTITY or	JNITS		DESCRIPTION OF SI	ERVICES OR PRODUC	т	TOTAL AMOUNT
903427	5.25	hr	Foreman Pickup				
903197	5	hr	Cement Pump Truck	κ			
90:206	5	hr	Bulk Truck				
1104	/30	516	Portland Cement				<u> </u>
1124		2	50/50 POZ Blond G		31/2 # 3		
1126		1	OWC - Blend Ceme	ent 41/2" U.A	-rplug		
1110		3 516	Gilsonite		, ,		
1107		1.55K	Flo-Seal			RECE	IVED
1118	<u> </u>	SIC	Premium Gel			KANSAS CORPORAT	TION COMMISSION
1215A		5.1	KCL Sadium Cilianta /	2 1 - \ \ \		AUG 1	7 2007
1111B		3 5 K	Sedium Silicate (201chlarid	<u> </u>	AUU I	/ ZUU /
1123	700	2001	Transport Truck			CONSERVATIO	DN DIVISION
903142	7	100	Transport Trailer			WICHIT	s, kë
932452	7	25 hc	80 Vac				
931500	٠٠٠,	27 hc					



KGS STATUS

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

Taylor, Wayne L 22-3 22-28S-18E 1" = 1,000'

POSTROCK



Current Completion

SPUD DATE: 4/19/2007

WELL: Taylor, Wayne L 22-3

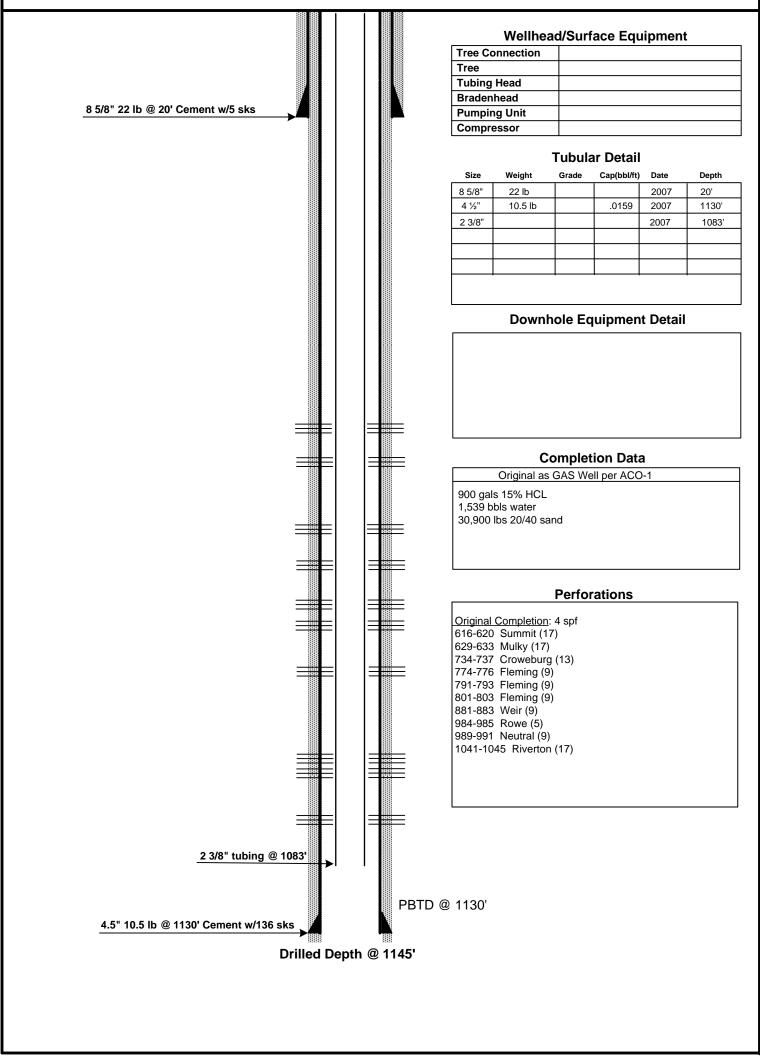
FIELD : Cherokee Basin

STATE : Kansas COUNTY : Neosho

e Basin COMP. Date : 4/23/2007 API: 15-133-26897-00-00

LOCATION: 22-28S-18E (SW, NE)

ELEVATION: 986'



PREPARED BY:	POSTROCK
A DDD OVED DV	

APPROVED BY:

DATE: Sept, 2012

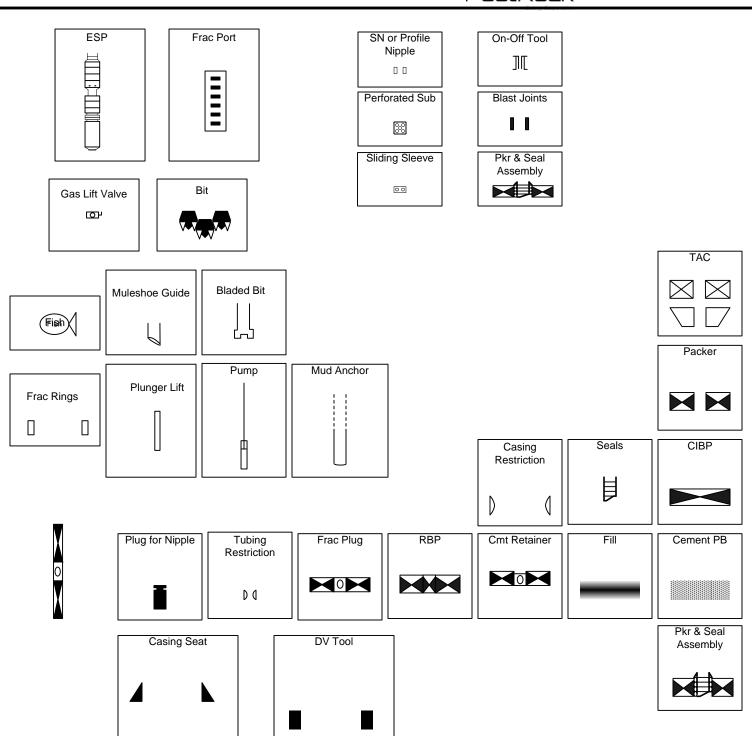
DATE:

POSTROCK



LEGEND

PostRock[®]



TAYLOR, WAYNE L 22-3

1 NAME & UPPER & LO	WER LIMIT OF	FACH PRODUCTION	INTERVAL TO BE COMMINGLED
---------------------	--------------	-----------------	---------------------------

FORMATION:	FLEMING	(PERFS):	801 -	803
FORMATION:	WEIR	(PERFS):	881 -	883
FORMATION:	ROWE	(PERFS):	984 -	985
FORMATION:	NEUTRAL	(PERFS):	989 -	991
FORMATION:	RIVERTON	(PERFS):	1041 -	1045
FORMATION:	CATTLEMAN	(PERFS):	817 -	822
FORMATION:	CATTLEMAN	(PERFS):	734 -	836
FORMATION:	CATTLEMAN	(PERFS):	842 -	845
FORMATION:	CATTLEMAN	(PERFS):	870 -	874
FORMATION:		(PERFS):	-	
FORMATION:		(PERFS):	-	
FORMATION:		(PERFS):	-	

2 ESTIMATED AMOUNT OF FLUID PRODUCTION TO BE COMMINGLED FROM EACH INTERVAL

FLEMING	BOPD:	0	MCFPD:	1.8	BWPD:	1
WEIR	BOPD:	0	MCFPD:	1.8	BWPD:	1
ROWE	BOPD:	0	MCFPD:	1.8	BWPD:	1
NEUTRAL	BOPD:	0	MCFPD:	1.8	BWPD:	1
RIVERTON	BOPD:	0	MCFPD:	1.8	BWPD:	1
CATTLEMAN	BOPD:	0.75	MCFPD:	0	BWPD:	5
CATTLEMAN	BOPD:	0.75	MCFPD:	0	BWPD:	5
CATTLEMAN	BOPD:	0.75	MCFPD:	0	BWPD:	5
CATTLEMAN	BOPD:	0.75	MCFPD:	0	BWPD:	5
0	BOPD:		MCFPD:		BWPD:	
0	BOPD:		MCFPD:		BWPD:	
0	BOPD:		MCFPD:		BWPD:	
	WEIR ROWE NEUTRAL RIVERTON CATTLEMAN CATTLEMAN CATTLEMAN	WEIR BOPD: ROWE BOPD: NEUTRAL BOPD: RIVERTON BOPD: CATTLEMAN BOPD: CATTLEMAN BOPD: CATTLEMAN BOPD: CATTLEMAN BOPD: O BOPD: 0 BOPD:	WEIR BOPD: 0 ROWE BOPD: 0 NEUTRAL BOPD: 0 RIVERTON BOPD: 0 CATTLEMAN BOPD: 0.75 CATTLEMAN BOPD: 0.75 CATTLEMAN BOPD: 0.75 CATTLEMAN BOPD: 0.75 O BOPD: 0.75 D BOPD: 0.75	WEIR BOPD: 0 MCFPD: ROWE BOPD: 0 MCFPD: NEUTRAL BOPD: 0 MCFPD: RIVERTON BOPD: 0 MCFPD: CATTLEMAN BOPD: 0.75 MCFPD: CATTLEMAN BOPD: 0.75 MCFPD: CATTLEMAN BOPD: 0.75 MCFPD: CATTLEMAN BOPD: 0.75 MCFPD: 0 BOPD: MCFPD: 0 BOPD: MCFPD:	WEIR BOPD: 0 MCFPD: 1.8 ROWE BOPD: 0 MCFPD: 1.8 NEUTRAL BOPD: 0 MCFPD: 1.8 RIVERTON BOPD: 0 MCFPD: 1.8 CATTLEMAN BOPD: 0.75 MCFPD: 0 MCFPD: 0 MCFPD: 0	WEIR BOPD: 0 MCFPD: 1.8 BWPD: ROWE BOPD: 0 MCFPD: 1.8 BWPD: NEUTRAL BOPD: 0 MCFPD: 1.8 BWPD: RIVERTON BOPD: 0 MCFPD: 1.8 BWPD: CATTLEMAN BOPD: 0.75 MCFPD: 0 BWPD: O BOPD: MCFPD: BWPD: O BOPD: MCFPD: BWPD:

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 Taylor, Wayne L 22-3 located in Neosho 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, Weir, Rowe, Neutral, Riverton and Cattleman producing formations at the Taylor, Wayne L 22-3, located in the NE SE SW NE, S22-T28S-R18E, Approximately 2075 FNL & 1620 FEL, Neosho 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

A COPY OF THE AFFIDAVIT OF PUBLICATION MUST ACCOM-PANY ALL APPLICATIONS

Affidavit of Publication .

STATE OF KANSAS, NEOSHO COUNTY, ss: Rhonda Howerter, being first duly sworn, deposes and says: That she is Classified Manager of THE CHANUTE TRIBUNE, a daily newspaper printed in the State of Kansas, and published in and of general circulation in Neosho County, Kansas, with a general paid circulation on a daily basis in Neosho County, Kansas, and that said newspaper is not a trade, religious or fraternal

publication.

Said newspaper is a daily published at least weekly 50 times a year: has been so published continuously and uninterruptedly in said county and state for a period of more than five years prior to the first publication of said notice; and has been admitted at the post office of Chanute, in said county as second class matter.

That the attached notice is a true copy thereof and was published in the regular and entire issue of said newspaper for 1 consecutive time, the first publication thereof being made as aforesaid on the 10 day of Vetober 2012, with subsequent publications being made on the following dates: . 2012 ___ Subscribed and sworn to and before me this 10 day of Otobo Public My commission expires: January 9, 2015 Printer's Fee\$ 70.14 Affidavit, Notary's Fee \$ 3.00 Additional Copies\$___ Total Publication Fees \$ 73,14



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 Kansas My Appt. Expires -

Notary Public Sedgwick County, Kansas

Printer's Fee: \$132.40

LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE
OCTOBER 11, 2012 (2211483)
BEFORE THE STATE CORPORATION
COMMISSION
OF THE STATE OF KANSAS
NOTICE OF FILING APPLICATION
RE: In the Maiter of Postrock Midconflinent
Production, LLC Application for
Commingling of Production in the Taylor,
Wayne L 22-3 located in Neosho County,
Kansas.

Kansas.

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

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, Weir, Rowe, Neutral, Riverton and Catileman producing formations at the Taylor, Wayne L 22-3, located in the NE SE SW NE, S22-T285-R18E, Approximately 2075 FNL & 1620 FEL, Massbo County, Kansse Neosho County, Kansas.

Neosho County, Kansas.

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All persons interested or concerned shall.

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All persons interested or concerned shall parsons interested or concerned shall person take notice of the foregoing and shall govern themselves accordingly. All person and/or companies wishing to protest this application are required to title 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 counset or as individuals, appearing on their own behalf, Postrock Midcontinent Production, LLC 210 Park Avenue, Suite 2750

210 Park Avenue, Suite 2750 Oklahoma City, Oklahoma 73102 (405) 660-7704

Affida	vit of Notice Served	
Re:	Application for: APPLICATION FO	R COMMINGLING OF PRODUCTION OR FLUIDS ACO-4
	Well Name: TAYLOR, WAYNE L	22-3 Legal Location: NESESWNE S22-T28S-R18E
The unc		duly authorized agent for the applicant, and that on the day 25th of OCTOBER
2012		application referenced above was delivered or mailed to the following parties:
	, a tide and correct copy of the a	pplication releasenced above was delivered of mailed to the following parties.
Note: A	copy of this affidavit must be served as a par	t of the application.
	Name	Address (Attach additional sheets if necessary)
GAF	RY E ENOS	200 N GRANT ST, CLEARWATER, KS 67026
I further :	attest that notice of the filing of this application	was published in the THE CHANUTE TRIBUNE , the official county publication
	OSHO	county. A copy of the affidavit of this publication is attached.
Signed th	nis 25 th day of OCTOBER	
		Chelle
		Applicant or Duly Authorized Agent
	Sub	scribed and sworn to before me this 25 day of OCTOBER , 2012
{	JENNIFER R. BEAL	Minnefer R. Beal
	OFFICIAL MY COMMISSION EXPIRES	Notary Public)
	7-20-2010	My Commission Expires:
<u> </u>		

TAYLOR, WAYNE L 22-3-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

Offset Operators, Unleased Mineral Owners and Landowner	s acreage		
(Attach additional sheets if necessary)			
Name:		Legal Description of Leasehold:	
SEE ATTACHED			
			
			•
			···
			
hereby certify that the statements made herein are true and correct	o the best of my knowledge and beli	er.	
	Ch15	1	
	Applicant or Duly Authorized A	Agent	
			2012
Subscribed and	I sworn before me this	and the same of th	t
JENNIFER R. BEAL	Dugas his	July 20, 2014	
OFFICIAL MY COMMISSION EXPIRES	Notary Public		
7-20-2016	My Commission Expires:	Quely 20, 2014	7
(The Control of the	,	0.0	
	···		

TAYLOR, WAYNE L 22-3

22-28S-18E

tract in W2NW Gary E. Enos

200 N Grant St

Clearwater, KS 67026

Conservation Division Finney State Office Building 130 S. Market, Rm. 2078 Wichita, KS 67202-3802



Phone: 316-337-6200 Fax: 316-337-6211 http://kcc.ks.gov/

Sam Brownback, Governor

Mark Sievers, Chairman Thomas E. Wright, Commissioner Shari Feist Albrecht, Commissioner

November 9, 2012

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

RE: Approved Commingling CO101222

Taylor, Wayne L. 22-3, Sec. 22-T28S-R18E, Neosho County

API No. 15-133-26897-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on October 26, 2012, has been reviewed and approved by the Kansas Corporation Commission (KCC) per K.A.R. 82-3-123. Notice was examined and found to be proper per K.A.R. 82-3-135a. No protest had been filed within the 15-day protest period.

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

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

Commingling ID number CO101222 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