

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		
Name:_		Spot Description:		
Address	s 1:		Sec Twp S.	R East West
Address	s 2:		Feet from North	/ South Line of Section
City:	State: Zip:+		Feet from East	/ West Line of Section
Contact	Person:	County:		
Phone:	()_	Lease Name:	Well #:	
□ 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:	BOPD:	MCFPD:	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 affidation	of the lessee of record or opera	ator.	within a 1/2 mile radius of
For Co	mmingling of PRODUCTION ONLY, include the following:			
<u> </u>	Wireline log of subject well. Previously Filed with ACO-1:	Yes No		
<u> </u>	Complete Form ACO-1 (Well Completion form) for the subject	well.		
For Co	mmingling of FLUIDS ONLY, include the following:			
7.	Well construction diagram of subject well.			
8.	Any available water chemistry data demonstrating the compati	ibility of the fluids to be commi	ngled.	
current i mingling	NIT: I am the affiant and hereby certify that to the best of my information, knowledge and personal belief, this request for comgistrue and proper and I have no information or knowledge, which sistent with the information supplied in this application.	Sul	omitted Electronic	ally
KC	C Office Use Only			the application. Protests must be ed wihin 15 days of publication of
De	enied Approved	the notice of application.	OL O 1000 and must be m	oa milii 10 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	Da	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 59 60 61 62 63 64 65 66 67	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH (Strong base) * Quality Control Checks at H 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

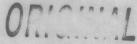
			Ratio			
	20%	20%	20%	20%	20	
Component (mg/L)	Brine 1	Brine 2	Brine 3	Brine 4	Brine 5	Mixed Brine
Calcium	1836	2452	2044	1920	1948	1952
Magnesium	1096	872	1200	953	858	865
Barium	0	0	0	0	0	0
Strontium	0	0	0	0	0	0
Bicarbonate	190	234	259	268	254	253
Sulfate	1	1	8	1	1	1
Chloride	36299	48965	47874	45632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



KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

Form ACO-1 September 1999 Form Must Be Typed

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 33344	API No. 15 - 205-25701-0000
Name: Quest Cherokee, LLC	County: Wilson
Address: P O Box 100	SW_SW_NE_NE_Sec. 3 Twp. 28 S. R. 16 V East West
City/State/Zip: Benedict, KS 66714	1300 feet from S / (N)(circle one) Line of Section
Purchaser: Bluestem Pipeline, LLC	1100 feet from (E) W (circle one) Line of Section
Operator Contact Person: Doug Lamb RECEIVED	Footages Calculated from Nearest Outside Section Corner:
620 698-2250	(circle one) NE SE NW SW
Contractor: Name: James D. Lorenz MAY 2 1 2004	Lease Name: Campbell Well #: 3-1
License: 9313 KCC WICHITA	Field Name: Cherokee Basin CBM
Wellsite Geologist: Michael L. Ebers	Producing Formation: Not yet complete
Designate Type of Completion:	Elevation: Ground: 1020 Kelly Bushing:
New Well Re-Entry Workover	Total Depth: 1288' Plug Back Total Depth: 1285'
Oil SWD SIOW Temp. Abd.	Amount of Surface Pipe Set and Cemented at 24 Feet
✓ Gas ENHR SIGW	
	Multiple Stage Cementing Collar Used? Yes No Yes Yes Yes Yes Yes Yes Yes Ye
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 1285 feet depth to Surface w/ 169 sx cmt.
Operator:	feet depth to Surface w/ 169 sx cmt.
Well Name:	Drilling Fluid Management Plan ALT#2 KJR 5/30/0
Original Comp. Date: Original Total Depth:	(Data must be collected from the Reserve Pit)
Deepening Re-perf Conv. to Enhr./SWD	Chloride content ppm Fluid volume bbls
Plug Back Plug Back Total Depth	Dewatering method used
Commingled Docket No	Location of fluid disposal if hauled offsite:
Dual Completion Docket No	
Other (SWD or Enhr.?) Docket No.	Operator Name:
01/21/2004 01/22/2004 01/26/2004	Lease Name: License No.:
Spud Date or Date Reached TD Completion Date or	Quarter Sec TwpS. R East West
Recompletion Date Recompletion Date	County: Docket No.:
INSTRUCTIONS: An original and two copies of this form shall be filed with Kansas 67202, within 120 days of the spud date, recompletion, workove 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 of TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells.	r or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. 2 months if requested in writing and submitted with the form (see rule 82-3- and geologist well report shall be attached with this form. ALL CEMENTING
All requirements of the statutes, rules and regulations promulgated to regular herein are complete and correct to the best of my knowledge.	te the oil and gas industry have been fully complied with and the statements
Signature: Vouglas L Ramb	KCC Office Use ONLY
Title: Manager Date: 05/19/2004	Letter of Confidentiality Received
Subscribed and sworn to before me this 19th day of May	If Denied, Yes Date:
	Wireline Log Received
20.04.	Geologist Report Received
Notary Public: Coennifer He Houston	UIC Distribution
Date Commission Expires: Ouls 30, 2005	
JENNIF Notary Pu	IER R. HOUSTON Iblic - State of Kaneas Guly 30, 2005

Sec. 3 Twp_28 S. R. 16	Operator Name: Que	est Cherokee, LL	.C		Lease	e Name:	Campbell		Well #: 3-1		
seted, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hold preservate, fluid or areas if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach copy electric Wireline Logs surveyed. Attach final geological well site report. Control Stem Tests Taken (Attach distinant Sheets)				West	Count	ty: Wilso	n				
Altanon't Additional Sheets) Amples Sent to Geological Survey Yes No Lenapah Lime 611 4409 Altanon't Lime 643 4377 Electric Log Run (submit Copy) List All E. Logs Run: RECEIVED Density-Neutron Dual Induction - Guard MAY 2 1 2004 KCC WCHTA Report all strings sel-conductor, surface, intermediate, production, etc. Purpose of String Disposition Production 6-3/4" 4-1/2" 6.5 1285' Production 6-3/4" 4-1/2" 6.5 1285' A" 169sx Additives ADDITIONAL CEMENTING / SOUEEZE RECORD Purpose: Portoate Protect Casing Prug Back TD Plug Olf Zone Shots Per Foot PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated None Waiting on Pipeline Partoate Production Size Set At Packer At Liner Run Packer At Liner Run Packer At Liner Run Production Oil Bbis. Gas Mcf Weiter Bos. Gas-Oil Ratio Gre Production Interval Production Interval Production Interval	ested, time tool oper emperature, fluid red	n and closed, flowin	g and shut-i	n pressures, urface test,	whether salong with	shut-in pre	essure reached	I static level, hyd	rostatic pressure	s, bottom	hole
Samples Sent to Geological Survey			Yes	s ✓ No		✓ L	og Forma	tion (Top), Depth	and Datum	□ Sa	ample
Cores Taken Yes No			☐ Yes	s No							
Electric Log Run (Submit Copy) Jet All E. Logs Run: RECEIVED Density-Neutron Dual Induction - Guard RECEIVED MAY 2 1 2004 KCC WICHTA Report all strings set-conductor, surface, intermediate, production, etc. Purpose of String Size Hole Drilled Size Casing Purpose: Surface 11" 8-5/8" 24.75 24' "A" Sex Production 6-3/4" 4-1/2" 6.5 1285' "A" 169sx ADDITIONAL CEMENTING / SOUEEZE RECORD Purpose: Perforate Protect Casing Prug Back TO Prug Diff Zone Sholls Per Foot PERFORATION RECORD - Bridge Plugs Set-Type Specify Footage of Each interval Perforated None Waiting on Pipelline Set At Packer At Liner Run Verial Set String Purpose: ADDITIONAL CEMENTING / SOUEEZE RECORD Purpose: Perforate Protect Casing Prug Back TO Prug Diff Zone Sholls Per Foot Specify Footage of Each interval Perforated None Waiting on Pipelline Date of First, Resumerd Production, SWD or Entry. Production Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval Production Interval Production Interval Production Interval Production Interval Production Interval			Yes	s V No							
Second Size Second Size Second Secon	Electric Log Run					Paw	nee Lime		754		
Density-Neutron Dual Induction - Guard MAY 2 1 2004 KCC WICHITA CASING RECORD New Used Report all strings sel-conductor, surface, intermediate, production, etc. Purpose of String Size Hole Size Casing Weight Setting Type of Cement Setting Settin	List All E. Logs Run:										
Report all strings set-conductor, surface, intermediate, production, etc. Purpose of String Size Hole Size Casing Set (in O.D.) Libs. /Fi. Setting Type of Cement Used Additives Suface 11" 8-5/8" 24.75 24' "A" 6sx Production 6-3/4" 4-1/2" 6.5 1285' "A" 169sx ADDITIONAL CEMENTING / SOUEEZE RECORD Purpose: Perforate Protect Casing Priorate Casing Prior											
Purpose of String Size Hole Drilled Size Casing Weight Lbs. / Fit. Setting Drilled Setting Dri				CASING	RECORD	land,		action, etc.			
Suface 11" 8-5/8" 24.75 24' "A" 6sx Production 6-3/4" 4-1/2" 6.5 1285' "A" 169sx ADDITIONAL CEMENTING / SQUEEZE RECORD Purpose: Perforate Protect Casing Plug Back TD Plug Back TD Plug Olf Zone Shots Per Foot PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated None Waiting on Pipeline TUBING RECORD Size Set At Packer At Liner Run Ves No Date of First, Resumerd Production, SWD or Enhr. Producing Method Flowing Pumping Gas Lift Other (Explain) Fer 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval	Purpose of String		Size	Casing	We	eight	Setting	Type of			
ADDITIONAL CEMENTING / SQUEEZE RECORD Purpose: Depth Top Bottom	Suface			(III O.B.)							
Purpose: Perforate Protect Casing Plug Back TD Plug Off Zone PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated Waiting on Pipeline TUBING RECORD Size Set At Packer At Liner Run Date of First, Resumerd Production, SWD or Enhr. Producting Method Disposition of Gas METHOD OF COMPLETION Type of Cement #Sacks Used Type and Percent Additives Type and Percent Additives Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) Disposition of Gas METHOD OF COMPLETION Production Interval	Production	6-3/4"	4-1/2"		6.5		1285'	"A"	169sx		
Purpose: Perforate Protect Casing Plug Back TD Plug Off Zone PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated None Waiting on Pipeline TUBING RECORD Size Set At Packer At Liner Run Yes No Date of First, Resumerd Production, SWD or Enhr. Producing Method Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval Production Interval Production Interval Production Interval Production Interval											
Perforate Protect Casing Plug Back TD Plug Off Zone Shots Per Foot PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated None Waiting on Pipeline TUBING RECORD Size Set At Packer At Liner Run Yes No Date of First, Resumerd Production, SWD or Enhr. Producing Method Flowing Pumping Gas Lift Other (Explain) Estimated Production Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval			•	ADDITIONA	L CEMENT	TING / SQ	UEEZE RECOF	RD			
None Waiting on Pipeline TUBING RECORD Size Set At Packer At Liner Run Yes No Date of First, Resumerd Production, SWD or Enhr. Producing Method Flowing Pumping Gas Lift Other (Explain) Estimated Production Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval	Perforate Protect Casing Plug Back TD	Top Bottom	Туре	of Cement	#Sack	ks Used		Type and	Percent Additives		
None Waiting on Pipeline TUBING RECORD Size Set At Packer At Liner Run Yes No Date of First, Resumerd Production, SWD or Enhr. Producing Method Flowing Pumping Gas Lift Other (Explain) Estimated Production Oil Bbls. Gas Mcf Water Bbls. Gas-Oil Ratio Gra Disposition of Gas METHOD OF COMPLETION Production Interval	Shots Per Foot	PERFORAT	TION RECORI	D - Bridge Plu	ugs Set/Typ	е				rd .	Double
TUBING RECORD Size Set At Packer At Liner Run Yes No Date of First, Resumerd Production, SWD or Enhr. Producing Method Flowing Pumping Gas Lift Other (Explain) Estimated Production Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval				ach Interval Pe	errorated		(Amount and Kind of	Material Used)		Depth
Date of First, Resumerd Production, SWD or Enhr. Producing Method Flowing Pumping Gas Lift Other (Explain) Estimated Production Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval	None	Waiting on Fipe	SIII IG								
Date of First, Resumerd Production, SWD or Enhr. Producing Method Flowing Pumping Gas Lift Other (Explain) Estimated Production Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval											
Date of First, Resumerd Production, SWD or Enhr. Producing Method Flowing Pumping Gas Lift Other (Explain) Estimated Production Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval	TUBING RECORD	Size	Set At		Packer	r At	Liner Run				
Estimated Production Per 24 Hours Oil Bbls. Gas Mcf Water Bbls. Gas-Oil Ratio Gradustion of Gas METHOD OF COMPLETION Production Interval								Yes 1	No		
Per 24 Hours Disposition of Gas METHOD OF COMPLETION Production Interval	Date of First, Resume	rd Production, SWD or	Enhr.	Producing Me	ethod	Flowin	ng Pum	ping Gas	Lift Othe	er (Explain)	
		Oil	Bbls.	Gas	Mcf	Wa	ter	Bbls.	Gas-Oil Ratio		Gravity
	Disposition of Gas	METHOD OF	COMPLETIO	N			Production Int	terval			
Vented Sold Used on Lease Open Hole Perf. Dually Comp. Commingled	Vented ☐ Sold	Used on Lease		Open Hole	Pe Pe	erf.	Dually Comp.	Commingled			

CONSOLIDATED OIL WELL SERVICES, INC. -211 W. 14TH STREET, CHANUTE, KS 66720 620-431-9210 OR 800-467-8676

TICKET NU	MBER	32728
LOCATION	CH	ANUTE
FOREMAN	TODO	A. TINDLE

TREATMENT REPORT

DATE	CUSTOMER #	WELL NAME	FORMATION		TRUCK #	DRIVER	TRUCK #	DRIVER
1-26-04	6628	CAMPBELL			255	HERB	国际基础的	
SECTION	TOWNSHIP	RANGE	COUNTY		103	WES		
3	28	16	WL		140	Tim		
CUSTOMER					286	WILL		
QUEST MAILING ADDR		LLC						
CITY	1 700			,				
BENEDIC	7-							
STATE		ZIP CODE						
KANSA.	5	66714				TYPE OF T	REATMENT	
					[] SURFACI	EPIPE	[] ACID BREA	KDOWN
TIME ARRIVED	ON LOCATION				[LIPRODUC	TION CASING	[] ACID STIMU	JLATION

WELL DATA						
PACKER DEPTH						
98 PERFORATIONS						
SHOTS/FT						
OPEN HOLE						
TUBING SIZE						
TUBING DEPTH						
TUBING WEIGHT						
TUBING CONDITION						

TYPE OF TREATMENT							
[] SURFACE PIPE	[] ACID BREAKDOWN						
[HPRODUCTION CASING	[] ACID STIMULATION						
[] SQUEEZE CEMENT	[] ACID SPOTTING						
[] PLUG & ABANDON	[] FRAC						
[] PLUG BACK	[] FRAC + NITROGEN						
[] MISP. PUMP	[]						
[] OTHER	[]						

PRESSURE LIMITATIONS

	THEORETICAL	INSTRUCTED
SURFACE PIPE		
ANNULUS LONG STRING		
TUBING		

RUN 5BBL PAD; RUN 10 BBLS DYE W/ SODIUM SHICKTE IN LAST 5BBL; CEMENT UNTIL DYE RETURN; FLUSH PUMP; PUMP PLUE W/ KOL WATER; SET FLOAT SHOE. LEAD IN EIZ. AUTHORIZATION TO PROCEED

TITLE

TAKE 14.4 (CEMENT.

TIME AM / PM	STAGE	BBL'S PUMPED	INJ RATE	PROPPANT PPG	SAND/STAGE	PSI	
							BREAKDOWN PRESSURE
		The second					DISPLACEMENT 4 4
							MIX PRESSURE
		DEOFIN	-6				MIN PRESSURE
		RECEIV	=D				ISIP
		MAY 2 1 20	04				15 MIN.
							MAX RATE
		KCC WIC	ATIF				MIN RATE



211 W. 14TH STREET, CHANUTE, KS 66720 620-431-9210 OR 800-467-8676

TICKET NUMBER 24167

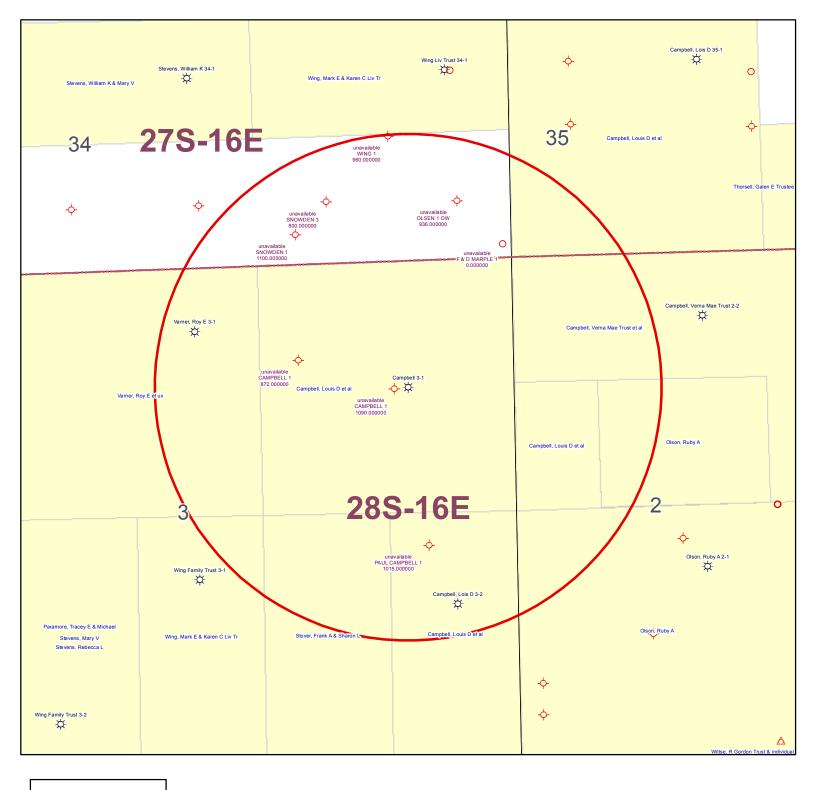
LOCATION CHANUTE

FIELD TICKET

DATE CUSTOMER ACCT # WELL NAME QTR/QT 1-2604 6628 CAMPBELL#3-1	R SECTION TWP RGE COUNTY FORMATION 3 28 16 WL
CHARGETO QUEST CHEROKEE ILC	OWNER
MAILING ADDRESS P.O. BOX 100	OPERATOR
CITY & STATE RENEDICT, KANSAS 66714	CONTRACTOR

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION OF SERVICES OR PRODUCT	UNIT PRICE	TOTAL AMOUNT
5401	1- WELL	PUMP CHARGE CEMENT PUMP		525°°
1110	185KS	GILSONITE		34920
1118	3 5KS	PREMIUM GEL LBENTONITE (3 5KS A)	YEAD)	3540
1107	2 SKS	CELLOFLAKE/ FLO-SEAL		7550
111118	15 GAL	SODIUM SILICATE		15000
1215	1 GAL	KCL		2200
1105	15K5	COTTONSEED HULLS		1995
	The state of the s			
1123	7350GAL5	CITY WATER (175 BBLS)		83.69
1120	1200 440	(111 WATER (112 BBCS)		Du
	5			
		RE	CEIVED	
		MAY	2 1 2004	
		KCC	WICHITA	
		BLENDING & HANDLING		
5407	15 mi	TON-MILES MINIMUM		10000
2707	1 ml 11/11	STAND BY TIME		. 1.00 -
		MILEAGE	1	
5501	51/2 HR	WATER TRANSPORTS	+ 10 -+	44000
5502	5/2 HR	VACUUM TRUCKS		41250
2266	2/2/1/2	FRAC SAND		. 411
1126	1695KS	CEMENT OWC		1909.7
		4	SALES TAX	164.77
		COWC; 5# GILSONITE; /4# FLO-SEAL		
2790		2h.	ESTIMATED TOTAL	4369.71

CUSTOMER or AGENTS SIGNATURE_ CIS FOREMAN TODD A. TINDLE CUSTOMER or AGENT (PLEASE PRINT)_ DATE_____



KGS STATUS

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

Campbell 3-1 3-28S-16E 1" = 1,000'

POSTROCK



Current Completion

WELL : Campbell 3-1 **FIELD**

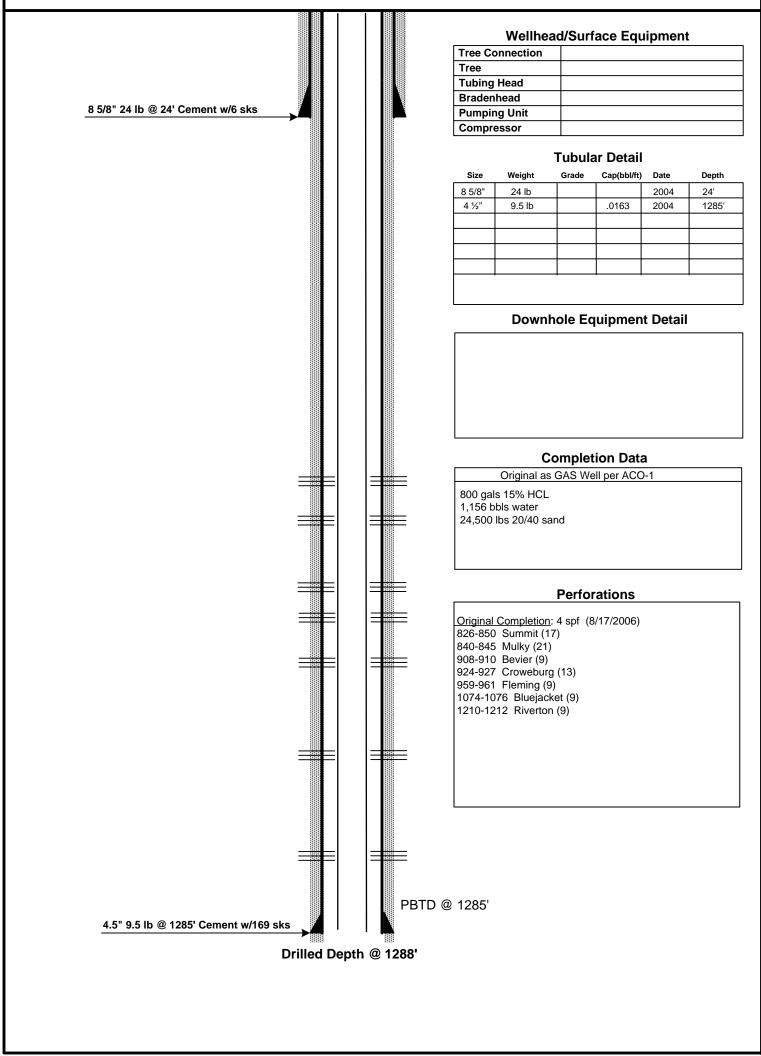
: Cherokee Basin

STATE : Kansas **COUNTY** : Wilson

SPUD DATE: 1/21/2004 COMP. Date: 1/26/2004 API: 15-205-25701-00-00

LOCATION: 3-28S-16E (NE,NE)

ELEVATION: 1020'



PREPARED BY: POSTROCK APPROVED BY: _

DATE: Sept, 2012

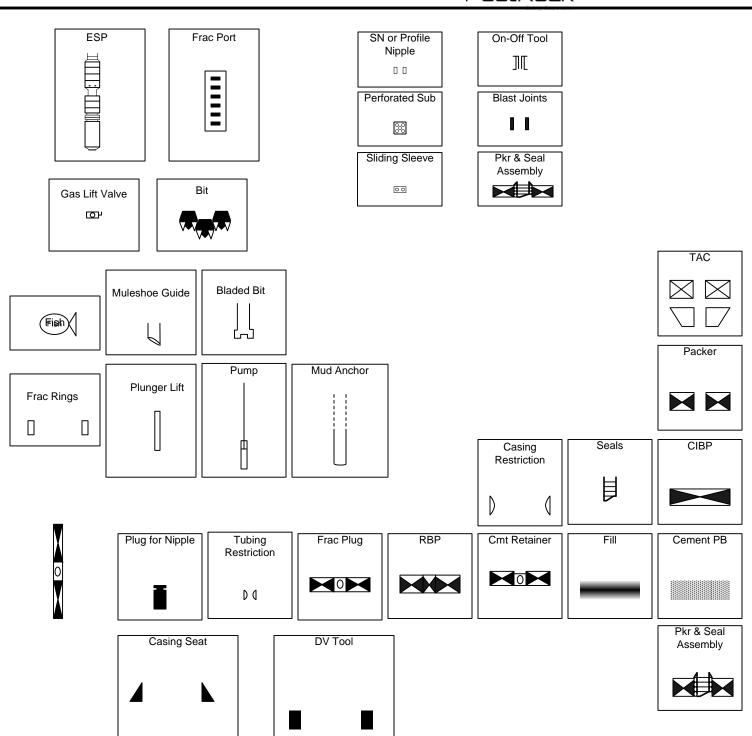
DATE:_

POSTROCK



LEGEND

PostRock[®]



CAMPBELL 3-1

	R & LOWER LIMIT OF EACH PRO	DOCTION INTERVAL TO E					
FORMATION:	BLUEJACKET	(PERFS):	1074 -	1076			
FORMATION:	RIVERTON	(PERFS):	1210 -	1212			
FORMATION:	BARTLESVILLE	(PERFS):	1083 -	1089			
FORMATION:		(PERFS):					
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FORMATION:		(PERFS):		-			
2 ESTIMATED AN FORMATION:	MOUNT OF FLUID PRODUCTION BLUEJACKET	TO BE COMMINGLED FRO	OM EACH INT 0	ERVAL MCFPD:	1	BWPD:	2.71
FORMATION:	RIVERTON	BOPD:	0	MCFPD:			
FORMATION:					1	BWPD:	2.71
	BARTLESVILLE	BOPD:	3	MCFPD:	0	BWPD: BWPD:	
FORMATION:	BARTLESVILLE	BOPD: BOPD:	3	_			2.71
FORMATION: FORMATION:	BARTLESVILLE		3	MCFPD:		BWPD:	2.71
	BARTLESVILLE	0 BOPD:	3	MCFPD:		BWPD: BWPD:	2.71
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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 1st 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

1st day of October, 2012

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

Notary Public Sedgwick County, Kansas

Printer's Fee: \$139.60

PUBLISHED IN THE WICHITA EAGLE OCTOBER 1, 2012 (3209757)
BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS NOTICE OF FILING APPLICATION
RE: In the Matter of Postrock Midconflient Production, LLC Application for Commingiling of Production in the Campbell 3-1 located in Wilson Counly, 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 Midconfinent Production, LLC has filed an application to commingle the Summif, Mulky, Bevier, Croweburg, Fleming, Blueiacket, Riverton and Bartlesville producing formalions at the Campbell 3-1, located in the SW SW NE NE, 53-T285-R16E, Approximately 1317-R10. & 1102 FEL, Wilson Counly, Kansas.

located in the SW SW NE IN A 102 FEL, Wilson County, Kansas.
Approximately 1317 FNL & 1102 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 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 Oli and Gas Commission.

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 ACCOMPANY ALL
APPLICATIONS

PROOF OF PUBLICATION

STATE OF KANSAS Wilson County - SS

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

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

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

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

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

1st publication was made on the	[N	day of
(Vitale	الان	12
2nd publication was made on the		day of
3rd publication was made on the		day of
	20-	
4th publication was made on the		_day of
5th publication was made on the		_day of
	20-	
6th publication was made on the		_day of
	20-	1
TOTAL PUBLICATION FEE: \$	272	
(Signed) Minus S. DeBerry		
Subscribed and sworn to before me, this	6th	day of
Cetrber		<u> </u>
Sta M. Kelf	(Notar	y Public
My commission expires lug. 3	0 20	14
1	/	

(Published in the Wilson County Citizen on Monday, October 1, 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 Campbell 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, Bluejacket, Riverton and Bartlesville producing formations at the Campbell 3-1, located in the SW SW NE NE, S3-T28S-R16E, Approximately 1317 FNL & 1102 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 65 1 cpy.

pal



Affida	vit of Notice Served		
Re:	Application for: APPLICATION FOR COMMINGL	ING OF PRODUCTION OR FLUIDS ACO-4	
	Well Name: CAMPBELL 3-1	Legal Location: SWSWNENE S3-T28S-R1	
The und	dersigned hereby certificates that he / she is a duly authorized ago	gent for the applicant, and that on the day $\underline{\mathcal{AY^{H}}}$ of \underline{OCTOBE}	<u>ER</u> ,
2012	, a true and correct copy of the application reference	ced above was delivered or mailed to the following parties:	
Mote: A	copy of this affidavit must be served as a part of the application.		
IVOGO	Name	. Address (Attach additional sheets if necessary)	
SEE	E ATTACHED	Addices (Allacin additional direction incorporation)	
ÜLL	ATTAURED		
		THE MU CON COUNTY OFFICEN	
	attest that notice of the filing of this application was published in the		e official county publication
of WII	A M	county. A copy of the affidavit of this publication is attached.	
Signed th	is <u>24th day of OCTOBER</u> , -	_2012	
••		MIM	
		Applicant or Duly Authorized Agent	
	Subscribed and sworn	to before me this day ofOCTOBER	. 2012
	JENNIFER R. BEAL	Stute Quinky X }	Boal
	SEAL: MY COMMISSION EXPIRES	Notary Public of 200	11
	Law auto	My Commission Expires: (Assless 30, 30)	<u> </u>
	/		
	*		
			,

CAMPBELL 3-1

34-27S-16E

S2SW & SWSE Dwight C Olson Revocable Living Trust

20106 Scott Rd Buffalo, KS 66717

SE4SE4

Todd J. & Darla D. Marple

18946 Queen Rd Altoona, KS 66710

CAMPBELL 3-1-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

Offset Operators, Unleased Mineral Owners and Landowners	acreage
(Attach additional sheets if necessary)	
Name:	Legal Description of Leasehold:
SEE ATTACHED	
•	
The state of the s	
hereby certify that the statements made herein are true and correct to	the best of my knowledge and belief
weren't the state of the state	the book of my minemous or distribution.
	CUELL
	Applicant or Duly Authorized Agent
Subscribed and s	sworn before me this 24 ¹² day of OCTOBER ,2012
ICAMPECO O DEAL	Chlange 7 DOCK
JENNIFER R. BEAL OFFICIAL MY COMMISSION EXPIDES	Notary Popular & Boal
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JENNIFER R. BEAL MY COMMISSION EXPIRES 7-20-2016	My Commission Expires: Quy 20, 2010
MY COMMISSION EXPIRES 7-20-2016	My Commission Expires: Quy, 20, 2010
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SEAL T-20-2010	My Commission Expires: Quilty, 20, 20/6
SEAL T-20-2016	My Commission Expires: Quilty, 20, 20/6

CAMPBELL 3-1

34-27S-16E

S2SW & SWSE Dwight C Olson Revocable Living Trust

20106 Scott Rd Buffalo, KS 66717

SE4SE4

Todd J. & Darla D. Marple

18946 Queen 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

November 8, 2012

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

RE: Approved Commingling CO101220

Campbell 3-1, Sec. 3-T28S-R16E, Wilson County

API No. 15-205-25701-00-00

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 CO101220 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