

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1093858

Form ACO-4 Form must be typed March 2009

APPLICATION FOR COMMINGLING OF Commingling ID # _ PRODUCTION (K.A.R. 82-3-123) OR FLUIDS (K.A.R. 82-3-123a)

OPERAT	OR: License #	API No. 15				
Name:_		Spot Description: _				
Address	1:		Sec Twp	S. R East West		
Address	2:		Feet from No	rth / South Line of Section		
City:	State: Zip:+	<u> </u>	Feet from East	st / West Line of Section		
	Person:					
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):				
	Estimated amount of fluid availation to be committed from a	and interval				
2.	Estimated amount of fluid production to be commingled from e		MCERD.	BWPD:		
	Formation:					
	Formation:			BWPD:		
	Formation:			BWPD:		
	Formation:			BWPD:		
	Formation:	BOPD:	MCFPD:	BWPD:		
3.	Plat map showing the location of the subject well, all other well the subject well, and for each well the names and addresses of	•	•	es within a 1/2 mile radius of		
4.	Signed certificate showing service of the application and affida	avit of publication as require	d in K.A.R. 82-3-135a.			
For Con	nmingling of PRODUCTION ONLY, include the following:					
<u> </u>	Wireline log of subject well. Previously Filed with ACO-1:	Yes No				
6.	Complete Form ACO-1 (Well Completion form) for the subject	well.				
For Con	nmingling 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 com	mingled.			
current in mingling	/IT: I am the affiant and hereby certify that to the best of my formation, knowledge and personal belief, this request for comistrue and proper and I have no information or knowledge, which istent with the information supplied in this application.	S	ubmitted Electron	ically		
l —	Office Use Only			in the application. Protests must be filed wihin 15 days of publication of		

Date: _

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			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	0,12
	CO3 Alkalinity	(mg/l as CO3)	170.00	434.00	237,00	200.00	234.00	241.03	Cen		
_	Carboxylic acids**	(mg/l)						0.00	Inor 6	Sulfide	
27	Ammonia	(mg/L) NH3						0.00	-0.16	-0.22	-0.06
											-0.00
	Borate	(mg/L) H3BO3						0.00	Zinc	Sulfide	
	TDS (Measured)	(mg/l)	4.040	4.0=4				72781	~		
	Calc. Density (STP) CO 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{Calculated}\$ Alkalinity Caclulated \$\text{Calculated}\$ Calcinos= \$\textstyle \text{Anions=}\$ Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer	(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{Calculated}\$ Alkalinity Caclulated \$\text{Calculated}\$ Calcinos= \$\textstyle \text{Anions=}\$ Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer	(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 m MPa Bar	49.0 25.0 25.0 25.0 	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit "F ft ³ bbl(42 US gal) psia	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00 Value 176 3,531 629 145,074 7,194	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 44 45 46 47 48 49 50 51 52 53 54 55 56 60 61 62 63 64 65 66 67 68	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H ₂ S Gas Total H ₂ Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated Alkalinity Caclulated ECations= EAnions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,	(F) (F) (Psia) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/l) as HCO3 (equiv./I) (equiv./I) (mg/l) Input 120 1 4 1 50	0 0 0 Unit min 1-Yes;0-No #	## 1 2 3 4 4 5 6 6 7	Inhibitor NTMP BHPMP PAA DTPMP PPCA SPA HEDP	Unit 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 m MPa Bar	49.0 25.0 25.0 25.0 	60.0 89.0 25.0 120.0 30.00 0.60 0 0 To Unit "F ft ³ bbl(42 US gal) psia	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00 Value 176 3,531 629 145,074 7,194	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	

Saturation Index Calculations

Champion Technologies, Inc. (Based on the Tomson-Oddo Model)

Brine 1: Ward Feed Yard 34-1
Brine 2: Ward Feed Yard 4-1
Brine 3: Clinesmith 5-4
Brine 4: Clinesmith 1
Brine 5: Clinesmith 2

			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 ORIGINAL WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License #33344	API No. 15 - 133-26896-0000
Name: Quest Cherokee, LLC	County: Neosho
Address: 211 W. 14th Street	ne -se -sw -se Sec. 22 Twp. 28 S. R. 18 V East West
City/State/Zip: Chanute, KS 66720	510 feet from (S)/ N (circle one) Line of Section
Purchaser: Bluestem Pipeline, LLC	1600 feet from (E)/ W (circle one) Line of Section
Operator Contact Person: Jennifer R. Ammann	Footages Calculated from Nearest Outside Section Corner:
Phone: (620) 431-9500	(circle one) NE (SE) NW SW
Contractor: Name: TXD	Lease Name: Taylor, Wayne L. Well #: 22-4
License: 33837	Field Name: Cherokee Basin CBM
Wellsite Geologist: Ken Recoy	Producing Formation: Bartlesville Producing Formation: Bartlesvi
Designate Type of Completion:	Elevation: Ground: 1010// Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1160 Plug Back Total Depth: 1154.12
Oil SWD SIOW Temp. Abd.	Amount of Surface Pipe Set and Cemented at 22 Feet
✓ Gas ENHR SIGW	Multiple Stage Cementing Collar Used? ☐ Yes ✓ No
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 1154.12
Operator:	feet depth to surface w/ 101 sx cmt.
Well Name:	- W
Original Comp. Date: Original Total Depth:	Drilling Fluid Management Plan AHTI W 3-509 (Data must be collected from the Reserve Pit)
Deepening Re-perf Conv. to Enhr./SWD	Chloride content ppm Fluid volume bbls
Plug BackPlug Back Total Depth	Dewatering method used
Commingled Docket No	Location of fluid disposal if hauled offsite:
Dual Completion Docket No	Location of finite disposal if finance offsite.
Other (SWD or Enhr.?) Docket No	Operator Name:
4/14/07 4/27/07 4/27/07	Lease Name: License No.:
Spud Date or Date Reached TD Completion Date or	Quarter Sec Twp S. R
Recompletion Date Recompletion Date	County: Docket No.:
INSTRUCTIONS: An original and two copies of this form shall be filed with Kansas 67202, within 120 days of the spud date, recompletion, workover Information of side two of this form will be held confidential for a period of 12 107 for confidentiality in excess of 12 months). One copy of all wireline logs a TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells.	or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. It months if requested in writing and submitted with the form (see rule 82-3-11) and geologist well report shall be attached with this form. ALL CEMENTING
All requirements of the statutes, rules and regulations promulgated to regulat	e the oil and gas industry have been fully complied with and the statements
herein are complete and correct to the best of my knowledge.	·
Signature: Chronibu R. Ammann	KCC Office Use ONLY
Title: New Well Development Coordinator Date: 8/15/07	Letter of Confidentiality Received
15th 0 L	If Denied, Yes
, OC /	Wireline Log Received
20 07.	Geologist Report Received RECEIVED
Notary Public: Serra Klauman	UIC Distribution KANSAS CORPORATION COMMISSION
Date Commission Expires: 8-4-2010 A. TER	RA KLAUMAN AUG 1 7 2007
	700 17 2007

Notary Public - State of Kansas
My Appt. Expires 8-4-2610

CONSERVATION DIVISION WICHITA, KS

Operator Name: Que	est Cherokee, LL	C	Lease Name	Taylor, Wayne	<u>L.</u>	Well #: _22-4	
Sec Twp2			County: Neos	sho			
ested, time tool oper emperature, fluid rec	n and closed, flowing covery, and flow rate	and base of formations p g and shut-in pressures s if gas to surface test, rinal geological well site	, whether shut-in p along with final ch	ressure reached	static level, hydro	ostatic pressure	s, bottom hole
Orill Stem Tests Take		☐ Yes 🗸 No		Log Format	on (Top) Depth	and Datum	Sample
samples Sent to Geo	ological Survey	☐ Yes 🗸 No		_{me} e attached		Тор	Datum
ores Taken lectric Log Run (Submit Copy)		Yes No					
ist All E. Logs Run: Compensated I Dual Induction Gamma Ray N	Density Neutron Log eutron Log	QNFIDENT					
			G RECORD	New Used ntermediate, produc	ction, etc.		
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4	8-5/8"	22	22	"A"	5	
Production;	6-3/4	4-1/2	10.5	1154.12	"A"	101	
Land of the second seco	u e rega		عا الم يدرا		***		
****		ADDITIONA	L CEMENTING / S	QUEEZE RECOR	D		
Purpose: Perforate Protect Casing Plug Back TD Plug Off Zone	Depth Top Bottom	Type of Cement	#Sacks Used		Type and	Percent Additives	
Shots Per Foot		ION RECORD - Bridge Pl Footage of Each Interval P			acture, Shot, Cemer		d Depth
 1	880-881			250gal 7.5%l	HCLw/ 25 bbls 2	%kcl water	880-881
TUBING RECORD	Size	Set At	Packer At	Liner Run	∏Yes ✓ N	0	
· · · · · · · · · · · · · · · · · · ·	3/8" rd Production, SWD or I	927 Enhr. Producing M	n/a ethod Flow	ring Pump	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		t (Éxplain)
Estimated Production Per 24 Hours	SS- n/a X	Bbls. Gas 109.8mcf	Mcf W	ater		Gas-Oil Ratio	Gravity
Disposition of Gas Vented ' Sold ' (If vented, So	Used on Lease	COMPLETION Open Hold Other (Spi		Production Inte	Commingled		
	· .	i AM	TERNA Ku AU Na y Pus ku - State o Pypo da		, , .		

QUEST

Resource Corporation

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

CONFIDENTIAL

TICKET NUMBER 2149

FIELD TICKET REF #

FOREMAN Jue

421040

TREATMENT REPORT & FIELD TICKET CEMENT

4-27-07		WE	WELL NAME & NUMBER SECTION TOWNSHIP RANGE					COUNTY
7 21-4/	1. Taylor	way	Ne 22-1	1	22_	28 .	18	NO
FOREMAN / OPERATOR	TIME .	TIME	LESS LUNCH	TRUCK #	TRAILER #	TRUCK HOURS		EMPLOYEE SIGNATURE
Jae. B	6:45	10:00)	903427		3.25	3.25	
MAYEVICK. i	7:00	11 5						h-12
Tyler-6	7:00			903203		3	-7	
Gory. C	7:00		903142 932452 3					1 Corkan
B:11 - B	6:30		93/6/5 3.5				hi	tlliam O. Back
PauliH	16:45	V	1		1	13.25	1	and His
JOB TYPE Long	String HOLES	SIZE 6	3 <i>/4</i> н	OLE DEPTH//	60 CAS	ING SIZE & WEIG	энт <u>Ч</u>	1/2 10.5
	154.12 DRILL							
	14.5 SLURA						SING_	0
DISPLACEMENT	18.46 DISPLA	CEMENT	PSI M	IIX PSI	RAT	E Hbom		
DEMARKS.			•			Ą		_
INSTAIL	d Coment ! to Surface.	head	RAN 25	15 gol 9	12 6610	ye of 101	<u>′ 5</u>	its of como
To cot due	to Surface.	flush	- numo	Pump wipen	oliate E	ottom 45	jet	that sha
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	1154.		F+, 47/2	COSING		<u> </u>		
	1/-//54.	6	Contral	ictpc.				
	/ //53.		Cont val	tshap				TOTAL
ACCOUNT CODE	QUANTITY or U	6	Contral	ictpc.	RVICES OR PRODU	ICT		TOTAL AMOUNT
ACCOUNT CODE	i i	JNITS	Contral	tshap	RVICES OR PRODU	JCT		
	QUANTITY or 0 3,25	JNITS	4/2 F100	Shap DESCRIPTION OF SE	RVICES OR PRODU	JCT		
903427	QUANTITY or 0 3 , 25 3 3	JNITS Lr Lr	Foreman Pickup Cement Pump Truck Bulk Truck	Shap DESCRIPTION OF SE	RVICES OR PRODU	JCT		
903427	QUANTITY or 0 3,25	JUNITS LY LY LY SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement	Shap DESCRIPTION OF SE		JCT		
903427 903197 903/03 1104	QUANTITY or 0 3 , 25 3 3	JNITS Lr Lr	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend-Ge	CFPC Shap DESCRIPTION OF SE	31/2 +3	ICT		
903427 903197 903/03 1104 1124	QUANTITY or U 3, 25 3 3 95	JNITS hr hr SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Ge OWC - Blend Cement	CFPC Shap DESCRIPTION OF SE		ICT		
903427 903197 903/03 1104 1124 1126 1110	QUANTITY or 0 3 , 25 3 3	JUNITS LY LY SK 2 1 SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Cement Gilsonite	CFPC Shap DESCRIPTION OF SE	31/2 +3	ICT		
903427 903197 903/03 1104 1124 1126 1110	QUANTITY or U 3, 25 3 3 95	Juits Lr Lr Lr Lr Lr SK SK SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend-Ge OWC - Blend Cement Gilsonite Flo-Seal	CFPC Shap DESCRIPTION OF SE	31/2 +3	JCT		
903427 903197 903/03 1104 1124 1126 1110 1107 1118	QUANTITY or U 3, 25 3 3 95	JUNITS LY LY SK 2 1 SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Cement Gilsonite Flo-Seal Premium Gel	CFPC Shap DESCRIPTION OF SE	31/2 +3	ICT		
903427 903197 903103 1104 1124 1126 1110 1107 1118 1215A	QUANTITY or U 3, 25 3 3 95	JUNITS LY LY SK SK SK SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Cement Gilsonite Flo-Seal Premium Gel KCL	DESCRIPTION OF SE	31/2 +3	JCT		AMOUNT
903427 903197 903/03 1104 1124 1126 1110 1107 1118 1215A 1111B	QUANTITY or U 3, 25 3 3 95	Juits Lr Lr Lr Lr Lr SK SK SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Go OWC - Blend Cement Gilsonite Flo-Seal Premium Gel KCL Sedium Silicate	CFPC Shap DESCRIPTION OF SE	31/2 +3		REC	AMOUNT
903427 903197 903/03 1104 1124 1126 1110 1107 1118 1215A 1111B 1123	QUANTITY or 0 3, 25 3 3 75 10 10 7000	JNITS hr hr SK 3K SK SK SK	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Cement Gilsonite Flo-Seal Premium Gel KCL Sodium Silicate	DESCRIPTION OF SE	31/2 +3		REC	AMOUNT
903427 903197 903103 1104 1124 1126 1110 1107 1118 1215A 1111B 1123 903142	QUANTITY or 0 3 , 25 3 95 /0 /0 /0 /0 /0 /0 /0 /0 /0 /	JNITS LY LY LY SK SK SK SK SK SK SK SK SK S	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Cement Gilsonite Flo-Seal Premium Gel KCL Sodium Silicate C City Water Transport Truck	DESCRIPTION OF SE	31/2 +3	KANSAS	CURPOR	AMOUNT CEIVED RATION COMMISSION
903427 903197 903/03 1104 1124 1126 1110 1107 1118 1215A 1111B 1123	QUANTITY or 0 3, 25 3 3 75 10 10 7000	JINITS hr hr SK 2 SK SK SK SK N	Foreman Pickup Cement Pump Truck Bulk Truck Portland Cement 50/50 POZ Blend Cement Gilsonite Flo-Seal Premium Gel KCL Sodium Silicate	DESCRIPTION OF SE	31/2 +3	KANSAS	AUG 1	AMOUNT



TXD SERVICES LP

t B

DRILLERS LOG



TXD SERVICES LP

RIG#	101	* 4	S. 22	T. 28	R. 1	8			
API#	133-26896		County:	Neosho	>		436'	0	
Harry Commence of the State of	Elev:	1010'	Location	Kansas	3		498'	0	
							529'	slight blow	
Operator:	Quest Cher	rokee, LLC				,	653'	15 - 1/2"	24.5
Address:	9520 N. Ma	y Ave, Suite	300				901'	1,612,000 mcf	
	Oklahoma	City, OK. 73	120				1087'	2million+	
Well #	22-4		Lease Name	Taylor,	Wayne L	•			
Footage Locat	ion	1510	ft from the	S	Line				
			ft from the	E	Line			-	
Drilling Contract	ctor:	TXD	SERVICES	LP				PONEIDENTIA	1
Spud Date;	4/19/2007		Geologist:					OUNTIDENTA	
Date Comp:	4/27/2007		Total Depth:	1170					
Exact spot Loc		SW SE				, .			
	and the second		San						
	Surface	Production							
Size Hole	12-1/4"	6-3/4"							
Size Casing	8-5/8"	4-1/2"							
Weight	24#								
Setting Depth	21'								
Type Cement	portland								
Sacks								NIC ACTIVITY TO A STATE OF THE	

The same of the same of the same of		I Dame			N. T. Carlo			
Formation	Тор	Btm.	Formation	Тор	Btm.	Formation	Тор	Btm.
top soil] 0	3	lime	295	337	shale	568	590
shale	3	42	shale	337	343	sand	590	598
lime	42	60	b.shale	343	346	shale	598	610
shale	60	100	shale	346	367	lime	610	627
lime	100	111	lime	367	369	shale	627	
shale	111	123	shale	369	400	b.shale	629	
lime	123	182	b.shale	400	402	shale	633	
shale	182	187	shale	402	405	lime	636	
lime	187	190	lime	405	425	shale	644	768
shale	190		shale	425	436	sand	768	790
sand	192	216	lime	436	445	sand/shale	790	799
coal	216	217	shale	445	452	coal	799	800
shale	217	227	sand	452	460	shale	800	816
coal	227	228	shale	460	475	oil sand	816	827
shale	228		coal	475	476	shale	827	
lime	230		shale	476		sand	861	
shale	250		lime	519	525	shale	869	
lime	257	269	shale	525	526	oil sand	878	885
shale	269	273	coal	526	527	shale	885	890
b.shale	273		shale	527	529	sand	890	
shale	276		lime	529	565	shale	894	
lime	283		shale	565	567	coal	910	
sand	288	295	b.shale	567	568	shale	911	972

RECEIVED
KANSAS CORPORATION COMMISSION

AUG 1 7 2007

290' added water

ormation	Top 😘	Btm.	Formation **	Top 5	Btm.	Formation	Тор	Btm.
sand/shale	972	- 7. 3 986			, š			
shale	986	992	,rı '- ",'					<u> </u>
coal	992	993			·			
shale	993							
coal	1012		L					<u> </u>
sand/shale	1014		<u> </u>					
coal	1046							
shale	1047	1						1
coal	1089							
lime/mississ	1071	1170						
						COM	FIDENT	
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								1

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AUG 1 7 2007

CONSERVATION DIVISION WICHITA, KS

9520 N. May, Suite 300 Oklahoma City, OK 73120 405-488-1304 405-840-1156 fax



8-15.2009

211 West 14th Street Chanute, KS 66720 620-431-9500 620-431-9501 fax

August 15th, 2007

CONFIDENTIAL

Kansas Corporation Commission 130 S. Market – Room 2078 Wichita, KS 67202

To Whom It May Concern:

RE: Ta

Taylor, Wayne L. 22-4 API # 15-133-26896-0000 Sec22-T28S-R18E

At this time we would like to request confidentiality for a period of two years on the above named well location in accordance with Regulation #82-3-107 (e).

I have attached a copy of the ACO-1 for your reference.

Thank you for your time and consideration in this matter.

Sincerely,

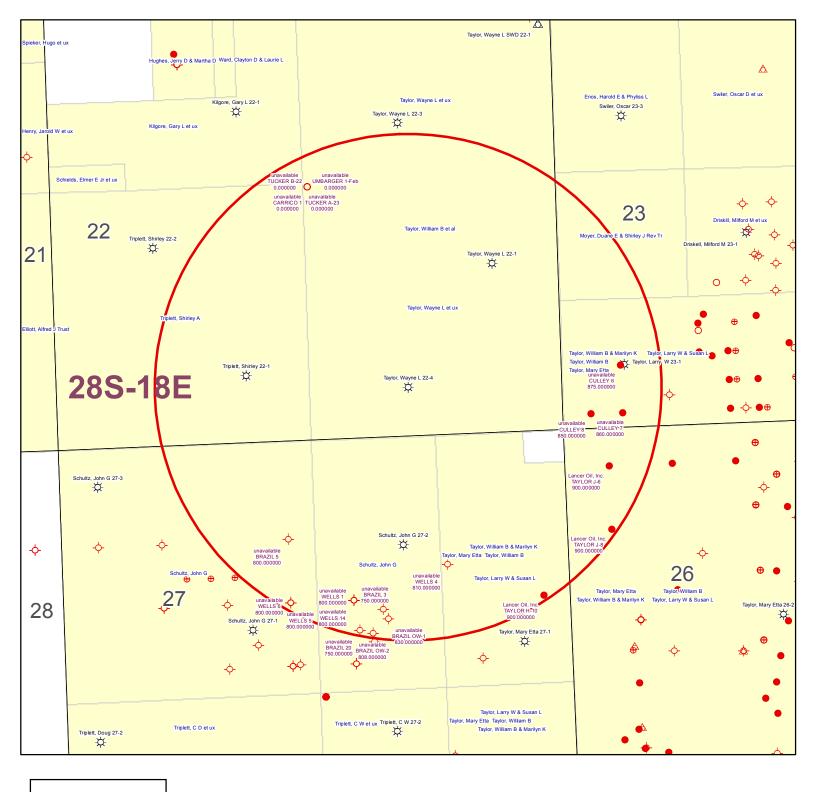
Jennifer R. Ammann

New Well Development Coordinator

Enclosure

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AUG 1 7 2007



KGS STATUS

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

Taylor, Wayne L 22-4 22-28S-18E 1" = 1,000'

POSTROCK



Current Completion

SPUD DATE: 4/14/2007

COMP. Date: 4/27/2007 API: 15-133-26896-00-00

WELL: Taylor, Wayne L 22-4

FIELD : Cherokee Basin

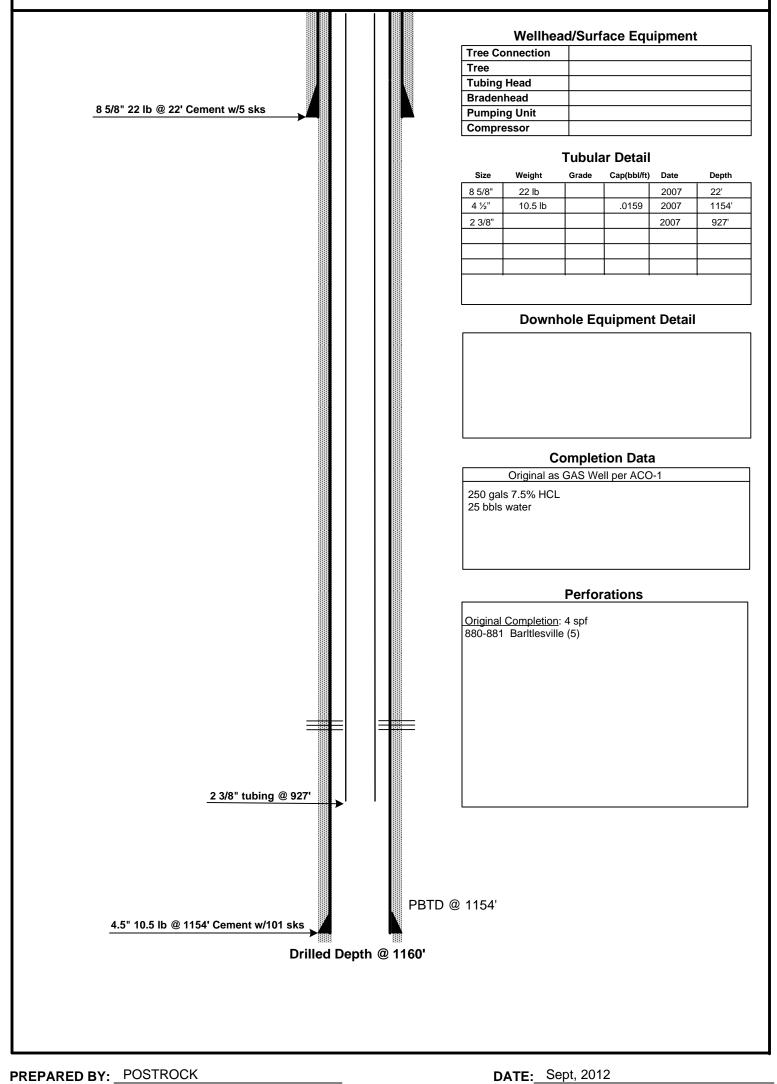
STATE : Kansas

APPROVED BY: __

COUNTY: Neosho

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

ELEVATION: 1010'



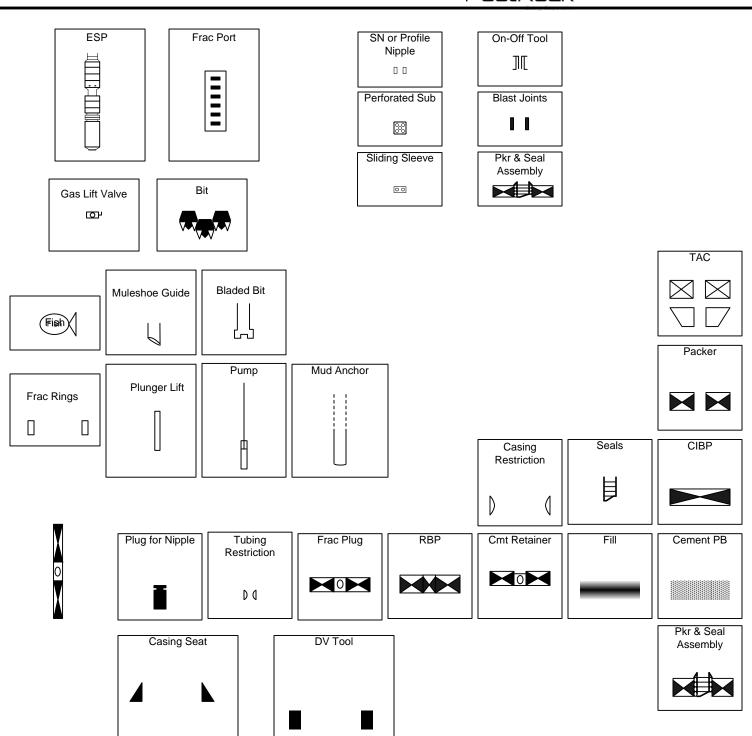
DATE:_

POSTROCK



LEGEND

PostRock[®]



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 22-4 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 Bartlesville and Cattleman producing formations at the Taylor, Wayne L 22-4, located in the NE SE SW SE, S22-T28S-R18E, Approximately 507 FSL & 1600 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.

chat the attached notice is a true copy thereof and was published in the regular and entire issue of said newspaper for consentive, the first publication hereof being made as aforesaid on the day of 2012, with subsequent publications being made on the following dates:
, 2012, 2012
, 2012, 2012
Phonda Howerton
Subscribed and sworn to and before me this
My commission expires: January 9, 2015 Printer's Fee
Additional Copies\$ Total Publication Fees\$ 7130



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.

Fletchall

Subscribed and sworn to before me this

11th day of October, 2012

PENNY L. CASE 回面 Notary Public - State of Kansas My Appt. Expires 2

Notary Public Sedgwick County, Kansas

Printer's Fee: \$130.00

LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE

PUBLISHED IN THE WICHITA EAGLE OCTOBER 11, 2012 (201682)
BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS NOTICE OF FILING APPLICATION RE: In the Maller of Postrock Midcontinent Production, LLC Application for Commingling of Production in the Taylor, Wayne L 22-4 located in Neosho County, Kansas.
TO: All Oll & Gas Producers, Unleased Mineral Interest Owners, Landowners, and all logresons

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 Bartlesville and Cattleman producting formations at the Taylor. Wayne L. 22-4, located in the NE SE SW SE, S22-T285-R18E, Approximately 507 FSL & 1600 FEL, Neosho County, Kansas.

Approximately SW FSL & Leve FEL, Neusna County, Kansas.

Any persons who object to or profest this application shall be required to file their objections or profest with the Conservation Division of the State Corporation Commission of the State of Kansas within fillier (15) days from the date of this publication. These profests 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 profest this application are required to file a written profest with the Conservation Division of the Kansas Oli and Gas Commission.

Conservation Expression of the School of the 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 coursel or as individuals, appearing on their

counsel or as Individuals, appearing on their own behalf.

Postrock Midcontinent Production, LLC.

210 Park Avenue, Suife 2750

Oklahoma City, Oklahoma 73192

(405) 560, 760 (405) 660-7704

Affida	vit of Notice Served				
Re:	Re: Application for: APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS ACO-4				
	Well Name: TAYLOR, WAYNE L 22-4	Legal Location: NESESWSE S22-T28S-R1	8E		
The unc		agent for the applicant, and that on the day 25 of OCTOBER			
2012, a true and correct copy of the application referenced above was delivered or mailed to the following parties:					
Note: A	copy of this affidavit must be served as a part of the application	on.			
	Name	Address (Attach additional sheets if necessary)			
LAN	CER OIL, INC	PO BOX 34, PIQUA, KS 66761			
JER	RY L & RONDA JO HAINES	6975 150TH RD, CHANUTE, KS	66720		
			·		
	attest that notice of the filing of this application was published	in the THE CHANUTE TRIBUNE , the c	official county publication		
of NE	OSHO	county. A copy of the affidavit of this publication is attached.			
Signed th	ais 25 ⁴² day of OCTOBER	2012			
J	·	MASS			
		Applicant or Duly Authorized Agent			
1	Subscribed and swo	orn to before me this25生_ day of _OCTOBER	, 2012		
	JENNIFER R. BEAL	Quille D. Beals			
1	SEAL MY COMMISSION EXPIRES	Notary Public () My Commission Expires: Aula 20, 20/6	·		
•		My Commission Expires: July 20, 2016			
		/ 0			
	•				

TAYLOR, WAYNE L 22-4-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

Offset Operators, Unleased Mineral Owners and Landowners acrea	ge
(Attach additional sheets if necessary)	
Name:	Legal Description of Leasehold:
SEE ATTACHED	
I hereby certify that the statements made herein are true and correct to the be	ast of my knowledge and helief
The oby contry that the statemente made northing are true and correct to the be	or or my morning out a bollon
	and ch
-	OCCO
	pplicant or Duly Authorized Agent
Subscribed and sworn I	before me thisday of OCTOBER
filternations (Invation and Invation and Invation and Invation and Invation and	
IEMMIECO D. DEM	Character & Beach
JENNIFER R. BEAL OFFICIAL MY COMMISSION EXPIRES	olary Pyblic & Beal
SEAL WAS THE STATES	olary Public Seal 2016
	olary Public Beal y Commission Expires: April 20, 2016
	otary Public y Commission Expires: Aprily 020, 2016
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	otary Public y Commission Expires: April 20, 2016
	otary Public y Commission Expires: April 20, 20/6
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	y Commission Expires: April 30, 2016
7-26-2010 M	
7-26-2010 M	olary Public y Commission Expires: 20, 20/6
7-26-2010 M	
7-26-2010 M	
7-26-2016 M	
7-20-2010 M	

TAYLOR, WAYNE L 22-4

27-28S-18E

Tract in NENE

Jerry L. & Ronda Jo Haines

6975 150th Rd Chanute, KS 66720

TAYLOR, WAYNE L 22-4

LEGAL LOCATION	SPOT	CURR_OPERA
S27-T28S-R18E	NE SE NE	Lancer Oil, Inc.
S26-T28S-R18E	NW NW NW	Lancer Oil, Inc.
S26-T28S-R18E	SW NW NW	Lancer Oil, Inc.

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 CO101223

Taylor, Wayne L. 22-4, Sec. 22-T28S-R18E, Neosho County

API No. 15-133-26896-00-00

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

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

Commingling ID number CO101223 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