

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1093896

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
Address	2:		Feet from	North / South Line of Section
City:	State: Zip:+		Feet from	East / West Line of Section
Contact I	Person:	County:		
Phone:	()	Lease Name:		Well #:
1.	Name and upper and lower limit of each production interval to	be commingled:		
	Formation:	(Perfs):		
2.	Estimated amount of fluid production to be commingled from e			21122
	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		•	leases within a 1/2 mile radius of
4.	Signed certificate showing service of the application and affida	avit of publication as required	d in K.A.R. 82-3-135a	ì.
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.		
	nmingling of FLUIDS ONLY, include the following:			
	Well construction diagram of subject well.			
8.	Any available water chemistry data demonstrating the compat	ibility of the fluids to be comr	ningled.	
current ir mingling	/IT: I am the affiant and hereby certify that to the best of my nformation, knowledge and personal belief, this request for comis true and proper and I have no information or knowledge, which istent with the information supplied in this application.	Sı	ubmitted Elect	ronically
	G Office Use Only			terest in the application. Protests must be ust be filed wihin 15 days of publication of
		in writing and comply with K		

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	0.00		Click
9	Field		CBM	CBM	Bartles	Bartles	Bartles	calculations.			
10	Na ⁺	(mg/l)*	19,433.00	27,381.00	26,534.00	25689.00	24220.00	24654.20	Initial(BH)	Final(WH)	SI/SR
11	K ⁺ (if not known =0)	(mg/l)						0.00	Saturation Index	values	(Final-Initial)
	Mg ²⁺	(mg/l)	1,096.00	872.00	1,200.00	953.00	858.00	995.91		lcite	
	Ca ²⁺	(mg/l)	1,836.00	2,452.00	2,044.00	1920.00	1948.00	2040.23	-0.73	-0.60	0.13
	Sr ²⁺		1,050.00	2,432.00	2,044.00	1720.00	1740.00				0.13
	Ba ²⁺	(mg/l)						0.00	Ба	rite	
.,		(mg/l)						0.00			
	Fe ²⁺	(mg/l)	40.00	21.00	18.00	82.00	90.00	50.21		lite	
	Zn ²⁺	(mg/l)						0.00	-1.77	-1.80	-0.03
18	Pb ²⁺	(mg/l)						0.00	Gyp	sum	
19	Cl	(mg/l)	36,299.00	48,965.00	47,874.00	45632.00	43147.00	44388.44	-3.19	-3.18	0.00
20	SO ₄ ²⁻	(mg/l)	1.00	1.00	8.00	1.00	1.00	2.40	Hemil	ıydrate	
21	F.	(mg/l)						0.00	-3.96	-3.90	0.06
	Br'	(mg/l)						0.00		ydrite	
	SiO2	(mg/l) SiO2						0.00	-3.47	-3.36	0.12
_	HCO3 Alkalinity**	(mg/l as HCO3)	190.00	234.00	259.00	268.00	254.00	241.03		estite	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./6	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}}\$ 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 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

ORIGINAL

Form ACO-1 September 1999 Form Must Be Typed

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

API No. 15 - 205-27014 -06-06

Operator: License # 33344

Name: Quest Cherokee, LLC	County: Wilson
Address: 211 W. 14th Street	e/2 _ ne _ se _ Sec. 3 _ Twp28 _ S. R15 _ \(\vec{7} \) East _ West
City/State/Zip: Chanute, KS 66720	1980 feet from N (circle one) Line of Section
Purchaser: Bluestem Pipeline, LLC	350 feet from (E) W (circle one) Line of Section
Operator Contact Person: Jennifer R. Ammann	Footages Calculated from Nearest Outside Section Corner:
Phone: (_620) 431-9500	(circle one) NE (SE) NW SW
Contractor: Name: TXD Services LP	Lease Name: Orendorff, Harry L. Well #: 3-1
License: 33837	Field Name: Cherokee Basin CBM
Wellsite Geologist: Ken Recoy	Producing Formation: Multiple
Designate Type of Completion:	Elevation: Ground: 860 Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1264 Plug Back Total Depth: 1256.38
OilSWDSIOWTemp. Abd.	Amount of Surface Pipe Set and Cemented at 21'6" 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 1256.38
Operator:	feet depth to_surfacew/_ 173sx cmt.
Well Name:	sx cm.
Original Comp. Date: Original Total Depth:	Drilling Fluid Management Plan ALT#2 KJR 6/15
•	(Data must be collected from the Reserve Pit)
Deepening Re-perf Conv. to Enhr./SWD	Chloride contentppm Fluid volumebbls
Plug BackPlug Back Total Depth	Dewatering method used
Commingled Docket No	Location of fluid disposal if hauled offsite:
Dual Completion Docket No	Operator Name:
Other (SWD or Enhr.?) Docket No	Logon Name:
11/28/06 11/29/06 12/04/06	Lease Name: License No.: Quarter Sec. Twp. S. R. 2 6 2007 East West
Spud Date or Date Reached TD Completion Date or Recompletion Date	County Sec. IWP. S. N. T. Control West
	County: DowCC: WICHITA
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 1	the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, er or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. I2 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. Submit CP-111 form with all temporarily abandoned wells.
All requirements of the statutes, rules and regulations promulgated to regulation are complete and correct to the best of my knowledge.	ate the oil and gas industry have been fully complied with and the statements
Signature: Dumming R Amonana	KCC Office Use ONLY
Title: New Well Development Coordinator Date: 3/23/07	Letter of Confidentiality Received
Subscribed and sworn to before me this 3° day of $ 1^{\circ}$ 1°	If Denied, Yes Date:
$20 \bigcirc \bigcirc \bigcirc$.	Wireline Log Received
	Geologist Report Received
,	TERRA KLAUMAN
Date Commission Expires: 8-4-90/0	Iotary Public - State of Kansas
· · · · · · · · · · · · · · · · · · ·	Expires R-4 - Days

Operator Name: Ques	t Cherokee, LL	el U				arry L.	Well #: <u>3-1</u>	<u>.</u>	:
Sec. 3 Twp. 28	S. R. 15	✓ East	t County:	Wilson		<u>-</u>	 	1	
NSTRUCTIONS: Show ested, time tool open a emperature, fluid recoverature, fluid recoverature.	and closed, flowing very, and flow rate:	and shut-in pressu if gas to surface te	res, whether shu est, along with fin	rt-in pres	ssure reached	l static level, hyd	rostatic pressure	s, bottom I	hole
Orill Stem Tests Taken (Attach Additional Sh	neets)	_ Yes ✓ N	lo	√ Lo	og Format	tion (Top), Depth	and Datum	' ∏ Sa	mple
Samples Sent to Geolo	gical Survey	☐ Yes 🗸 N	io I	Name See a	e attached		Тор	Da	tum
Cores Taken Lectric Log Run (Submit Copy)		☐ Yes ☑ N	11					j ; 1	
ist All E. Logs Run:			'						
Compensated I Dual Induction	-	ron Log							
			SING RECORD	Ne		-41			
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	s set-conductor, surf Weigh Lbs./-f	ht	Setting Depth	Type of Cement	# Sacks Used	Type and Add	d Percent itives
Surface	12-1/4	8-5/8"	20		21' 6"	"A"	5		
Production	6-3/4	4-1/2	10.5		1256.38	"A"	173		
	704		ONAL CEMENTIN		EEZE RECOR				
Purpose: Perforate Protect Casing	Depth Top Bottom	Type of Cement	#Sacks U	Jsed		Type and	I Percent Additives	i i	
Plug Back TD Plug Off Zone									
Shots Per Foot		ON RECORD - Bridg Footage of Each Interv		:		acture, Shot, Ceme Amount and Kind of			Depth
N. A. B. B. C. L. A. B. B. C. L. B. C.	vaiting on pipeli	n		i				,	
				,	,			r	
			.,					1	
TUBING RECORD	Size	Set At	Packer At		Liner Run	Yes N		-	
Date of First, Resumerd F	Production, SWD or E	Enhr. Producin	g Method	Flowing	ı 🗍 Pumı			er (Explain)	
Estimated Production Per 24 Hours	Oil	Bbls. Gas	Mcf	Wate	r .	Bbls.	Gas-Oil Ratio	!	Gravity
Disposition of Gas	METHOD OF (COMPLETION		:	Production Into	erval		•	
Vented Sold (If vented, Subr	Used on Lease	Open Other	(Specify)		ually Comp.	Commingled			
		MANUAL STATES	AURICHRET Weisen ber	. 19 M. P				•	





Ravin 4513

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

TICKET NUMBER 1938

RANGE

FIELD-TICKET REF #

TOWNSHIP

SECTION

FOREMAN _ 500

COUNTY

619050

TREATMENT REPORT & FIELD TICKET CEMENT

WELL NAME & NUMBER

12-04-06	Drendo	rff	Harry :	3-1	3	27 13	WH
FOREMAN / OPERATOR	TIME	TIME	LESS LUNCH	TRUCK #	TRAILER #	TRUCK HOURS	EMPLOYEE SIGNATURE
Joe B	6.45	4:00		903427		6.75	100 Bancha
Wes.T	7:00	2:30		903197		7.5	Was
Russell Ar	7:08	2:30		903230		7.5	
Brendon. M	7:00	1:30		903400	932705	6.5	7565 -
INDU AU	6:30	1:30		903286	क्ष्मार स्रोत	3 7	In my
		/ 3	1,	HOLE DEPTH 12	64 00	NG SIZE & WEIGHT	4/2 105
JOB TYPE Long 54				TUBING	•	R	
CASING DEPTH /2:				WATER gal/sk			
SLURRY WEIGHT_/				MIX PSI			
DISPLACEMENT 20	OSPLA	ACEMENT	SI	WIIX F31			
REMARKS:	Cana a 1 1 1	(Da	· 2442	and of the late	aldup of 1	73 KKS	of coment TO
JustAlled aget due to SI	CMEN+ re	20 FA	D 8 182 6	30, 9 11,61	alcoult as	1 Sat Clast	shoe *
got dire to Si	ixtace. Hu	<pre>Lybrub</pre>	· rump w	iper plus 4	O NO LOINT	7 301 71113	
					<u> </u>		
					<u> </u>		
Chr L	Jaite			no move f	TUCKS O	04 07 MU	7 7 2 8 0 8 0
	1256,			Casing_			
		4	Centrali:				
			41/2 floo	atshae			
ACCOUNT CODE	QUANTITY or	UNITS		DESCRIPTION OF S	ERVICES OR PRODU	СТ	TOTAL AMOUNT
903427	6.75	he	Foreman Pickup				
903197	7.5	he	Cement Pump Tru	ıck			
903230	7.5	hr	Bulk Truck	,			
1104	16	3.58	Portland Cement				
1124	``	2	5 0/50 POZ Blend	Cement B B		113	
1124		(OWG Blend Cen	nent 41/2 wip	er plus		
· 1110		7 SK	Gilsonite	19	1 /	RECE	:WED
1107		5 SK	Flo-Seal	·		BAAD	6 2007 CHITA
1118	7	LSK	Premium Gel			MAK 2	6 2007
1215A	19	01	KCL .	~	0	KOO 14.	
1111B		3 SK	-Sodium Stilicate (Calchlorid		NUC W	CHITA
ৰ্ন 23	700	Daga !	City Water	+			
	6.	5 hr	Transport Truck	:			
	6.5	5 hr	Transport Trailer				
902286	7	a hr	80 Vac				

TXD SERVICES LP DRILLERS LOG

4 4 4 4 5 5 B

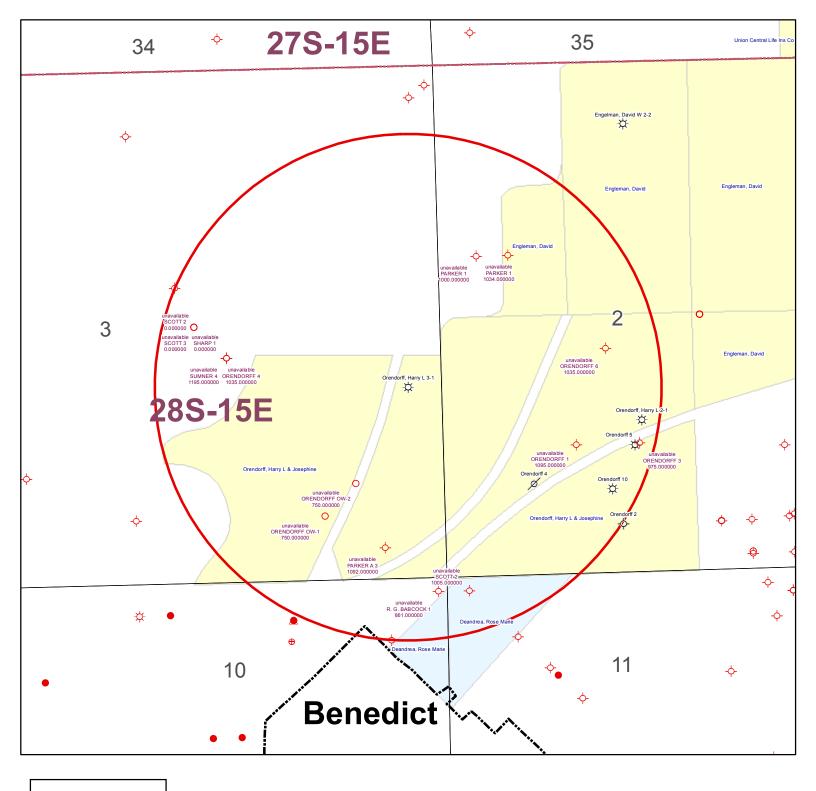
TXD SERVICES LP

RIG#	1	01		S. 3	T. 28	R. 15			
API#	205-2701	14.71		County:	Wilson		408'	10 - 1/4"	5.32
	Elev:	-5 860 '		Location	Kansas		439'	10 - 1/4"	5.32
	7	- ** t + .	332	米養	1		532'	3 - 1/2"	10.9
Operator:	Quest Cl	nerokee, L		ed T			689'	2 - 1/2"	8.87
Address:	9520 N.	May Ave,	Suite 3	300			720'	2 - 1/2"	8.87
	Oklahom	a City, Ol	<. 731:	20			752'	2 - 1/2"	8.87
Well#	3-1	<u>ه</u> . ا		Lease Name	Orendorff	, Harry L.	783'	2 - 1/2"	8.87
Footage Locat	tion	* •	1980	ft from the	S	Line	815'	2 - 1/2"	8.87
			350	ft from the	E	Line	908'	2 - 1/2"	8.87
Drilling Contra	ictor.	T	XD S	ERVICES	LP	_	940'	3 - 1/2"	10.9
Spud Date:	11/28/20	006		Geologist:			1001'	6 - 1/2"	15.4
Date Comp:	11/29/20	006		Total Depth:	1264'		1157'	6 - 1/2"	15.4
Exact spot Loc	cation;	E/2 N	E SE				1189'	7 1/2"	16.7
Activities of the Committee of the Commi							1264'	TD/GCS	
P	Surface	Produ	ction						
Size Hole	12-1/4"	6-3/4	Н						
Size Casing	8-5/8"	4-1/2					R	ECEIVED	
Weight	24#							NR 2 6 2007	
Setting Depth							101/	IN CO ZUUT	
Type Cement	portland						<u> </u>		
Sacks	1	I				-	I KC	WICHITA	

Formation	Тор	Btm.	Formation	Тор	Btm.	Formation	Тор	Btm.
top soil	0	1	lime	461	486	sand	683	703
clayshalelime	1	20	coal	486	487	l.shale	703	705
shale	20	106	lime	487	515	lime	705	708
lime	106	124	b.shale	515	520	coal	708	710
shale	124	170	coal	520	522	lime	710	737
lime	170	218	b.shale	522	524	b.shale	737	739
shale	218	245	shale	524	530	coal	739	740
sand	245		b.shale	530	532	lime	740	750
b.shale	263		shale	532	540	shale	750	75
shale	265		sand	540	550	sand	752	764
ime	283		shale	550	567	coal	764	76
shale	296		lime	567		lime	765	
lime	306		shale	571	575	b.shale	791	79:
b.shale	389	391	lime	575	585	lime	793	4
lime	391	397	shale	585	606	coal	803	
shale	397		lime	606	618	shale	805	
sand	419	1	sand	618	621	sand	808	862
coal	424		shale	621	628	b.shale	862	
lime	425		lime	628	654	shale	864	
shale	430	445	shale	654	669	sand	877	88
lime	445		coal	669		coal	880	
b.shale	459	<u> </u>	shale	670		sand	882	
coal	460	461	l.shale	675		shale	889	

	Тор	Carlo A. M. Market				A AND LONG	TOTAL EL PERMIT	pg2
cormation	Тор	Btm.	Formation	Тор	Btm.	Formation	Тор	Btm.
coal	916			•				
shale	917	928						
coal	928							
and	929							
shale	952							
shale	962	964						
sand	964	980						
shale	980	1020						
sand	1020							
shale	1095	1100		4				
sand	1100	1128						
coal	1128	1130						
sand	1130	1165						
b.shale	1165	1167						
coal	1167	1168						
shale	1168	1179						
chat	1179	1264						
,								
7 -								

RECEIVED MAR 2 6 2007 KCC WICHITA



KGS STATUS

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

Orendorff, Harry L 3-1 3-28S-15E 1" = 1,000'

POSTROCK



Current Completion

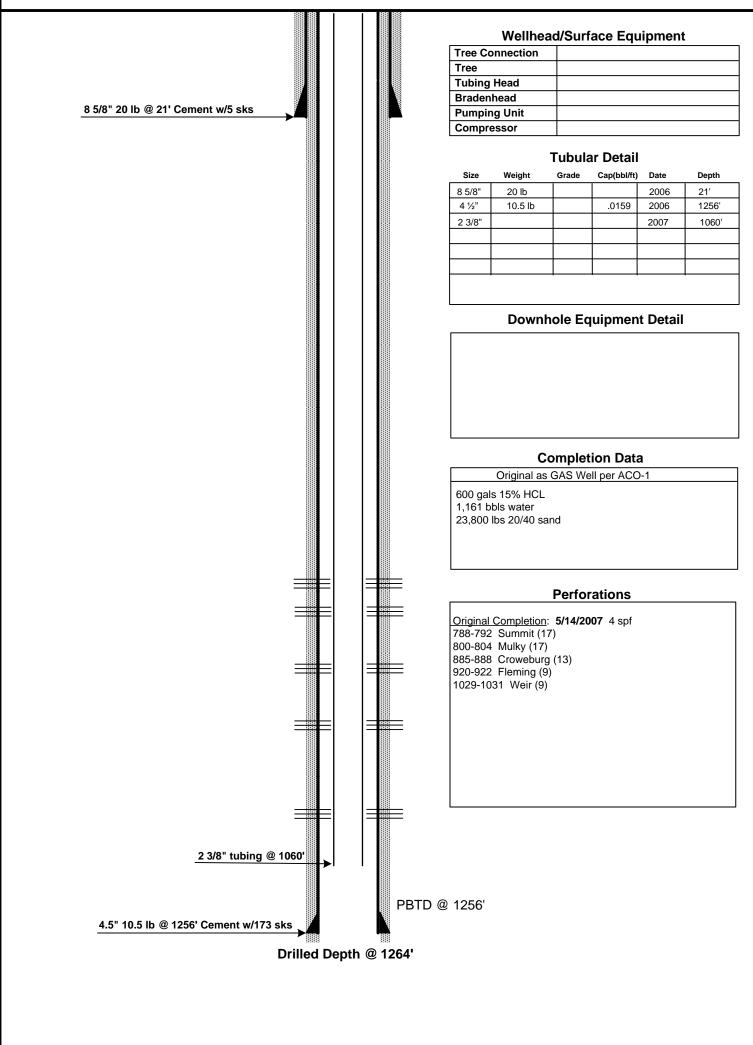
WELL : Orendorff, Harry L 3-1

FIELD : Cherokee Basin

STATE : Kansas COUNTY : Wilson SPUD DATE: 11/28/2006 COMP. Date: 12/4/2006 API: 15-205-27014-00-00

LOCATION: 3-28S-15E (NE,SE)

ELEVATION: 860'



PREPARED BY: POSTROCK

APPROVED BY: _____

DATE: Sept, 2012

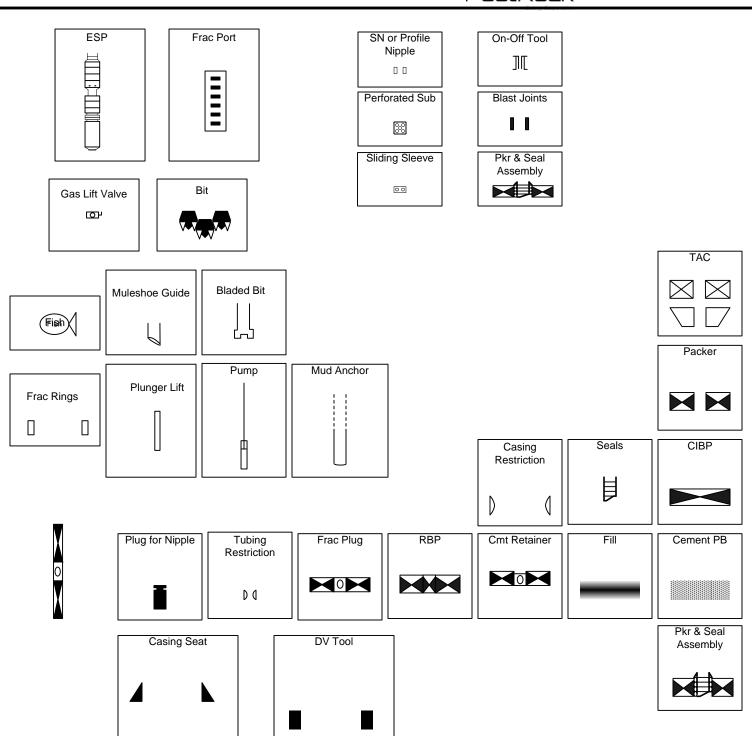
DATE:__

POSTROCK



LEGEND

PostRock[®]



ORENDORFF, HARRY L 3-1

FORMATION:	CATTLEMAN	(PERFS):	945 -	950			
FORMATION:	CATTLEMAN	(PERFS):	974	982			
FORMATION:		(PERFS):					
FORMATION:		(PERFS):		-			
FORMATION:		(PERFS):		-			
FORMATION:		(PERFS):					
FORMATION:		(PERFS):		-			
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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 2nd publication was made on the 3rd publication was made on the_____ 4th publication was made on the_____ 5th publication was made on the ______day of 6th publication was made on the____ Subscribed and sworm to before me, this

My commission expires

(Published in the Wilson County Citizen on Monday, October 15, 2012.)

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

NOTICE OF FILING APPLICATION

RE: In the Matter of Postrock Midcontinent Production, LLC Application for Commingling of Production in the Orendorff, Harry L 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, Croweburg, Fleming, Weir and Cattleman producing formations at the Orendorff, Harry L 3-1, located in the E2 NE SE, S3-T28S-R15E, Approximately 1989 FSL & 347 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 69 1 cpy.

PAID



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

made as aforesaid on the 11th of

publication of said notice was

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 Notary Public - State of Kan

My Appt. Expires

Notary Public Sedgwick County, Kansas

Printer's Fee: \$130.00

LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE
OCTOBER 11, 2012 (22)1694)
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 Commingting
of Production in the Orendorff, Harry L 3-1
located in Wilson County, Kansas,
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Own behalf.
Postrock Midconfinent Production, LLC
210 Park Avenue, Suite 2750
Oklahoma City, Oklahoma 73102 (
405) 660-7704

davit of Notice Served	
	MINGLING OF PRODUCTION OR FLUIDS ACO-4
Well Name: ORENDORFF, HARRY L 3-1	Legal Location: E2NESE S3-T28S-R15E
	orized agent for the applicant, and that on the day 26TH of NOVEMBER
12, a true and correct copy of the application	referenced above was delivered or mailed to the following parties:
: A copy of this affidavit must be served as a part of the app	olication.
Name	Address (Attach additional sheets if necessary)
EE ATTACHED	
er attest that notice of the filing of this application was public	shed in the THE WILSON COUNTY CITIZEN , the official county publicatio
WILSON	county. A copy of the affidavit of this publication is attached.
d this 26TH day of NOVEMBER	2012
d this day of	- Mours
	Applicant or Duly Authorized Agent
Subscribed and	d sworn to before me this 27th day of NOVEMBER
and the same of th	
JENNIFER R. BEAL OFFICIAL MY COMMISSION EXPIRES	Notary Public My Commission Expires: Apply 20, 2014
7-20-2016	My Commission Expires: Auly 30, 3010

ORENDORFF, HARRY L 3-1

2-28S-15E

NWNW

John & Julie Seiwert

16304 Inman Rd Fredonia, KS 66736

W2SWNW

Charles T. Jr. & Dulcie M. Parker

227S 8th

Fredonia, KS 66736

3-28S-15E

N2NE &

John & Julie Seiwert

tracts in S2NE 16304 inman Rd

Fredonia, KS 66736

tract in E2

Charles T. Jr. & Dulcie M. Parker

227S 8th

Fredonia, KS 66736

Tract in W2

Florence Payne Trust

12682 2000 Rd Buffalo, KS 66717

Tract in S2

Pierpoint Farms

700 N Main

Yates Center, KS 66783

10-28S-15E

Tracts in NE4

Charles & Peggy Miller

1140 Faulkner Dr Claremore, OK 74017

Tracts in NE4

Kelley & Phyllis Starbuck

130 Allen

Benedict, KS 66714

11-28S-15E

Tract in NW

Mary Lamb

170 Benedict Rd Benedict, KS 66714

Railroad ROW in all

sections within this report

Sunflower Rails-Trails Conservancy

P.O. Box 44-2043

Lawrence, KS 66044

ORENDORFF, HARRY L 3-1-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

Applicant of the eleterents made herein are true and correct to the best of my knowledge and balled. Applicant of the alphanger Agont Subscribed and sworn before rise that Applicant of the property of th	th additional sheets if necessary)	Large Description of Largehold
Applicant of Dily Authorized Apent Applicant of Dily Authorized Apent Subscribed and sworn before me this 2014 day of NOVEMBER 2012 **RENNYERR BEAL OFFICIAL MY COMMISSION EXPIRES My Commission Expires: April 20, 2016	Name:	Legal Description of Leasehold:
Subscribed and sworn before me this 2012 LENNIFER R. BEAL MY COMMISSION EXPIRES My Commission Expires: Applicant of Disy Authorized Agent Subscribed and sworn before me this 2011 Notary Public	- / / / / Oneb	
Subscribed and sworn before me this 2012 LENNIFER R. BEAL WY COMMISSION EXPIRES 7-20-2016 Applicant of Dity Author and Agent Subscribed and sworn before me this 2011 Notary Puly Funding R. Beal My Commission Expires: Quely 20, 20/6		
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Subscribed and sworn before me this 2012 JENNIFER R. BEAL OFFICIAL MY COMMISSION EXPIRES 7-20-2016 My Commission Expires: Quely 20, 2016		
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ORENDORFF, HARRY L 3-1

2-28S-15E

NWNW John & Julie Seiwert

16304 Inman Rd Fredonia, KS 66736

W2SWNW Charles T. Jr. & Dulcie M. Parker

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Tract in S2 Pierpoint Farms

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10-28S-15E

Tracts in NE4 Charles & Peggy Miller

1140 Faulkner Dr Claremore, OK 74017

Tracts in NE4 Kelley & Phyllis Starbuck

130 Allen

Benedict, KS 66714

11-28S-15E

Tract in NW Mary Lamb

170 Benedict Rd Benedict, KS 66714

Railroad ROW in all

Sunflower Rails-Trails Conservancy

sections within this report P.O. Box 44-2043

Lawrence, KS 66044

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

December 12, 2012

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

RE: Approved Commingling CO121204

Orendorff, Harry L. 3-1, Sec. 3-T28S-R15E, Wilson County

API No. 15-205-27014-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on December 10, 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 Wier 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 CO121204 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