

# KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1097677

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	TOR: License #	API No. 15		
Name:_		Spot Description:		
Address	1:		Sec Twp	_S. R East West
Address	2:		Feet from No	orth / South Line of Section
City:			Feet from Ea	st /  West Line of Section
Contact	Person:	County:		
Phone:	()	Lease Name:	Wel	l #:
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			
	Formation:			BWPD:
	Formation:			BWPD:
	Formation:			BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
<ul><li>□ 3.</li><li>□ 4.</li></ul>	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 op	erator.	ses within a 1/2 mile radius of
For Con	nmingling of PRODUCTION ONLY, include the following:			
□ 5.	Wireline log of subject well. Previously Filed with ACO-1:	Yes No		
6.	Complete Form ACO-1 (Well Completion form) for the subject	<del>_</del>		
	. , , , , , , , , , , , , , , , , , , ,			
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 ir mingling	VIT: 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.	S	ubmitted Electron	iically
l —	C Office Use Only  priced ☐ Approved			t in the application. Protests must be e filed wihin 15 days of publication of

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.	<b>————</b>		
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 <sup>+</sup>	(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 <sup>+</sup> (if not known =0)	(mg/l)						0.00	Saturation Index	values	(Final-Initial)
	Mg <sup>2+</sup>	(mg/l)	1,096.00	872.00	1,200.00	953.00	858.00	995.91		lcite	
	Ca <sup>2+</sup>	(mg/l)	1,836.00	2,452.00	2,044.00	1920.00	1948.00	2040.23	-0.73	-0.60	0.13
	Sr <sup>2+</sup>		1,050.00	2,432.00	2,044.00	1720.00	1740.00				0.13
	Ba <sup>2+</sup>	(mg/l)						0.00	Da	rite	
.,		(mg/l)						0.00			
	Fe <sup>2+</sup>	(mg/l)	40.00	21.00	18.00	82.00	90.00	50.21		lite	
	Zn <sup>2+</sup>	(mg/l)						0.00	-1.77	-1.80	-0.03
18	Pb <sup>2+</sup>	(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 <sub>4</sub> <sup>2-</sup>	(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 <sub>2</sub> 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 <sub>2</sub> 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/ <sup>0</sup> 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/ <sup>0</sup> 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/ <sup>0</sup> 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/ <sup>0</sup> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> S Gas Total H <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> 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 <sub>2</sub> S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\textstyle \text{Calcite}\$ acid \$\text{Lacite}\$ acid \$\text	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0	71.0 71.0 25.0 25.0 4 1 1 2	70.0 70.0 25.0 25.0 25.0 Inhibitor NTMP BHPMP	41.0 25.0 25.0 Unit Converter From Unit	49.0 25.0 25.0 25.0 (From metric Value 80	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00  Value 176 3,531 629	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H <sub>2</sub> S Gas Total H <sub>2</sub> 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 <sub>2</sub> 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 <sup>3</sup> 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 <sub>2</sub> S Gas Total H <sub>2</sub> 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 <sub>2</sub> 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 <sup>3</sup> 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 <sub>2</sub> 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

### **WELL COMPLETION FORM** WELL HISTORY - DESCRIPTION OF WELL & LEASE

Form ACO-1 September 1999 Form Must Be Typed

ORIGINAL

Operator: License # 33344	API No. 15 - 205-26982 <b>-00-60</b>
Name: Quest Cherokee, LLC	County: Wilson
Address: 211 W. 14th Street	
City/State/Zip: Chanute, KS 66720	1980 feet from S / N (circle one) Line of Section
Purchaser: Bluestem Pipeline, LLC	660 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: Olson, Ruby A. Well #: 4-1
License: 33837	Field Name: Cherokee Basin CBM
Wellsite Geologist: Ken Recoy	Producing Formation: not yet completed
Designate Type of Completion:	Elevation: Ground: 1022 Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1317 Plug Back Total Depth: 1303.14
Oil SWD SIOW Temp. Abd.	Amount of Surface Pipe Set and Cemented at 20 Feet
✓ Gas ENHR SIGW	Multiple Stage Cementing Collar Used?
Dry Other (Core, WSW, Expl., Cathodic, etc)	If yes, show depth setFeet
If Workover/Re-entry: Old Well Info as follows:	If Alternate II completion, cement circulated from 1303.14
Operator:	feet depth to surface w/ 164 sx cmt.
Well Name:	All T 14 (02 DO TO
Original Comp. Date: Original Total Depth:	Drilling Fluid Management Plan AHI NH 6-00 08  (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	
Dual Completion Docket No	Location of fluid disposal if hauled offsite:
Other (SWD or Enhr.?) Docket No	Operator Name:
40/05/05	Lease Name: License No.:
10/25/06 10/30/06 10/31/06  Spud Date or Recompletion Date  Date Reached TD Recompletion Date or Recompletion Date	Quarter Sec. Twp. S. R. East West County: Docket No.:
Kansas 67202, within 120 days of the spud date, recompletion, works information of side two of this form will be held confidential for a period of	ith the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, over or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. If 12 months if requested in writing and submitted with the form (see rule 82-3-125 and geologist well report shall be attached with this form. ALL CEMENTING IIIS. Submit CP-111 form with all temporarily abandoned wells.
All requirements of the statutes, rules and regulations promulgated to regulate are complete and correct to the best of my knowledge.	ulate the oil and gas industry have been fully complied with and the statements
Signature: Jamuele K. Ammann	KCC Office Use ONLY
Title: New Well Development Coordinator Date: 2/23/07	Letter of Confidentiality Received
Subscribed and sworn to before me this $\frac{3}{8}$ day of $\frac{4}{8}$ Larucuy	If Denied, Yes Date:
20_07	Wireline Log Received
Notary Public: Deuise V. Vlenneman	Geologist Report Received RECEIVED  UIC Distribution KANSAS CORPORATION COMMISSION
Date Commission Expires: 7-1-08 A DENISE V.	VENNEMAN FEB 2 6 2007
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

STATE OF KANSAS MY APPT. EXPIRES 7-1-08

CONSERVATION DIVISION WICHITA, KS

Operator Name: Que	est Cherokee, LL	.C	Lease N	Name:_	Olson, Ruby	Α.	Well #: <u>4-1</u>	
Sec. 4 Twp. 2		✓ East	County:					
ested, time tool oper emperature, fluid red	n and closed, flowin covery, and flow rate	and base of formations g and shut-in pressures es if gas to surface test, final geological well site	s, whether shu along with fir	ut-in pre	ssure reached	static level, hydr	ostatic pressure	s, bottom hole
Orill Stem Tests Take (Attach Additional		☐ Yes 📝 No		<b></b> ✓L	og Format	ion (Top), Depth	and Datum	Sample
Samples Sent to Geo	ological Survey	☐ Yes 🗸 No		Nam See	e attached		Тор	Datum
Cores Taken Electric Log Run (Submit Copy)		Yes No						
ist All E. Logs Run: Dual Induction Compensated	n Log	tron Log						
		CASING Report all strings set	G RECORD t-conductor, sur	Ne	_	ction, etc.		
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weigl	ht	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4	8-5/8"	20		20	"A"	5	
Production	6-3/4	4-1/2	10.5		1303.14	"A"	164	
		ADDITIONA	AL CEMENTIN	G / SQL	JEEZE RECOR	D		·
Purpose:  Perforate Protect Casing Plug Back TD Plug Off Zone	Depth Top Bottom	Type of Cement	#Sacks t	Used		Type and	Percent Additives	
Shots Per Foot		ION RECORD - Bridge PI Footage of Each Interval P				acture, Shot, Ceme mount and Kind of N		d Depth
	waiting on pipel	ine						
TUBING RECORD	Size	Set At	Packer At	;	Liner Run	Yes N	0	
Date of First, Resumer	d Production, SWD or	Enhr. Producing M	ethod	Flowin	g ··· Pump	ing Gas L	ift Othe	er (Explain)
Estimated Production Per 24 Hours	Oil	Bbls. Gas	Mcf	Wate	er l	3bls.	Gas-Oil Ratio	Gravity
Disposition of Gas	METHOD OF	COMPLETION			Production Inte	erval		
Vented Sold	Used on Lease	Open Hol			Dually Comp.	Commingled		



### TXD SERVICES LP DRILLERS LOG

## TXD SERVICES LP

RIG#	101		<b>\$.</b> 4	T. 28	R. 16E	GAS TES		emicros.
API#	205-26982		County:	Wilson		563'	slight blow	
多のなる。	Elev:	1,022'	Location	Kansas		720'	slight blow	
						815'	1 - 1/4"	8.95
Operator:	Quest Che	rokee, LLC				877'	2 - 3/4"	108
Address:	9520 N. Ma	ay Ave, Suite	∋ 300			940'	2 - 3/4"	108
	Oklahoma	City, OK. 73	120		,	970'	2-1/2" - 3/4"	121
Well #	4-1		Lease Name	e Olson, f	Ruby A.	1,063'	2 - 3/4"	108
Footage Loca	ition	1.98	ft from the	(S) Line	9	1,127	2 - 3/4"	108
		660	ft from the	(E) Line	è	1,158'	1 – 1"	137
Drilling Contri	actor:	TXD	SERVICE	SLP		1,220'	2 - 195	195
Spud Date;	10/25/06		Geologist:	-		TD	GCS	
Date Comple	ted: 10/30/0	6	Total Dep	th: 1,317'	·			
Exact spot Lo	cation; NE	SW						
	Surface	Production						
Size Hole	12-1/4"	6-3/4"						
Size Casing	8-5/8"	4-1/2"						
Weight	24#							
Setting Depth	1 20'							
Type Cemen	portland							
Sacks	5							

Formation	Тор	Btm.	Formation	Тор	Btm.	Formation	Тор	Btm.
top soil	0		coal	594	595	shale	843	844
shale	8	143	sand/shale	595	601	lime	844	847
lime	143	146	shale	601	646	shale	847	851
shale	146	150	sand	646	649	coal	851	852
lime	150	159	lime	649	664	shale	852	883
sand	159	192	shale	664	673	sand	883	900
sand/shale	192	273	lime	673	678	shale	900	928
lime	273	282	shale	678	708	coal	928	
sand/shale	282	316	coal	708	709	shale	929	946
sand	316	325	shale	709	725	sand/shale	946	960
lime	325		lime	725	741	coal	960	961
shale	331	351	shale	741	761	shale	961	978
lime	351	402	coal	761	763	sand	978	982
shale	402	404	shale	763	771	shale	982	1,004
lime	404	444	lime	771	780	sand	1,004	1,011
sand	444	450	shale	780	800	shale	1,011	
sand/shale	450	456	coal	800	801	coal	1,040	
sand	456	462	shale	801	815	shale	1,041	<del></del>
lime	462	483	coal	815	816	coal	1,053	
shale	483	486	shale	816	818	shale	1,054	
lime	486	537	lime	818		coal	1,068	
shale	537	588	shale	837		shale	1,069	
sand	588	594	b.shale	840		coal	1,073	

RECEIVED KANSAS CORPORATION COMMISSION

FEB 2 6 2007

CONSERVATION DIVISION WICHITA, KS

Company of the second			Well	Log Ols	on: 4-1 p	Formation		9.1999
Formation	Тор	Btm.	Formation	Тор	Btm.	Formation	Тор	Btm
shale	1,074							
sand	1,080							
coal	1,112							
sand/shale	1,113							
sand	1,117							
coai	1,189							
shale	1,191							
coal	1,218							
shale	1,219							
lime	1,215	1,317						
		<u> </u>						
								[
		<u> </u>						
	1	i	]		i i	Ĺ		ł

Comments: 404'-444' added water; 761'-763' mulberry; 771'-778' pink; 818'-837' oswego; 1,237' odor

RECEIVED KANSAS CORPORATION COMMISSION FEB 2 6 2007

CONSERVATION DIVISION WICHITA, KS



10.31.06



### TICKET NUMBER 1820

SECTION | TOWNSHIP

4

<u> </u>28

FOREMAN TO

RANGE

16

COUNTY

614060

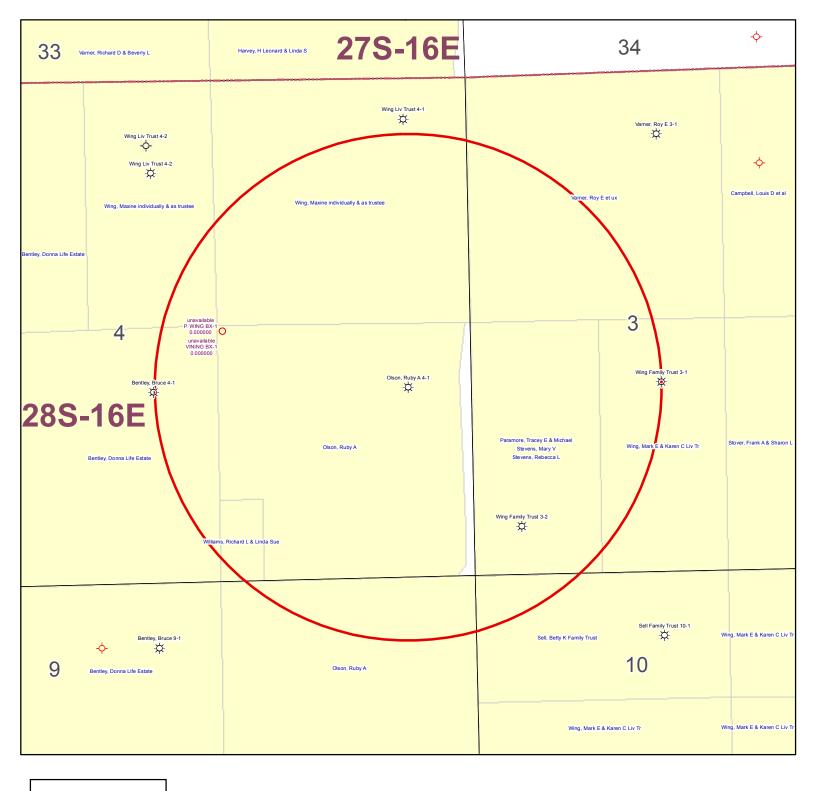
OISON

#### TREATMENT REPORT & FIELD TICKET CEMENT

WELL NAME & NUMBER

Ruby

FOREMAN / OPERATOR	TIME	TIME	LESS LUNCH	TRUCK #	TRAILER #	TRUCK HOURS	EMPLOYEE SIGNATURE
The state of the s	6:45	10:00		903427		3.25	sor Blanchai
Jac B	7.:45	1		903 255		3.25	1/ House
Tim. A	6:30			503206		3.5 🕊	2.1
Russ-11.A	b:415			9311120		3.25.	TP L
TROY. W		-	<u> </u>			7. 7	May leftel
ON Location	NOC	riveR		90313PP	932452	<u> </u>	
JOB TYPE Longst	tina HOLES	SIZE 63	14 +	OLE DEPTH 13.1	7 CASIN	IG SIZE & WEIGHT	41/2 10.5
CASING DEPTH 13							
SLURRY WEIGHT_1							
DISPLACEMENT 20							
DEMADKS.					ð		
TISTAILED CO	ment han	1 Row	2586 01	4 12 661	Que + 16"	1 SKS = 5	Shows Toge
10 12/12/12/12	free Tlu	th airm	o Timow	ree du to	1Hans et	<1 Fhet	5 km min
7 47 10 37,0	10.75.	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	,, , , , , , , , , , , , , , , , , , ,	7 7 7 10		- Cip	
					<del></del>		
I hr wa.t	ron mater	<u> </u>				<del></del>	
		- 111					1
	13.0		F+ 472 (				
		6	Centroliz				
			41/2 Floo	st shae	-		
ACCOUNT CODE	QUANTITY or U	STINU		DESCRIPTION OF SE	RVICES OR PRODUC	Т	TOTAL AMOUNT
903427	3. 25	} , F	oreman Pickup				
903 255	3.245		Cement Pump Truck	(	<u>.</u>		
903206	3.5		Bulk Truck			0.5	
1104			Portland Cement				CEIVED  DRATION COMMISSION
1124			60/50-POZ-Blend-G	ement Boffle	3"		1
1126		/ 6	WC - Blend-Geme	mt 41/2 wipe	R Plug	FEB	2 6 2007
1110	16	5 £ C	Silsonite			CONSERV	ATION DIVISION
1107	1.5	5 E F	lo-Seal			Wic	HITA, KS
1118		2 5K F	Premium Gel				
1215A	laci	ŀ	(CL			معدولين والعدا الجعاليان	
1111B		3 SK 8	Sodium Silicate	Calchiaride			The state of the s
1123	7000 ac	(	City Water				TO AMERICAN
903139	3.25	"'	ransport Truck				
932452	3.24		ransport Trailer				
9314/20	3.2	5 hr 8	30 Vac				
Bavin 4513							



### **KGS STATUS**

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

Olson, Ruby A 4-1 4-28S-16E 1" = 1,000'

### **POSTROCK**



### **Current Completion**

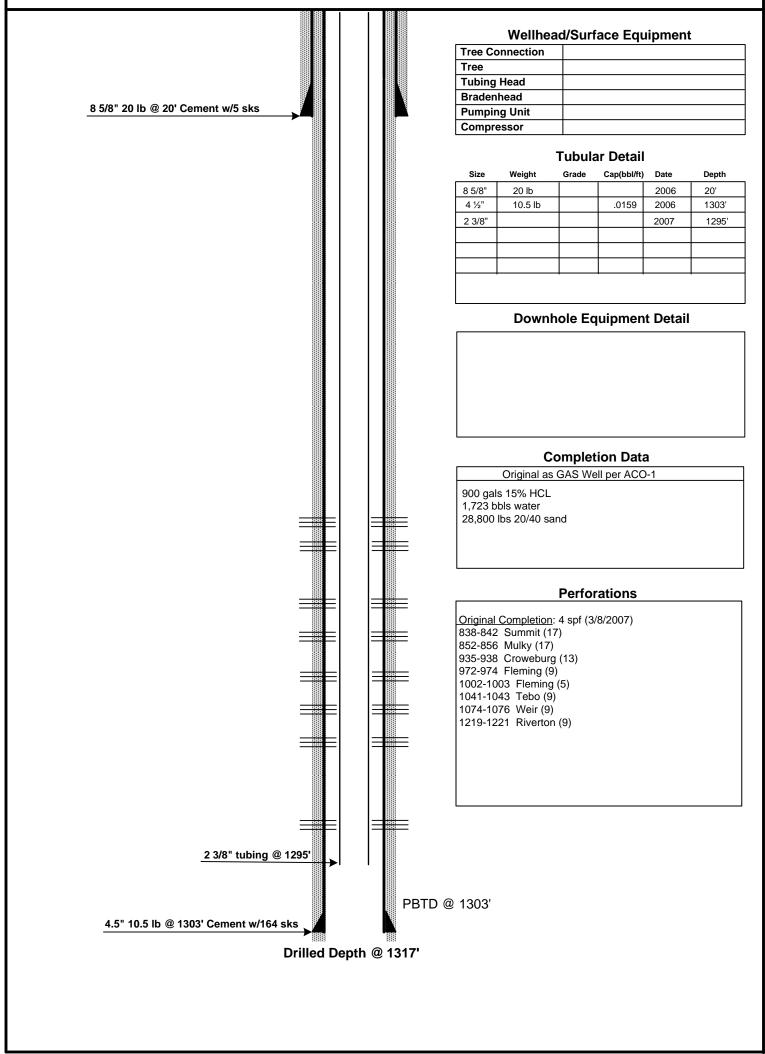
**WELL** : Olson, Ruby A 4-1 **FIELD** : Cherokee Basin

SPUD DATE: 10/25/2006 COMP. Date: 10/31/2006 API: 15-205-26982-00-00

**STATE** : Kansas COUNTY : Wilson

LOCATION: 4-28S-16E (NE,SE)

**ELEVATION: 1022'** 



PREPARED BY: POSTROCK

APPROVED BY: \_

**DATE:** Oct, 2012

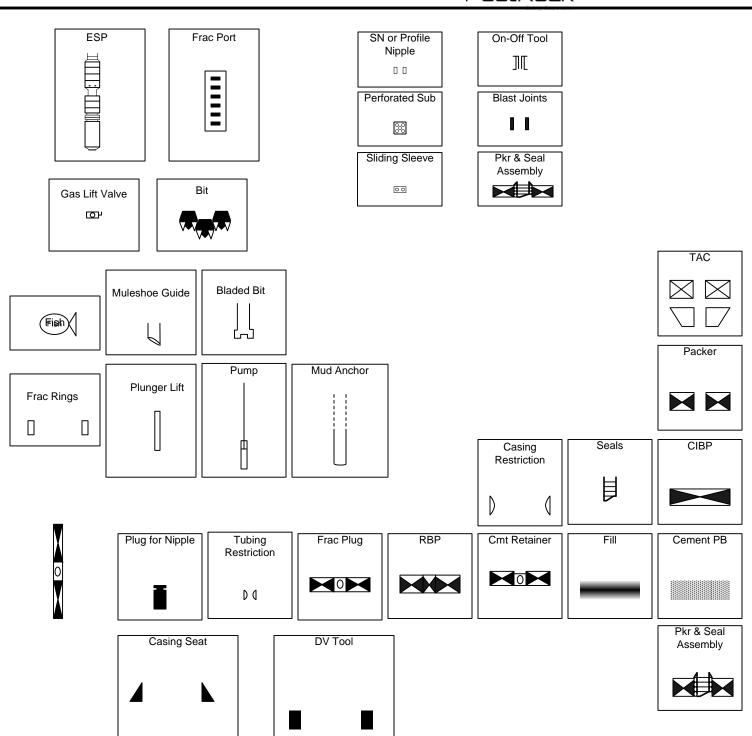
DATE:\_

# **POSTROCK**



### **LEGEND**

### PostRock<sup>®</sup>



### OLSON, RUBY A 4-1

FORMATION:	TEBO	(PERFS):	1041 -	1043			
FORMATION:	WEIR	(PERFS):	1074 -	1076			
FORMATION:	RIVERTON	(PERFS):	1219 -	1221			
FORMATION:	BARTLESVILLE	(PERFS):	1084 -	1090			
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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 27th 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

29th 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

### LEGAL PUBLICATION

Published in The Wichita Eagle October 27, 2012 (3214839)
BEFORE THE STATE CORPORATION COMMISSION

BEFORE THE STATE OF KANSAS

OF THE STATE OF KANSAS

NOTICE OF FILING APPLICATION

RE: in the Matier of Postrock Midcontinent

Production, LLC Application for

Commingling of Production in the Olson,

Ruby A 4-1 located in Wilson County,

Kansas,
TO All Oll & Gas Producers, Unleased
Mineral Interest Owners, Landowners, and
all persons whomever concerned.
You, and each of you, are hereby notified

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, Tebo, Weir, Riverton and Bartlesville producing formations at the Otson, Ruby A 4-1, located in the NW SE NE SE, S4-T28S-R16E, Approximately 1977 FSL & 657 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 Commission of the State Corporation Commission 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 politic 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 his application are required to file a wriften 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 inclviduals, appearing on their own behalf.

Postrock Midcontinent Production, LLC 210 Park Avenue, Suite 2750 Oklahoma City, Oklahoma 73102 (405) 660-7704

### OLSON, RUBY A 4-1-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

ffset Operators, Unleased Mineral Owners and Landowners a httach additional sheets if necessary) Name:	acreage	Legal Description of Leasehold:
POSTROCK MIDCONTINENT PRODUCTION, LLC		POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2
		MILE RADIUS
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	<del></del>	
		·
ereby certify that the statements made herein are true and correct to	the best of m	y knowledge and belief.
÷	P	66311
		t or Duly Authorized Agent
Subscribed and s	worn before r	me this 30 day of OCTOBER 2012
JENNIFER R. BEAL  OFFICIAL MY COMMISSION EXPIRES  7-20-2014	Notary P	Mulia Beal mission Expires: Aula 20, 2016

Affidav	it of Notice Served		
Re:	Application for: APPLICATION FOR COMMINGLIN		
	Well Name: OLSON, RUBY A 4-1	Legal Location: NWSENESE S4-T28S-R1	
The unde	ersigned hereby certificates that he / she is a duly authorized agen	it for the applicant, and that on the day $36^{t}$ of OCTOBE	<u>:R</u> ,
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.		
	Name	Address (Attach additional sheets if necessary)	
POST	ROCK MIDCONTINENT PRODUCTION, LLC	OKLAHOMA TOWER, 210 PARK AVE, STE 2750, OKLA	HOMA CITY, OK 73102
		,	
further a	test that notice of the filing of this application was published in the	THE WILSON COUNTY CITIZEN , the	official county publication
of WIL	SON	_ county. A copy of the affidavit of this publication is attached.	
Signed thi	s 30 <sup>th</sup> day of OCTOBER , 2	2012	
	, , ,	Chel st.	
	-	Applicant or Duly Authorized Agent	
<u>~</u>	Subscribed and sworn to	before me this day ofOCTOBER	, 2012
	JENNIFER R. BEAL	Quille P Bool	
	OCAL F INTOUNINIOUS EAPINED 19	Notary Public	
€E.		My Commission Expires: Auly 20, 201	<i>'</i>
		V ()	
			ŀ

### 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	day of
Oct.	
2nd publication was made on the	day of
	. 20
3rd publication was made on the	day of
	20
4th publication was made on the	day of
	20
5th publication was made on the	day of
6th publication was made on the	
	<u>20</u>
TOTAL PUBLICATION FEE: \$ 3	<i>/</i>
(Signed) Joseph S. Kelpe	
Subscribed and sworn to before me, this	Oth day of
Cetalier	, 20_/2
Bita M. Kelp	(Notary Public)
	2014

(Published in the Wilson County Citizen on Monday, October 29, 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 Olson, Ruby A 4-1 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, Tebo, Weir, Riverton and Bartlesville producing formations at the Olson, Ruby A 4-1, located in the NW SE NE SE, S4-T28S-R16E, Approximately 1977 FSL & 667 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 Chlahoma City, Oklahoma 73102 (405) 660-7704

Rita M. Relph NOTARY PUBLIC State of Kansas STATE OF KANSAS My Commission Expires 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 14, 2012

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

RE: Approved Commingling CO111204

Olson, Ruby A. 4-1, Sec. 4-T28S-R16E, Wilson County

API No. 15-205-26982-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on November 8, 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 CO111204 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