

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1089995

Form ACO-4 Form must be typed March 2009

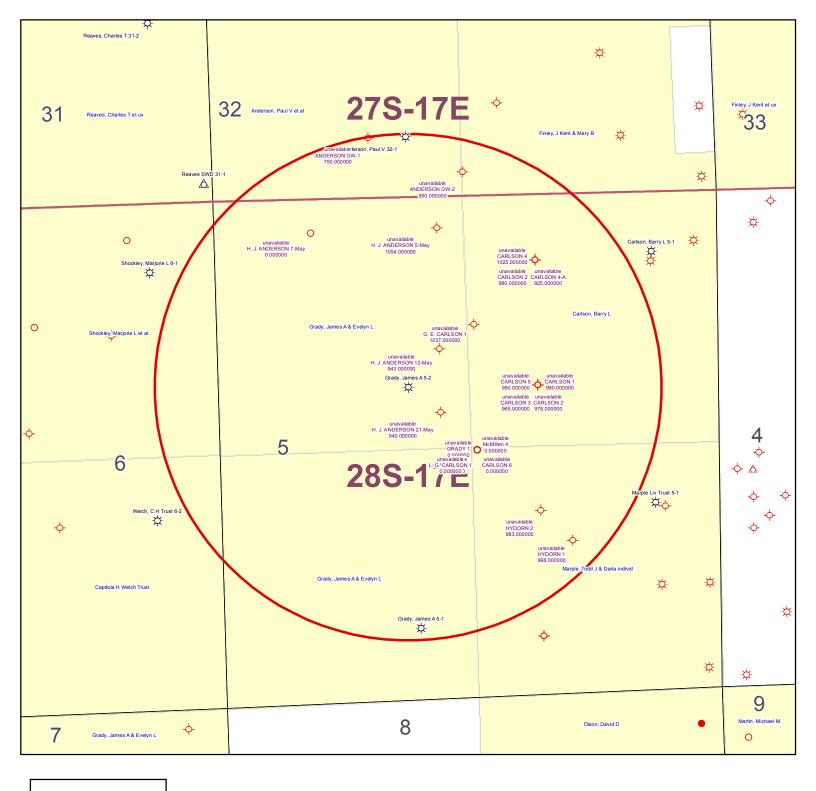
APPLICATION FOR COMMINGLING OF Commingling ID # _ PRODUCTION (K.A.R. 82-3-123) OR FLUIDS (K.A.R. 82-3-123a)

OPERAT	FOR: License #	API No. 15		
Name:_		Spot Description: _		
Address	1:		_ Sec Twp	S. R East West
Address	2:		Feet from Nor	rth / South Line of Section
City:	State: Zip:+		Feet from Eas	st / West Line of Section
Contact	Person:	County:		
Phone:	()	Lease Name:	Well	#:
1.	Name and upper and lower limit of each production interval to	be commingled:		
	Formation:	(Perfs):		
2.	Estimated amount of fluid production to be commingled from e			
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
	Formation:	BOPD:	MCFPD:	BWPD:
□ 3.□ 4.	Plat map showing the location of the subject well, all other well the subject well, and for each well the names and addresses of Signed certificate showing service of the application and affidation	of the lessee of record or ope	erator.	es 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	_		
	Complete Form ACC-1 (Well Completion form) for the subject	wen.		
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	VIT: I am the affiant and hereby certify that to the best of my nformation, knowledge and personal belief, this request for comistrue and proper and I have no information or knowledge, which sistent with the information supplied in this application.	Sı	ubmitted Electroni	ically
KCC	C Office Use Only	Protosto man ha filad b	y porty boying a vallet inter-	in the application Draft-to word
	enied Approved			in the application. Protests must be filed wihin 15 days of publication of

Date: _

15-Day Periods Ends: __

Approved By: _



KGS STATUS

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

Grady, James A 5-2 5-28S-17E 1" = 1,000'

-	Α	В	С	D	Е	F	G	Н	1		K
1	Produced Fluids #	В	1	2	3	4	5	11	•	<u> </u>	
	Parameters	Units	Input	Input	Input	Input	Input		Click he	re	Click
3	Select the brines	Select fluid		Ī		V	Ī	Mixed brine:	to run SS	-	
4	Sample ID	by checking						Cell H28 is	to ruii oc	•	Click
5	Date	the box(es),	3/19/2012	3/4/2012	3/14/2012	1/20/2012	1/20/2012	STP calc. pH.	————		
6	Operator	Row 3	PostRock	PostRock	PostRock	PostRock	PostRock	Cells H35-38			Click
7	Well Name		Ward Feed	Ward Feed	Clinesmith	Clinesmith	Clinesmith	are used in	Goal Seek	SSP	
8	Location		#34-1	#4-1	#5-4	#1	#2	mixed brines	0.00		Click
9	Field		CBM	CBM	Bartles	Bartles	Bartles	calculations.			
10	Na ⁺	(mg/l)*	19,433.00	27,381.00	26,534.00	25689.00	24220.00	24654.20	Initial(BH)	Final(WH)	SI/SR
11	K ⁺ (if not known =0)	(mg/l)						0.00	Saturation Index	values	(Final-Initial)
	Mg ²⁺	(mg/l)	1,096.00	872.00	1,200.00	953.00	858.00	995.91		lcite	
	Ca ²⁺	(mg/l)	1,836.00	2,452.00	2,044.00	1920.00	1948.00	2040.23	-0.73	-0.60	0.13
	Sr ²⁺		1,050.00	2,432.00	2,044.00	1720.00	1740.00				0.13
	Ba ²⁺	(mg/l)						0.00	Da	rite	
.,		(mg/l)						0.00			
	Fe ²⁺	(mg/l)	40.00	21.00	18.00	82.00	90.00	50.21		lite	
	Zn ²⁺	(mg/l)						0.00	-1.77	-1.80	-0.03
18	Pb ²⁺	(mg/l)						0.00	Gyp	sum	
19	Cl	(mg/l)	36,299.00	48,965.00	47,874.00	45632.00	43147.00	44388.44	-3.19	-3.18	0.00
20	SO ₄ ²⁻	(mg/l)	1.00	1.00	8.00	1.00	1.00	2.40	Hemil	ıydrate	
21	F.	(mg/l)						0.00	-3.96	-3.90	0.06
	Br'	(mg/l)						0.00		ydrite	
	SiO2	(mg/l) SiO2						0.00	-3.47	-3.36	0.12
_	HCO3 Alkalinity**	(mg/l as HCO3)	190.00	234.00	259.00	268.00	254.00	241.03		estite	
	CO3 Alkalinity	(mg/l as CO3)	170.00	434.00	237,00	200.00	234.00	241.03	Cen		
_	Carboxylic acids**	(mg/l)						0.00	Inor 6	Sulfide	
27	Ammonia	(mg/L) NH3						0.00	-0.16	-0.22	-0.06
											-0.00
	Borate	(mg/L) H3BO3						0.00	Zinc	Sulfide	
	TDS (Measured)	(mg/l)	4.040	4.0=4				72781	~		
	Calc. Density (STP) CO ₂ Gas Analysis	(g/ml)	1.038 19.97	1.051 18.76	1.050 22.41	1.048 35.53	1.045	1.047	Calcium	fluoride	
	- ,	(%)		0.0292			33.79	26.16	I C.	-l	
	H ₂ S Gas Analysis*** Total H2Saq	(%)	0.0289	1.00	0.0296	0.0306	0.0151 0.50	0.0269	-0.74	rbonate -0.51	0.23
_	_	(mgH2S/l)	1.00 5.67	5.76	1.00 5.72	1.00 5.54	5.55	5.63		eeded (mg/L)	0.23
34	pH, measured (STP)	pH 0-CO2%+Alk,	5.07	5./0	5.72	5.54	5.55	5.03	Calcite	NTMP	
	Choose one option								Calcite	NIMI	
35	to calculate SI?	2-CO2%+pH	0	0	0	0	0				
36	Gas/day(thousand cf/day)	(Mcf/D)						0	0.00	0.00	
	Oil/Day	(B/D)	0	0	1	1	1	4	Barite	BHPMP	
	Water/Day	(B/D)	100	100	100	100	100	500	0.00	0.00	
	For mixed brines, enter val			mag in Calle (H	(40 H42)						
-	Initial T			` .		44.0	40.0	(Enter H40-H43)		Н	
		(F)	66.0	71.0	70.0	41.0	49.0	60.0	5.69	5.60	1
	Final T	(F) (F)	66.0 66.0	71.0 71.0	70.0 70.0	41.0	49.0	60.0 89.0	5.69 Viscosity (5.60 CentiPoise)	
42	Final T Initial P	(F) (F) (psia)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0	5.69 Viscosity (1.196	5.60 CentiPoise) 0.826	
42 43	Final T Initial P Final P	(F) (F) (psia) (psia)	66.0 66.0	71.0 71.0	70.0 70.0	41.0	49.0	60.0 89.0	5.69 Viscosity (1.196 Heat Capaci	5.60 CentiPoise) 0.826 ty (cal/ml/ ⁰ C)	
42 43 44	Final T Initial P Final P Use TP on Calcite sheet?	(F) (F) (psia) (psia) I-Yes;0-No	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0	5.69 Viscosity (1.196 Heat Capaci 0.955	5.60 CentiPoise) 0.826 ty (cal/ml/ ⁰ C) 0.959	
42 43 44 45	Final T Initial P Final P	(F) (F) (psia) (psia)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0	5.69 Viscosity (1.196 Heat Capaci 0.955	5.60 CentiPoise) 0.826 ty (cal/ml/ ⁰ C)	
42 43 44 45 46	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav.	(F) (F) (psia) (psia) I-Yes;0-No API grav.	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor no	5.60 CentiPoise) 0.826 ty (cal/ml/ ⁰ C) 0.959 eeded (mg/L)	
42 43 44 45 46 47 48	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav.	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00	
42 43 44 45 46 47 48 49 50	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG//Day Conc. Multiplier H* (Strong acid) *	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) †	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH* (Strong base) † Quality Control Checks at	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP:	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH* (Strong base) † Quality Control Checks at H ₂ S Gas	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP:	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H ₂ S Gas Total H2Saq (STP)	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH' (Strong base) * Quality Control Checks at H ₂ S Gas Total H2Saq (STP) pH Calculated	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/l) (pH)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H ₂ S Gas Total H2Saq (STP)	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH* (Strong base) * Quality Control Checks at H ₂ S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated ECations=	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH (Strong base) * Quality Control Checks at H ₂ S Gas Total H ₂ Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated SCations= EAnions=	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/l) as HCO3 (equiv./I) (equiv./I)	66.0 66.0 25.0	71.0 71.0 25.0	70.0 70.0 25.0	41.0 25.0	49.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) * OH* (Strong base) * Quality Control Checks at H ₂ S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated ECations= ECations= Calc TDS=	(F) (F) (Psia) (psia) (1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I)	66.0 66.0 25.0 25.0	71.0 71.0 25.0 25.0	70.0 70.0 25.0 25.0	41.0 25.0 25.0	49.0 25.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH* (Strong base) † Quality Control Checks at H ₂ S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\textit{\Sigma}\$ (STP) Exhions= \$\textit{\Sigma}\$ (STD)= Inhibitor Selection	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input	66.0 66.0 25.0 25.0 0 0	71.0 71.0 25.0 25.0	70.0 70.0 25.0 25.0	41.0 25.0 25.0	49.0 25.0 25.0	60.0 89.0 25.0 120.0 30.00 0 0	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H ₂ S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated ECations= EAnions= Calc TDS= Inhibitor Selection Protection Time	(F) (F) (Psia) (psia) (1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I)	66.0 66.0 25.0 25.0	71.0 71.0 25.0 25.0	70.0 70.0 25.0 25.0	41.0 25.0 25.0 Unit Converter	49.0 25.0 25.0	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 62 63	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H ₂ S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\textstyle \text{Calcite}\$ acid \$\text{Lacite}\$ acid \$\text	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0	71.0 71.0 25.0 25.0 4 1 1 2	70.0 70.0 25.0 25.0 Inhibitor NTMP BHPMP	41.0 25.0 25.0 Unit Converter From Unit	49.0 25.0 25.0 25.0 (From metric Value 80	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H ₂ S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated 2Cations= £Anions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you?	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0 0	# 1 2 3	Inhibitor NTMP BHPMP PAA	Unit Converter From Unit C m³	49.0 25.0 25.0 25.0 (From metric Value 80 100	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00 Value 176 3,531	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H ₂ S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\textstyle \text{Calcite}\$ acid \$\text{Lacite}\$ acid \$\text	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/I) as HCO3 (equiv./I) (equiv./I) (mg/I) Input 120	66.0 66.0 25.0 25.0 0 0	71.0 71.0 25.0 25.0 4 1 1 2	70.0 70.0 25.0 25.0 Inhibitor NTMP BHPMP	41.0 25.0 25.0 Unit Converter From Unit	49.0 25.0 25.0 25.0 (From metric Value 80	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity (1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00 Value 176 3,531 629	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	Final T Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day Conc. Multiplier H* (Strong acid) † OH (Strong base) † Quality Control Checks at H ₂ S Gas Total H ₂ Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated \$\mathbb{\text{Catluated}}\$ 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 Converter 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

1058604

Form ACO-1 June 2009 Form Must Be Typed Form must be Signed All blanks must be Filled

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #33343	API No. 15
Name:PostRock Midcontinent Production LLC	Spot Description:
Address 1: Oklahoma Tower	<u>SE_NW</u> Sec. 5 Twp. 28 S. R. 17 🗸 East West
Address 2: 210 Park Ave, Ste 2750	1980 Feet from ✓ North / ☐ South Line of Section
City: OKLAHOMA CITY State: OK Zip: 73102 +	1980 Feet from ☐ East / ✓ West Line of Section
Contact Person: LANCE GALVIN	Footages Calculated from Nearest Outside Section Corner:
Phone: (405) 600-7704	□NE ☑NW □SE □SW
CONTRACTOR: License #	County: Wilson
Name: McPherson, Ron dba McPherson Drilling	Lease Name: GRADY, JAMES A Well #: 5-2
Wellsite Geologist: KEN RECOY	Field Name:
Purchaser:	Producing Formation: CHEROKEE COALS
Designate Type of Completion:	Elevation: Ground: 991 Kelly Bushing: 0
✓ New Well Re-Entry Workover	Total Depth: 1270 Plug Back Total Depth: 1267
Oil wsw swd slow	Amount of Surface Pipe Set and Cemented at: 21 Feet
☑ Gas ☐ D&A ☐ ENHR ☐ SIGW	Multiple Stage Cementing Collar Used? Yes V No
☐ OG ☐ GSW ☐ Temp. Abd.	If yes, show depth set: Feet
CM (Coal Bed Methane)	If Alternate II completion, cement circulated from: 1267
Cathodic Other (Core, Expl., etc.):	feet depth to: 0 w/ 185 sx cmt.
If Workover/Re-entry: Old Well Info as follows:	sx cmt.
Operator:	
Well Name:	Drilling Fluid Management Plan (Data must be collected from the Reserve Pit)
Original Comp. Date: Original Total Depth:	
☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD	Chloride content: 0 ppm Fluid volume: 0 bbls
Conv. to GSW	Dewatering method used: Evaporated
Plug Back: Plug Back Total Depth	Location of fluid disposal if hauled offsite:
Commingled Permit #:	Operator Name:
Dual Completion Permit #:	Operator Name:
SWD Permit #:	Lease Name: License #:
ENHR Permit #:	Quarter Sec. Twp. S. R. East West
GSW Permit #:	County: Permit #:
2/7/2011 2/11/2011 2/22/2011	
Spud Date or Date Reached TD Completion Date or Recompletion Date	

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY
Letter of Confidentiality Received
Date:
Confidential Release Date:
✓ Wireline Log Received
Geologist Report Received
UIC Distribution
ALT I I II Approved by: Deanna Garrison Date: (06/30/2011)

Side Two



Operator Name: Po	stRock Midcontine	ent Production LLC	Lease	Name: _	GRADY, JAN	MES A	Well #:5-2	2	
Sec. 5 Twp. 28	8s. R. <u>17</u>	✓ East	Count	y: Wils	on				
time tool open and cl recovery, and flow ra	osed, flowing and shu	d base of formations pe t-in pressures, whether st, along with final char well site report.	shut-in pres	ssure rea	ched static level	, hydrostatic pre	ssures, bottom h	nole temp	perature fluid
Drill Stem Tests Take (Attach Additional		_ Yes ✓ No		- DL	og Formatio	on (Top), Depth a	and Datum		Sample
Samples Sent to Geo	ological Survey	Yes No		Nam	ne ATTACHED		Тор	I	Datum
Cores Taken Electric Log Run Electric Log Submitte (If no, Submit Cop	Yes No Yes No Yes No		SEE	·					
List All E. Logs Run: Attached									
	***************************************	CASING	3 RECORD	V N	ew Used				
		Report all strings set		urface, int		tion, etc.			
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	We Lbs.		Setting Depth	Type of Cement	# Sacks Used		and Percent dditives
SURFACE	12.25	8.625	22		21	Α	4		
PRODUCTION	7.875	5.5	14.5		1267.92	A	185		
	·	ADDITIONA	L CEMENTI	NG / SQI	JEEZE RECORD				
Purpose: Perforate Protect Casing	Depth Top Bottom	Type of Cement	# Sacks	# Sacks Used		Type and	Percent Additives		
Plug Back TD Plug Off Zone	_	,							
Shots Per Foot	PERFORATION Specify F	ON RECORD - Bridge Plu cotage of Each Interval Pe	gs Set/Type			icture, Shot, Ceme mount and Kind of M		d	Depth
4	1120-1122				400GAL 15% HCL W/ 668BLS 2% KCL WATER, 429BBLS W/ 2% KCL, BIOCIDE, MAXFLOW, 2300# 2014			1120-1122	
4	920-922				400GAL 15% HCL W/ 88B	BLS 2% KCL WATER, 444BBLS	W/ 2% KCL, BIOCIDE, MAXFL	OW, 3018# 20/40	920-922
4	722-726/710-715			400GAL 15% HCL W/ 59BBLS 2% KCL WATER, 764BBLS W/ 2% KCL, BIOCIDE, MAXFLOW, 179728 20				OW, 17972# 20/4	722-726/710-715
4	492-496/368-371	. All and a second seco			400GAL 15% HCL W/ 508	BLS 2% KCL WATER, 841BBLS	W/ 2% KCL, BIOCIDE, MAXFL	OW, 10944# 20/4	492-496/368-37
TUBING RECORD:	Size: 1.5	Set At: 1200	Packer A N/A	vt:	Liner Run:	Yes N	0		
Date of First, Resumed 3/8/2011	Production, SWD or EN	HR. Producing Me	thod: ✓ Pumpir	ng 🗌	Gas Lift (Other (Explain)			
Estimated Production Per 24 Hours	Oil E	Bbls. Gas 34	Mcf	Wate 2	er 8 20	bls.	Gas-Oil Ratio		Gravity
DISPOSITI	ON OF GAS:		METHOD OF	COMPLE	TION:		PRODUCTIO	N INTER	/AI ·
Vented ✓ Solo		l	Perf.	Dually	Comp. Cor	mmingled	- NODOCIIC		rrs L .
(If vented, Su	bmit ACO-18.)	Other (Specify)		(Submit)	ACO-5) (Sub	mit ACO-4)			

Gpsn G	BDP2!.!X f mlDpn qrhijpo
Pqf sbups	Qpt uSpdl !Njedpoujof ouQspevdujpo!MMD
X fmMObn f	HSBEZ-!KBNFT!B!6.3
Epd!JE	2169715

BritFrindujd!Mpht!Svo

	# * * * * * * * * * * * * * * * * * * *
DEM	
EJM	
DEM	
JFNQ	

Called Becke @KU 9:00AM

QUEST

Resource Corporation

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

D 11009

TICKET NUMBER

7031

FIELD TICKET REF #

FOREMAN Joe Blanchord

SSI 6/8430

TREATMENT REPORT & FIELD TICKET CEMENT

API 15-205-27903

DATE		- (g)=			TICKET CEME		70144-0115		7703
DATE	7		ELL NAME & N			SECTION	TOWNSHIP	RAN	
2-16-11	Grady		mes f		<u>5 · 2</u>	5	28	17	WL
FOREMAN / OPERATOR	TIME	TIME		SS NCH	TRUCK #	TRAILER #	TRUC		EMPLOYEE SIGNATURE
_	•						1.00		
Joe Bauchon	17	12:00	\ 		904850		6		Joe Black
OHO POWE	6:45				903/97	<u> </u>	<u> </u>		atto de
Nathan Golom	6:45				703142	932900	5. 25		N/5/60
Wes Gary	6.45				921385	931307	5. 25		ي يوليا
MAH NOFF					903600		6		Mahl
Justin Sanse	7	1			Trainne		5		
	•								quera ciji
					OLE DEPTH /2		NG SIZE & W	EIGHT,	512 14
ASING DEPTH /2					UBING	OTHE	R		
LURRY WEIGHT	3.5 SLURR	Y VOL		v	VATER gal/sk				_
ISPLACEMENT 32	DISPLA	CEMENT	PSI	\	/IIX PSI	RATE	46pm	L	1
EMARKS:					Installed (•		
togay So	tock Rig au	<u>while</u>	1 Les	ded to l	Casing 10:	30: STARte Ominute wa	d cem	ent.	TU CEN
ACCOUNT CODE	QUANTITY or UI	NITS		· · · · · · · · · · · · · · · · · · ·	DESCRIPTION OF SE	RVICES OR PRODUC	T		TOTAL AMOUNT
904850	- 6	_hc	Foreman Pic		*		************		
703197	6	<u> </u>	Cement Pun	p Truck		· · · · · · · · · · · · · · · · · · ·			
903600	<u> </u>	hc	Bulk Truck						
131585	5.25	hc h	Transport Tru		,				,
731387	5.25	-pc	Transport Tra 80 Vac	uler .					
04735	404	bc.		1/ -		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
	1267.9	1 <u>2 F4</u>	Casing 5						
	<u></u>		Float Shoe	·					
		4:	Wiper Plug	·					
	•	2		44.	# 472				
	150	SK	Portland Cen		L7				40
	40	SK	Gilsonite	· · · · · · · · · · · · · · · · · · ·	 	· .			
	2	SK	Flo-Seal			· ·			
	16	SK	Premium Gel			?			··· · · · · · · · · · · · · · · · · ·
	6		Cal Chloride		•				
			KCL 51/2	- B	ask+				
·	700	مقصل	City Water						
703142	5.45		Casin	a t	vactor				

932900

TOd. M. Pherson Orilling Friday 02/11/2011@4PM.

Pipe#	Length	Running Total	Battle Location	IDACTROCY FREDCY CORP. CARRIES TALLY COLOR
1 1				POSTROCK ENERGY CORP - CASING TALLY SHEET
	37.78	37.78	in the second	Date: 02/14/2011
2	39.80	77.58	Cement Basket	Well Name & #: Grady, James A. 5-2
3	39.45	117.03 /	19/	Township & Range: 28S-17E
4	39.45	156.48	116 50	County/State: Wilson/Kansas
5	39.88	196.36	226/#	SSI #: 618430
6	39.10	235.46	0 379	AFE#: D11009
7	39.38	274.84		Road Location: 1900 & Wichita, W&S into
. 8	39.56	314.40		API# 15-205-27903
9	38.82	353.22		
10	38.91	392.13		
11	38.24	430.37		- all-
12	38.92	469.29	:	Som
13	38.75	508.04		1100
14	38.92	546.96		
15	38.98	585.94		
16	38.38	624.32		
17	39.12	663.44		
18	39.83	703.27		
19	39.60	742.87		
20	40.12	782.99		
21	38.98	821.97	- Set Uppe	Boffle @ 821.97 ft. Big Hole.
22	38.58	860.55	1/	
23	38.32	898.87		
24	39.20	938.07		
25	39.00	977.07	····	
26	40.23	1017.30		
27	39.99	1057.29	- Set Lower	Coffle @ 1057,29 ft. Small Hale.
(28)	38.78	1096.07		
29	39.09	1135.16		
30	39.02	1174.18	TOTAL CONTROL OF THE PARTY OF T	
31	39.71	1213.85		
32	39.07	1252.92		
Sub	15.00	1267.92		
	1/2	7/27	100 A	H 151051
	Wer	all DL	Mary V	ore 13 fg. Jul.
		<u> </u>		V
	•		$\frown \Lambda$	
		50)~7e	
-			- V - V	• •

Miss Top = 1130 fd.

Tally Botton = 1267.92 fd.

Log Botton = 1269.50 ft.

Driller TD = 1270 fd.

Teamwork works! Put Safety 1st!

Le Revo S

Cell 620 - 305 - 9900

02-14-2011

McPherson Drilling LLC Drillers Log

PO#	LRG021611	-1 AFE	# D11009		
Rig Number:	1	· .	S. 5	T. 28	R. 17 E
API No. 15-	205-27903		Dpvouz;!	Wilson	
	Frfiw!	::2	Mpdbypo;		í

Pofsbups!	QP TU:	SPDL		!!
Beesftt;!	321!Qt	321!Qbsl !Bwf !Tuf !3861		
	Plmbip	on b!Djuz-!PL!8421	13.6752	
XfmMOp;	5-2		√fbtf!Obnf; (Grady James A
Gopubhf!!Mpd	Gppubhf!!Mpdbujpo; 2-: 9		g√lgspn!uif!	OPSUI Mof
		2-: 91	g√lgspn!uif!	X FTU Mof
	Esimjonh!Dpousbdups; McPherson			·
Tqve!ebuf; 30808122		30808122	Hf prphjt u!	Lf o!Sf dpz
Ebuf !Dpn qrfn	ufe;	302203122	UpubrlEf qui ;!	2381

Casing Record			Rig Time:		
	Tvsgbdf!	Qspevdujpo!			
Tj{f!lprfn;	22#	8!809#	i.juli 3p!A	261#2311#	
Tj{f !Dbt joh;	9!609#				
X fjhi y	31\$				
Tfujoh!Efqui;	32	NDQ			
Uzqf !Df n f ou	Qpsumboe	1	ESJMFS;	Boez!Dpbut	
Tbdl t;	5	NDQ	,	2002.5554	

Gas Tests:	
611	2/79
746	2/79
771	2/79
826	3/48
841	3/48
916	5/56
941	5/56
: 16	5/56
: 31	5/56
: 42	5/56
: 66	9/98
2116	9/98
2231	9/98
2246	9/98
2381	9/98
Dpn n f out ;!	
Tubsuljolif dujoh!A!	311#

				Well Log				
Formation	Тор	Btm.	HRS. Formation	Тор	Btm.	Formation	Тор	Btm.
t pjm	1	4	rjm f	638	652	t boet i brfn	: 29	: 39
rjm f	4	35	tibrfn	652	659	dpbm	: 39	: 41
tibrfn	35	: 1	t boe	659	686	tibmi	: 41	: 47
njm f	: 1	21:	dpbm	686	687	dpbm	: 47	: 49
t boet i brfn	21:	355	t boet i brfn	687	736	t boet i brin	: 49	: 61
njm f	355	41:	njim f	736	738	t boe!	: 61	: 96
tibmí	41:	426	dpbm	738	73:	dpbm	: 96	: 97
njm f	426	428	njm f	73:	765	t boe	: 97	2123
cmbditibmf	428	432	dpbm	765	768	t boet i brfn	2123	21: 1
tibmf	432	453	tibrfn	768	79:	t boe	21: 1	2212
njm f	453	45:	pt x	79:	816	tibmfi	2212	2226
tibmf	45:	486	t vn n ju	816	821	dpbm	2226	2228
njm f	486	519	pt x	821	827	tibmf	2228	2237
cmbditibmf	519	521	n vrhz	827	831	n jtt/!Mn f	2237	2381
rjm f	521	531	rjm f	831	834			
tibmf	531	53:	tibmi	834	8: 8			
cmladitib mfn	53:	543	dpbm	8: 8	8: :			
tib <i>r</i> n	543	563	tibmf	8: :	917			
t boe!	563	585	t boet i brfn	917	929		•	
tibmf	585	594	dpbm	929	931			
cmloditibrfn	594	594	ti brfn	931	996			
tibmf	594	621	dpbm	996	997			;
njm f	621	626	t boet i brfn	997	: 27			
tibmf	626	638	dpbm	: 27	: 29			

POSTROCK



Current Completion

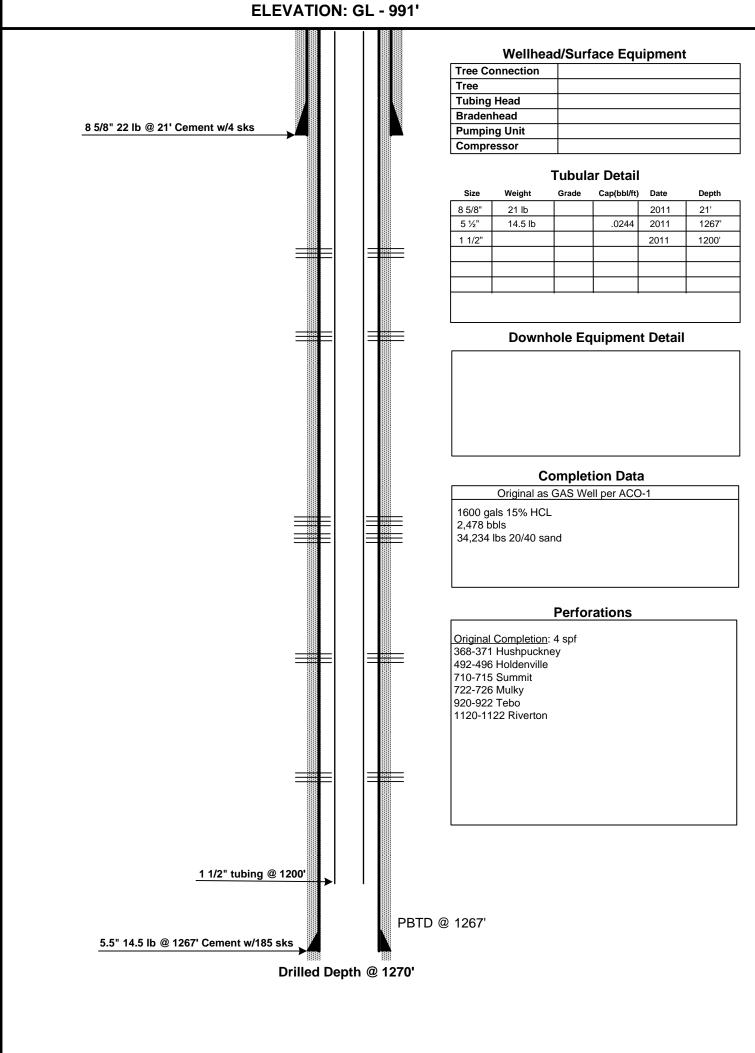
: Grady, James A 5-2 **WELL**

FIELD : Cherokee Basin

STATE : Kansas COUNTY : Wilson

SPUD DATE: 2/7/2011 COMP. Date: 2/22/2011 API: 15-205-27903-00-00

LOCATION: 5-28S-17E (SE, NW)



PREPARED BY: POSTROCK

APPROVED BY: _

DATE: July, 2012

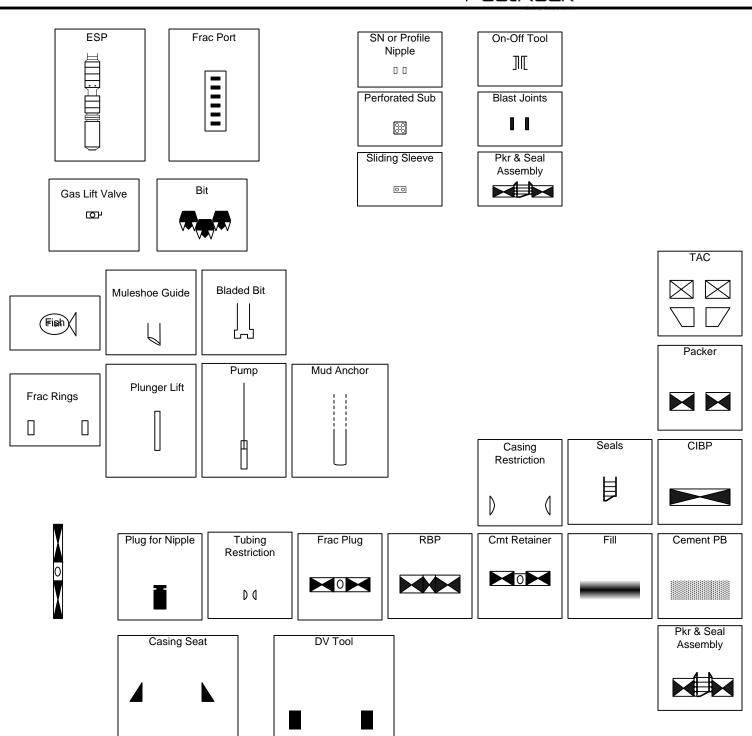
DATE:_

POSTROCK



LEGEND

PostRock[®]



GRADY, JAMES A 5-2

1 NAME & UPPE	R & LOWER LIMIT OF EACH PRODU	JCTION INTERVAL TO BE	COMMING	LED			
FORMATION:	RIVERTON	(PERFS):	1120 -	1122			
FORMATION:	BARTLESVILLE	(PERFS):	958 -	961			
FORMATION:	BARTLESVILLE	(PERFS):	966 -	972			
FORMATION:		(PERFS):		·			
FORMATION:		(PERFS):		·			
FORMATION:		(PERFS):		·			
FORMATION:		(PERFS):		·			
FORMATION:		(PERFS):		·			
FORMATION:		(PERFS):		·			
FORMATION:		(PERFS):		·			
FORMATION:		(PERFS):		·			
FORMATION:		(PERFS):		·			
2 ESTIMATED AN FORMATION:	MOUNT OF FLUID PRODUCTION TO	BE COMMINGLED FROM	1 EACH INT 0	ERVAL MCFPD:	5.67	BWPD:	6.67
FORMATION:	BARTLESVILLE	BOPD:	1.5	MCFPD:	0	BWPD:	10
FORMATION:	BARTLESVILLE	BOPD:	1.5	MCFPD:	0	BWPD:	10
FORMATION:		BOPD:		MCFPD:		BWPD:	
FORMATION:		BOPD:		MCFPD:		BWPD:	
FORMATION:		BOPD:		MCFPD:		BWPD:	
FORMATION:		BOPD:		MCFPD:		BWPD:	
FORMATION:		BOPD:		MCFPD:		BWPD:	
FORMATION:		BOPD:		MCFPD:		BWPD:	
FORMATION:		BOPD:		MCFPD:		BWPD:	
FORMATION:		BOPD:		MCFPD:		BWPD:	
FORMATION:		BOPD:		MCFPD:		BWPD:	
		·		_			

Affidavit of Notice Served	
Re: Application for: APPLICATION FOR COMMINGLING OF PRODUCTION OR FL	JIDS ACO-4
Well Name: GRADY, JAMES A 5-2 Legal Location: SENW	S5-T28S-R17E
The undersigned hereby certificates that he / she is a duly authorized agent for the applicant, and that on the day	13 ^{td} of AUGUST
, a true and correct copy of the application referenced above was delivered or mailed to the fo	llowing parties:
Note: A copy of this affidavit must be served as a part of the application.	
Name Address (Attach additional sh	eets if necessary)
POSTROCK MIDCONTINENT PRODUCTION, LLC 210 PARK AVENUE, SUITE	E 2750, OKLAHOMA CITY, OK 73102-5641
I further attest that notice of the filing of this application was published in the WILSON COUNTY CITIZEN	, the official county publication
of WILSON county. A copy of the affidavit of this p	ublication is attached.
Signed this	0.
Jest Z	Morra
Applicant or Duty Authorized Agent	
Subscribed and sworn to before me this/4/14 day of	AUGUST , 2012
OFFICIAL JENNIFER R. BEAL	Beal
SEAL MY COMMISSION EXPIRES Notary Public Notary P	
My Commission Expires:	ly 20, 2016

et Operators, Unleased Mineral Owners and Landowners acreag	ge
ach additional sheets if necessary)	Land Daniel Control of Control
Name: STROCK MIDCONTINENT PRODUCTION, LLC	Legal Description of Leasehold: POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2
OTTOOK WIDGOWTINENT PRODUCTION, LEC	
	MILE RADIUS
	-
by certify that the statements made herein are true and correct to the bes	
	Juss & Mouris
	pplicant or Duly Authorized Agent
Subscribed and sworn be	efore me this / 4/12 day of AUGUST , 2012
JENNIFER R. BEAL	Quinky R Beal
## UPPRIME * **********************************	tary Public 7 Stal
7-20-201	
My	Commission Expires: 2944 00, 00/9

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

August 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

13th day of August, 2012

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

Notary Public Sedgwick County, Kansas

Printer's Fee: \$139.60

PUBLISHED IN THE WICHITA EAGLE AUGUST 11, 2012 (3200868)

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS NOTICE OF FILING APPLICATION

RE: In the Malter of Postrock Midconlinent Production, LLC Application for Commingling of Production in the Grady, James A 5-2 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 Hushpuckney, Holdenville, Summit, Mulky, Tebo, Riverton and Barriesville producing formalions at the Grady, James A 5-2; located in the SE NW, S5-7285-R17E, Approximately 1980 FNL & 1980 FWL, Wilson County, Kansas.

Any persons who object to or protest this application shall be required to file their objections or protest with the Conservation 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 unitics of the forgrounce and concerned shall never the concerned shall take unitics of the forgrounce and concerned shall and concerned the concerned the concerned shall and concerned the con

of Kansas.

All persons interested or concerned shall fake 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.

counsel or as individuals, appearing on from behalf.
Postrock Midcontinent Production, LLC
210 Park Ayenue, Suite 2750
Oklahoma City, Oklahoma 73102
(405) 660-7704
A COPY OF THE AFFIDAVIT
PUBLICATION MUST ACCOMPANY APPLICATIONS

PROOF OF PUBLICATION

STATE OF KANSAS Wilson County - SS

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

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

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

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

THE ATTACHED was published on the following dates in a regular issue of said newspaper: $/2\mu$.

1st publication was made on the	12100	day o
Cleege	ust20	12
2nd publication was made on the		
	. 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
	. 20-	
6th publication was made on the		_day of
		73
TOTAL PUBLICATION FEE: \$		
(Signed) Joseph S. K.	eljsk	
Subscribed and sworn to before me, this	144	day of
August	, 20/	2_
Rita M. Rely	ル (Notar	y Public)
	30,20	

LEGAL NOTICES

(Published in the Wilson County Citizen on Monday, August 13, 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 Grady, James A 5-2 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 Hushpuckney, Holdenville, Summit, Mulky, Tebo, Riverton and Bartlesville producing formations at the Grady, James A 5-2, located in the SE NW, S5-T28S-R17E, Approximately 1980 FNL & 1980 FWL, 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 73102 (405) 660-7704 511 cpy.

PARA



Rita M. Relph NOTARY PUBLIC State of Kansas My Commission Expires

F 4

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

August 29, 2012

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

RE: Approved Commingling CO081223

Grady, James A. 5-2, Sec. 5-T28S-R17E, Wilson County

API No. 15-205-27903-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on August 24, 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 CO081223 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