

### KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

Form ACO-4 Form must be typed March 2009

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

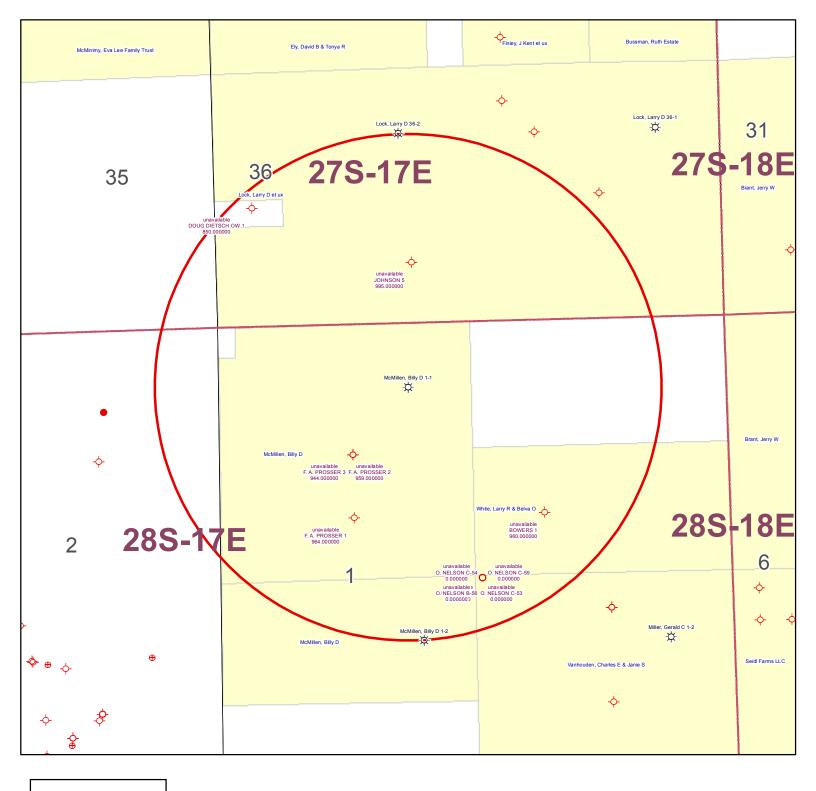
OPERA	TOR: License #	API No. 15		
Name:_		Spot Description: _		
Address	s 1:	<del>-</del>	_ Sec Twp	_S. R East West
Address	s 2:		Feet from No	orth / South Line of Section
City:	State: Zip:+	<u> </u>	Feet from Ea	ast / West Line of Section
	Person:			
Phone:	()_	Lease Name:	We	II #:
1.	Name and upper 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:
☐ 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	•	•	ses within a 1/2 mile radius of
4.	Signed certificate showing service of the application and affide	avit of publication as required	d in K.A.R. 82-3-135a.	
For Con	mmingling of PRODUCTION ONLY, include the following:			
<u> </u>	Wireline log of subject well. Previously Filed with ACO-1:	Yes No		
☐ 6.	Complete Form ACO-1 (Well Completion form) for the subject	well.		
For Con	mmingling of FLUIDS ONLY, include the following:			
☐ 7.	Well construction diagram of subject well.			
8.	Any available water chemistry data demonstrating the compat	ibility of the fluids to be comi	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 compistrue and proper and I have no information or knowledge, which sistent with the information supplied in this application.	Sı	ubmitted Electror	nically
KCC	C Office Use Only			et in the application. Protests must be
☐ De	enied Approved	in writing and comply with K the notice of application.	K.A.R. 82-3-135b and must b	e filed wihin 15 days of publication of

Mail with all required attachments and files to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Date: \_

**KCC Office Use Only** Denied Approved 15-Day Periods Ends: \_\_

Approved By:



### **KGS STATUS**

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

McMillen, Billy D 1-1 1-28S-17E 1" = 1,000'

	Α	В	С	D	Е	F	G	Н	1	1	K
1	Produced Fluids #	Б	1	2	3	4	5	11		<u> </u>	I IX
	Parameters	Units	Input	Input	Input	Input	Input		Click her	re	Click
3	Select the brines	Select fluid	7	Ī		V	Ī	Mixed brine:	to run SS	-	
4	Sample ID	by checking						Cell H28 is	10 1411 00	•	Click
5	Date	the box(es),	3/19/2012	3/4/2012	3/14/2012	1/20/2012	1/20/2012	STP calc. pH.			
6	Operator	Row 3	PostRock	PostRock	PostRock	PostRock	PostRock	Cells H35-38			Click
7	Well Name		Ward Feed	Ward Feed	Clinesmith	Clinesmith	Clinesmith	are used in	Goal Seek	SSP	
8	Location		#34-1	#4-1	#5-4	#1	#2	mixed brines			Click
9	Field		CBM	CBM	Bartles	Bartles	Bartles	calculations.			
10	Na <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	Ба	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	osum	
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	
	F	(mg/l)						0.00	-3.96	-3.90	0.06
	Br'	(mg/l)						0.00		ydrite	3.00
	SiO2	(mg/l) SiO2						0.00	-3.47	-3.36	0.12
_			100.00	224.00	250.00	200 00	254.00				0.12
	HCO3 Alkalinity**	(mg/l as HCO3)	190.00	234.00	259.00	268.00	254.00	241.03	Cele	estite	
	CO3 Alkalinity	(mg/l as CO3)						_			
	Carboxylic acids**	(mg/l)						0.00		Sulfide	
27	Ammonia	(mg/L) NH3						0.00	-0.16	-0.22	-0.06
28	Borate	(mg/L) H3BO3						0.00	Zinc S	Sulfide	
29	TDS (Measured)	(mg/l)						72781			
30	Calc. Density (STP)	(g/ml)	1.038	1.051	1.050	1.048	1.045	1.047	Calcium	fluoride	
31	CO <sub>2</sub> Gas Analysis	(%)	19.97	18.76	22.41	35.53	33.79	26.16			
	H <sub>2</sub> S Gas Analysis***	(%)	0.0289	0.0292	0.0296	0.0306	0.0151	0.0269		rbonate	
33	Total H2Saq	(mgH2S/l)	1.00	1.00	1.00	1.00	0.50	0.90	-0.74	-0.51	0.23
34	pH, measured (STP)	pН	5.67	5.76	5.72	5.54	5.55	5.63	Inhibitor ne	eeded (mg/L)	
	Chasse one ention	0-CO2%+Alk,							Calcite	NTMP	
35	Choose one option to calculate SI?		0	0	0	0					
	Gas/day(thousand cf/day)	(Mcf/D)	•		0	U		0	0.00	0.00	
	Oil/Day	(B/D)	0	0	1	1	1	4	Barite	BHPMP	1
	Water/Day	(B/D)	100	100	100	100	100	500	0.00	0.00	
39	For mixed brines, enter val	ues for temperat	tures and pressi	res in Cells (H	(40-H43)			(Enter H40-H43)		Н	
40	Initial T	iucs for tempera						(Linco 1145)	р	п	
41		(F)	66.0	71.0	70.0	41.0	49.0	60.0	5.69	5.60	1
	Final T		66.0	71.0	70.0	41.0	49.0	60.0 89.0	5.69 Viscosity (	5.60 CentiPoise)	
	Final T Initial P	(F)	66.0 25.0	71.0 25.0	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	Initial P Final P	(F) (F) (psia) (psia)	66.0	71.0	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	Initial P Final P Use TP on Calcite sheet?	(F) (F) (psia) (psia) 1-Yes;0-No	66.0 25.0	71.0 25.0	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	Initial P Final P Use TP on Calcite sheet? API Oil Grav.	(F) (psia) (psia) 1-Yes;0-No API grav.	66.0 25.0	71.0 25.0	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 ne	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C) 0.959 eeded (mg/L)	
42 43 44 45 46	Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav.	(F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav.	66.0 25.0	71.0 25.0	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	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C) 0.959 eded (mg/L) HDTMP	
42 43 44 45 46 47	Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day	(F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D)	66.0 25.0	71.0 25.0	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	Initial P Final P Use TP on Calcite sheet? API Oil Grav. Gas Sp.Grav. MeOH/Day MEG/Day	(F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav.	66.0 25.0	71.0 25.0	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	5.60 CentiPoise) 0.826 ty (cal/ml/ <sup>0</sup> C) 0.959 eded (mg/L) HDTMP	
42 43 44 45 46 47 48 49	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) (B/D)	66.0 25.0	71.0 25.0	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	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) (B/D)	66.0 25.0	71.0 25.0	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	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 25.0	71.0 25.0	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	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) (B/D) (N) (N) STP:	66.0 25.0	71.0 25.0	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	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)	66.0 25.0	71.0 25.0	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	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 25.0	71.0 25.0	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	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	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (N) (N) (N) STP: (%) (mgH2S/I) (pH) (%)	66.0 25.0	71.0 25.0	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	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	(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	66.0 25.0	71.0 25.0	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	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 \$\textstyle{\textstyle{2}}\$\text{Control}\$	(F) (F) (psia) (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 25.0	71.0 25.0	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	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	(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	66.0 25.0	71.0 25.0	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	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 SCations= EAnions=	(F) (F) (psia) (psia) 1-Yes;0-No API grav. Sp.Grav. (B/D) (B/D) (N) (N) STP: (%) (mgH2S/I) (pH) (%) (mg/l) as HCO3 (equiv./l) (equiv./l)	66.0 25.0	71.0 25.0	70.0 25.0	41.0 25.0 25.0	49.0 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	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) (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 25.0 25.0 0 0	71.0 25.0 25.0	70.0 25.0 25.0 1nhibitor NTMP	41.0 25.0 25.0 Unit Converter	49.0 25.0 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 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	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 \$\textstyle{\textstyle{2}}\text{Collections=} \text{\$\textstyle{2}}\text{\$\text{Anions=}} \text{\$\text{Calc}} Calc TDS= Inhibitor Selection	(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	66.0 25.0 25.0 0 0	71.0 25.0 25.0	70.0 25.0 25.0	41.0 25.0 25.0 Unit Converter From Unit	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 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	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,S Gas Total H2Saq (STP) pH Calculated PCO2 Calculated Alkalinity Caclulated SCations= EAnions= Calc TDS= Inhibitor Selection Protection Time	(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	66.0 25.0 25.0 0 0	71.0 25.0 25.0	70.0 25.0 25.0 1nhibitor NTMP	41.0 25.0 25.0 Unit Converter	49.0 25.0 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 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 60 61 62 63	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 Have ScaleSoftPitzer	(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) (equiv./I) Input 120	66.0 25.0 25.0 0 0	71.0 25.0 25.0 25.0	Inhibitor NTMP BHPMP	41.0 25.0 25.0 Unit Converter From Unit	49.0 25.0 25.0 25.0 (From metric Value 80	60.0 89.0 25.0 120.0 30.00 0.60 0	5.69 Viscosity ( 1.196 Heat Capaci 0.955 Inhibitor ne Gypsum 0.00 Anhydrite 0.00	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	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 Have ScaleSoftPitzer pick inhibitor for you?	(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) (equiv./I) (mg/I) Input 120	0 0 0 0 Unit min	# 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 0 0 0 To Unit "F ft <sup>3</sup>	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 63 64 65	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 SCations= EAnions= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, 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) (equiv./I) (mg/I) Input 120	0 0 0 0 Unit min	# 1 2 3 4	Inhibitor NTMP BHPMP PAA DTPMP	Unit Converter From Unit °C m³ m³	49.0 25.0 25.0 25.0 (From metric Value 80 100 100	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 3,531 629	5.60 CentiPoise) 0.826 ty (cal/ml/°C) 0.959 ceded (mg/L) HDTMP 0.00 HDTMP	
42 43 44 45 46 47 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	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 Seatons= Calc TDS= Inhibitor Selection Protection Time Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,	(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) (mg/I) Input 120  1 4	0 0 0 0 Unit min 1-Yes;0-No #	## 1 2 3 4 5 5	Inhibitor NTMP BHPMP PAA DTPMP PPCA	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 55 56 57 58 59 60 61 62 63 64 65 66 67	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 Have ScaleSoftPitzer pick inhibitor for you? If No, inhibitor # is: If you select Mixed,  1st 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) (mg/I) Input 120  1 4	0 0 0 0 Unit min 1-Yes;0-No #	# 1 2 3 4 5 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 43 44 45 46 47 48 49 50 51 52 53 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69	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 Have ScaleSoftPitzer pick 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/l) as HCO3 (equiv./l) (equiv./l) (mg/l) Input 120  1 4 1 50	0 0 0 0 Unit min 1-Yes;0-No # # %	## 1 2 3 4 4 5 5 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 ft <sup>3</sup> bbl(42 US gal) 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	

### **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

Wichita, KS

### **WELL COMPLETION FORM**

### WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 33344	API No. 15 - 133-26673 - 00 - 00
Name: Quest Cherokee, LLC	County: Neosho
Address: 211 W. 14th Street	
City/State/Zip: Chanute, KS 66720	660 feet from S / Circle one) Line of Section
Purchaser: Bluestem Pipeline, LLC	1980 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: Michael Dilling	Lease Name: McMillen, Billy D. Well #: 1-1
License: 33783	Field Name: Cherokee Basin CBM
Wellsite Geologist: Ken Recoy	Producing Formation: Multiple
Designate Type of Completion:	Elevation: Ground: 976 Kelly Bushing: n/a
New Well Re-Entry Workover	Total Depth: 1162 Plug Back Total Depth: 1158.44
Oil SWD SIOW Temp. Abd.	Amount of Surface Pipe Set and Cemented at 23 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 1158.44
Operator:	feet depth to surface w/ 180 sx cmt.
Well Name:	
Original Comp. Date: Original Total Depth:	Orilling Fluid Management Plan (U) I KAR 10/29/09 (Data must be collected from the Reserve Pit)
Deepening Re-perf Conv. to Enhr./SWD	
Plug Back Plug Back Total Depth	Chloride content ppm Fluid volume bbls
Commingled Docket No.	Dewatering method used
Dual Completion Docket No	Location of fluid disposal if hauled offsite:
Other (SWD or Enhr.?) Docket No.	Operator Name:
	Lease Name: License No.:
8/10/06         8/11/06         8/21/06           Spud Date or         Date Reached TD         Completion Date or	Quarter Sec Twp S. R East _ West
Recompletion Date Recompletion Date	County: Docket No.:
•	
INSTRUCTIONS: An original and two copies of this form shall be filed with Kansas 67202, within 120 days of the spud date, recompletion, workove Information of side two of this form will be held confidential for a period of 1. 107 for confidentiality in excess of 12 months). One copy of all wireline logs TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells.	er or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply.  2 months if requested in writing and submitted with the form (see rule 82-3- and geologist well report shall be attached with this form. ALL CEMENTING
	te the oil and gas industry have been fully complied with and the statements
herein are complete and correct to the best of my knowledge.	
Signature: Aranka B. Olmanaran	KCC Office Use ONLY
Title: New Well Development Coordinator Date: 12/12/06	N
1 7th 7	Letter of Confidentiality Received
Subscribed and sworn to before me this 12 day of December	
20 <u>Clo</u> .	Wireline Log Received  Geologist Report Received
Notary Public: Dexxa Alguman	RECEIVED
211-2010	- o die es sous alation commission
	RRA KLAUMAN Public: State of Kansas
My Appt. Expir	
<del></del>	10 (10 an

į	1 1 1 pass	-2 <sup>38</sup> √		Side	Two			4		.ó. ∼ .
Operator Name: Que	est Cherokee. LL	С		1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	McMillen, Bi	ly D.	,,,,,,,, 1-1	a.	
ec. 1 Twp. 2			West		Name:_ Neos			vveii #:		
NSTRUCTIONS: Shested, time tool oper emperature, fluid recollectric Wireline Logs	now important tops a and closed, flowing covery, and flow rate	and base og g and shut s if gas to	f formations pe in pressures, s surface test, a	enetrated. whether sh long with fi	Detail a out-in pre	ll cores. Repo essure reached	l static level, hydr	ostatic pressure	s, bottom	hole
orill Stem Tests Take		Ye	es ∉ No		<b>₹</b> L	og Forma	tion (Top), Depth	and Datum	Sa	mple
amples Sent to Geo		. TY6	es 🗸 No		Nam	e attached		Тор	Da	ıtum
Cores Taken Electric Log Run (Submit Copy)		Ye	es V No es No							
ist All E. Logs Run:										
Dual Induction Compensated Gamma Ray N	Density Neutro	on Log								
				RECORD		w Used				
Purpose of String	Size Hole	Siz	rt all strings set-c e Casing	Weig	ght	Setting	Type of	# Sacks		d Percent
Surface	Drilled	İ	(In O.D.)	Lbs. /	Ft.	Depth	Cement	Used	Add	litives
	12-1/4	8-5/8"		20		23		4		
Production	6-3/4	4-1/2		10.5		1158.44	"A"	180		<del></del>
			ADDITIONAL	CEMENTIN	NG / SOI	JEEZE RECOF	ID.			
Purpose: Perforate Protect Casing Plug Back TD Plug Off Zone	Depth Top Bottom	Туре	of Cement	#Sacks				Percent Additives		
Shots Per Foot			RD - Bridge Plug				acture, Shot, Ceme		d	Depth
4	849-851/784-78	<del>_</del>	Each Interval Per 3/759-762	- Iorateu		·	obls 2%kol water, 497bbls water		# 30/70 send 8	49-851/784-7
									8	11-813/759-7
4	663-667/653-65	7				300gai 15%HCLvd 40	obts 2%kcl water, 594bbls water	or w/ 2% KCL, Blockle, 13400	# 30/70 sand 6	63-667/653-4
TUBING RECORD	Size	Set At		Packer A	At	Liner Run	Yes V N	lo.		
Date of First, Resumer	3/8" d Production, SWD or	841.13 Enhr.	Producing Met	n/a hod	———	[ [ ]			(F(-in)	
10/30/06	Oil	Bbls.	Gas	Mcf	Flowir ————Wat		ping Gas I Bbls.	Gas-Oil Ratio	er (Explain)	Gravity
Per 24 Hours	n/a	DUIS.	0mcf	14101	15.1			Jul Jii Hallo		
Disposition of Gas	METHOD OF	COMPLETIO	ON			Production Int	erval			
Vented ✓ Sold (If vented, So	Used on Lease ubmit ACO-18.)		Open Hole Other (Spec	✓ Perf		Dually Comp.	Commingled			
					***		٠			

81	106
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# Michael Drilling, LLC

P.O. Box 402 Iola, KS 66749 620-365-2755

Company:

Quest Cherokee LLC

Address:

9520 North May Ave, Suite 300

Oklahoma City, Oklahoma 73120

Ordered By: Donnie Meyers

Date:

08/11/06

Lease:

McMillen, Billy D.

County: Neosho

Well#:

1-1-API#:

15-133-26673-00-00

### Drilling Log

	<u> </u>	IN LAUM	
FEET	DESCRIPTION	FEET	DESCRIPTION
0-20	Overburden	5 <b>6</b> 5-56 <b>8</b>	Coal
20-108	Sandy Shale	568-598	Lime
108-123	Lime	598-601	Black Shale
123-131	Shale	601-635	Sandy Shale
131-222	Lime	635-636	Coal
222-235	Shale	636-656	Lime
235-251	Lime	648	Gas Test 54" at 1/4" Choke
251-255	Black Shale	656-660	Black Shale
255-270	Lime	660-666	Lime
270-287	Sand	561	Gas Test 54" at 1/4" Choke
287-295	Lime	665-668	Black Shale
295-302	Shale	668-669	Coal
302-350	Lime	669-680	Sand
350-380	Sandy Shale	680-711	Shale Shale
380-408	Shale	686	Gas Test 17" at 1/2" Choke
408-418	Sand	711-740	Shale
418-440	Sandy Shale	740-742	Coal
440-449	Lime	742-758	Shale
449-471	Shale	758-759	Lime
471-481	Lime	759-760	Coal
481-490	Shale	760-788	Shale RECEIVED
490-496	Sand	788-790	CO21 KANSAS CORPORATION COMMISSION
496-561	Sandy Shale	790-798	Shale DEC 1 3 2006
561-565	Lime	798-799	Coal CONSERVATION DIVISION WICHTIA KS

#3 ft ·	A A A
TC 8	11 1 14 14

# Michael Drilling, LLC

P.O. Box 402 Iola, KS 66749 620-365-2755

Company:	•
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1 1	
A S 1	

Quest Cherokee LLC

Address:

9520 North May Ave, Suite 300

Oklahoma City, Oklahoma: 73 120

Ordered By: Donnie Meyers

Date: 08/11

Lease:

McMillini, Billy D.

County: Neosho

Well#: 1-1

API#: 15-133-26673-00-00

# **Drilling Log**

FEET	DESCRIPTION	FEET	DESCRIPTION
799-822	Shale		
822-823	Coal		
823-851	Shale		
851-853	Coal		
853-876	Shale		
876-878	Coal		
878- <del>9</del> 15	Shale		
915-921	Sand		
921-928	Shale		
928-982	Sand		
982-984	Coal		
984-1070	Sand		
1070-1073	Coal		
1073-1079	Shale		
1075	Gas Test 3" atl-1/2" Choke		
1079-1162	Missippi Lime		
1087	Gas Test 3" ati-1/2" Choke		
1162	Gas Test 3" ati-1/2" Choke		RECEIVED KANSAS CORPORATION COMMISSION
1162	TD		DEC 1 3 2005
			CONSERVATION DIVISION
	Surface 23'		WICHTIA KS



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

# TICKET NUMBER 1758

FIELD TICKET REF.#

FOREMAN Joe/craig

# TREATMENT REPORT & FIELD TICKET CEMENT

DATE		WELL NAME & NUMBER		SECTION	TOWNSHIP RANGE		COUNTY	
8-21-06	McMille	n B	illy 1-1			28	17	NO_
FOREMAN /	TIME	TIME		TRUCK #	TRAILER	TRUC HOUR		EMPLOYEE SIGNATURE
OPERATOR	4:45	OUT	+		#	· 4. 4	5 10	Beich
craig 6	7:00	11:15		903427		4.2		7
Wes.T.	7:00			903197		41.	25 My	A COM
MAURICK . B.	7:00			903230		4.2	5	TON OF THE PARTY O
DAvid C	7:15			921415		닉	Son	14/9all
TRUY W	6:30			93/6/5		41.7	5 10	within
RUSSEIL . A	7:06			lextra		4.	5 11	7 9
JOB TYPE Low	HOLE S	SIZE <u>6</u>	<i>З/у</i> н	IOLE DEPTH <u>116</u>	<u>2</u> CAS	ING SIZE & W	/EIGHT <u>/-/</u>	<u>12 10.5</u>
CASING DEPTH 11	,			UBING	отн	ER		
SLURRY WEIGHT_	H. 5 SLURR	Y VOL	W	/ATER gal/sk	CEM	ENT LEFT in	CASING O	
DISPLACEMENT /				1IX PSI				
REMARKS:						ا نا		
		. to <	estace. I	NOT Allot (0	mond hon	RAW 1	sk acl	
12 5610	Ct IAA	5 K<	ef ( pM + 2.4	to get of	10 to 5, v	for. T	Flust. 0	0000000
P	200	. 1. 11	a <0-	Float Sh	,		1,	1
- CMP WI	Part Pigg +	C: Vintt	در ۱۸۰۰	110021 3 P	0-2			
	1158.	44	F1 41/2	Casing				
		6	Centroliz	_				
93/300	2	5 h,	Casing +				•	
607240	2	5 hr	Cakina		-	-		
	· · · · · · · · · · · · · · · · · · ·		3	DESCRIPTION OF SE				TOTAL
ACCOUNT CODE	QUANTITY or U	INITS	-	DESCRIPTION OF SE	RVICES OR PRODU	ICT		AMOUNT
903H27	4. 4	5 he	Foreman Pickup				<u> </u>	
903197	41.2	2 Y\C	Cement Pump Truck					
903230	21. 29	5 hr	Bulk Truck					
1104	/-	10 SK	Portland Cement	2 66		1.11.44		
1124		1	50/50 POZ Blend Oc	271110				
1126	-		OWC Blend Cemer	m 41/2 W.	per plug	·		
1110	18 ₩	⇒ SK	Gilsonite	* "				
1107	1.	5 SK	Flo-Seal					
1118		3 SK	Premium Gel					
1215A	Lgal		KCL					
1111B		3 ≤K	Sodium Silicate	al Chlorid	P			
1123	70000	pl	City Water		9.5	CEIVED		
981415		4 hr	Transport Truck	30'VOC	KANSAS CORP	oration com	Mission —	
			Transport Trailer					
903615	۷. 7	5 hr	80 Vac		UEC	1 3 2006		
Ravin 4513			:		CONSERV	ATION DIVISIO	M	

### **POSTROCK**



# **Current Completion**

**SPUD DATE: 8/10/2006** 

COMP. Date: 8/21/2006 API: 15-133-26673-00-00

WELL : McMillen, Billy D 1-1

FIELD : Cherokee Basin

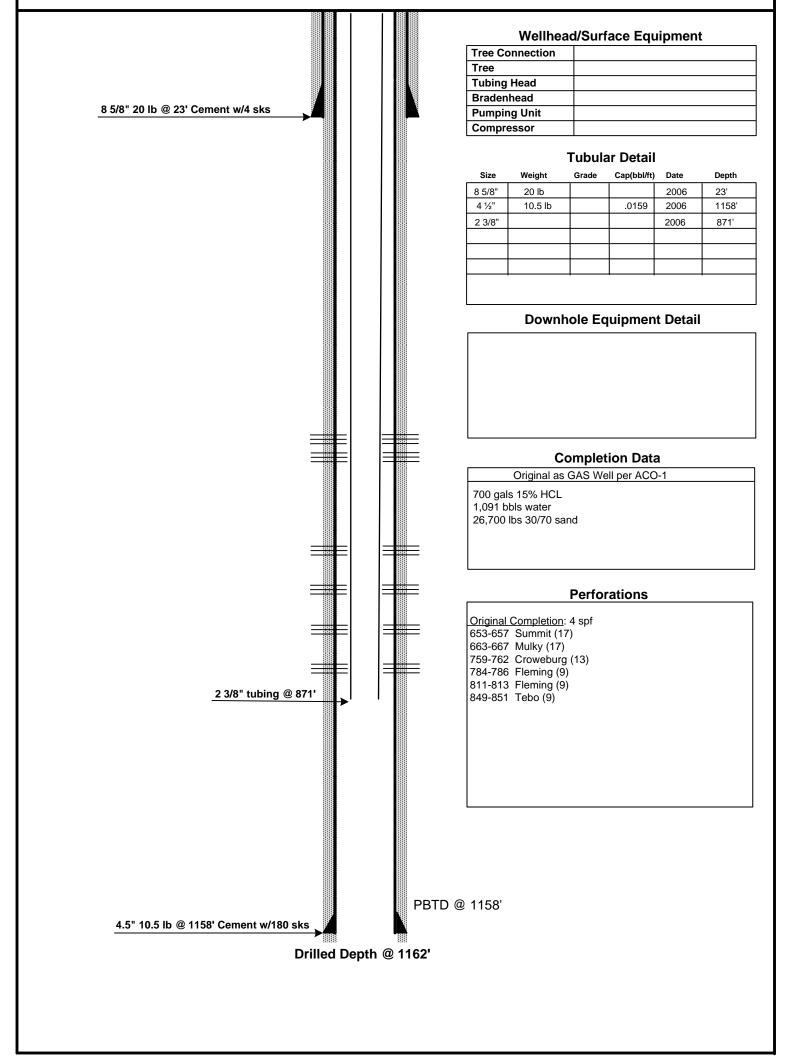
STATE : Kansas COUNTY : Neosho

PREPARED BY: POSTROCK

APPROVED BY: \_

: Neosho LOCATION: 1-28S-17E (NE,NW)

**ELEVATION: 976'** 



**DATE:** Oct, 2012

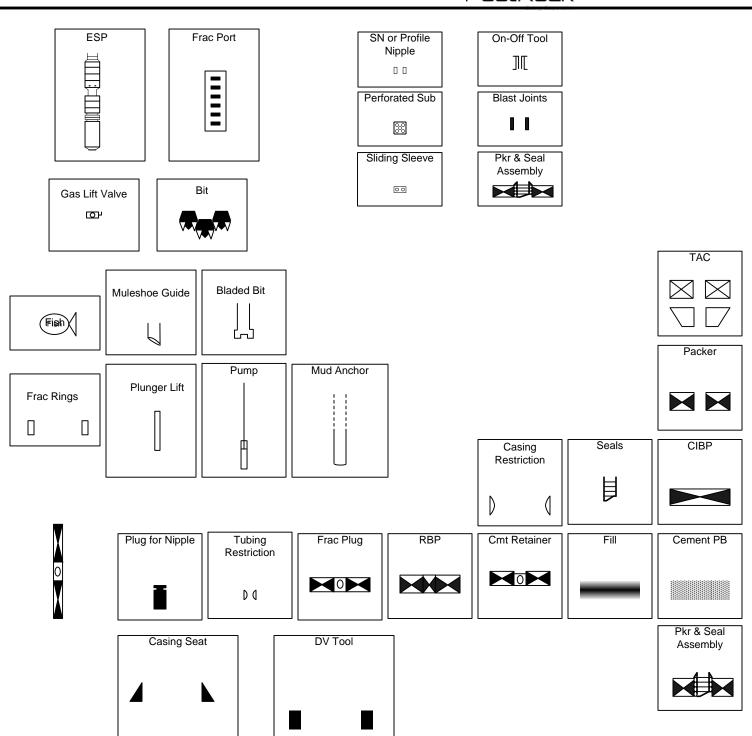
DATE:\_

# **POSTROCK**



### **LEGEND**

# PostRock<sup>®</sup>



### MCMILLEN, BILLY D 1-1

1 NAME & UPPE	R & LOWER LIMIT OF EACH PRODU	JCTION INTERVAL TO E	BE COMMING	LED		
FORMATION:	TEBO	(PERFS):	849 -	851		
FORMATION:	BARTLESVILLE	(PERFS):	912 -	918		
FORMATION:	BARTLESVILLE	(PERFS):	938 -	946		
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2 ESTIMATED AN FORMATION:	MOUNT OF FLUID PRODUCTION TO	BE COMMINGLED FRO	OM EACH INT 0	ERVAL MCFPD:	0.33 0 BWPD:	6.67
FORMATION:	BARTLESVILLE	BOPD:	1.5	MCFPD:	0 BWPD:	10
FORMATION:	BARTLESVILLE	BOPD:	1.5	MCFPD:	0 BWPD:	10
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FORMATION:	0	BOPD:		MCFPD:	BWPD:	

		Ann 100 100 100 100 100 100 100 100 100 1	
Affidav	it of Notice Served		J.,,1800-113-
Re:	Application for: APPLICATION FOR C	OMMINGLING OF PRODUCTION OR FLUIDS ACO-4	
	Well Name: MCMILLEN, BILLY D 1-1	Legal Location: NESWNENW S1-T28S-R17E	
The und	ersigned hereby certificates that he / she is a duty	authorized agent for the applicant, and that on the day	:
2012		ation referenced above was delivered or mailed to the following parties:	
Note: A	copy of this affidavit must be served as a part of th		
<b></b>	Name	Address (Atlach additional sheets if necessary)	
SEE	ATTACHED		
		published in the THE CHANUTE TRIBUNE , the official	county publication
of NEC	SHO	county. A copy of the affidavit of this publication is attached.	
Signed this	26th day of OCTOBER	2012	
		MILLA	
		Applicant or Duly Authorized Agent	<del></del>
	Subscribed	d and sworn to before me this day ofOCTOBER	
	JENNIFER R. BEAL	D. L. Beal	
OF	MY COMMISSION EXPIRES	Notary Partie Resident Recol	
<u> </u>	7-20-2016	My Commission Expires: Oferly 20, 2016	
		. 0	

#### MCIVILLEN, BILLY D 1-1

1-28S-17E

tract in NE/4

Derek Waggoner

3651 Country Club Rd Chanute, KS 66720

N2NE/4 less tract

Ruthanne Waggoner

2615 190th Rd Chanute, KS 66720

tract in NW/4

Robert McMillen

2375 190th Rd Chanute, KS 66720

tract in NW/4 NW/4

**Union Valley Cemetary** 

Chanute, KS 66720

2-28S-17E

NE4

Legacy Farms LLC

½ minerals

PO Box 5

Chanute, KS 66720

Kepley Enterprises LLC ½ minerals term

3035 160th Rd

Chanute, KS 66720

35-27S-17E

tract in SE4

William A. & Deborah Ellis

19135 Brown Rd Chanute, KS 66720

tract in SE4

Galen E Thorsell Rev Trust

1305 W 4th St Chanute, KS 66720

<u>36-27S-17E</u>

tract in SW4

Douglas & Jennifer Dietsch

19220 Brown Rd Chanute, KS 66720

# MCMILLEN, BILLY D 1-1-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

Operators, Unleased Mineral Ow	vners and Landowners acreage		and the second
h additional sheets if necessary)			
Name:		Legal Description of Leasehold	:
E ATTACHED			
-			
			<u> </u>
·			
by certify that the statements made her	rein are true and correct to the best	of my knowledge and belief.	
	Subscribed and sworn ber	fore me this Alpha day of OCTOBER	2012
JENNIFER R. BE MY COMMISSION E)	KPIRES	ary Public of Beal	
JENNIFER R. BE MY COMMISSION E)  7-20-2016	KPIRES	Commission Expires: July 20, 2016	
SEAL MY COMMISSION EX	KPIRES	Commission Expires: July 20, 2016	
SEAL MY COMMISSION EX	KPIRES	Commission Expires: July 20, 2016	
SEAL MY COMMISSION EX	KPIRES	Commission Expires: July 20, 2019	
SEAL MY COMMISSION EX	KPIRES	Commission Expires: July 20, 2016	
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#### MCMILLEN, BILLY D 1-1

1-28S-17E

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N2NE/4 less tract

**Ruthanne Waggoner** 

2615 190th Rd Chanute, KS 66720

tract in NW/4

Robert McMillen 2375 190th Rd

Chanute, KS 66720

tract in NW/4 NW/4

**Union Valley Cemetary** 

Chanute, KS 66720

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36-27S-17E

tract in SW4

Douglas & Jennifer Dietsch

19220 Brown Rd Chanute, KS 66720

#### **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: \$137.20

#### LEGAL PUBLICATION

Published in The Wichita Eagle October 27, 2012 (3214835) BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

NOTICE OF FILING APPLICATION NOTICE OF FILING APPLICATION
RE: In the Matter of Postrock
Midcontinent Production, LLC Application
for Commingling of Production in the
McMillen, Billy D 1-1 located in Neosho
County, Kansas.
TO: All Oll & Gas Producers, Unleased
Mineral Interest Owners, Landowners, and
all persons whomever concerned.

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 and Bartlesville producing formallons at the McMillen, Billy D 1-1, located in the NE SW NE NW, S1-T28S-R17E, Approximately 670 FNL & 1976 FWL, Neosho County, Kansas.

Any persons who object to or protest this application shall be required to file their objections or protest with the Conservation.

Any persons who object to or profest this application shall be required to file their objections or profest with the Conservation Division of the State Corporation Commission of the State of Kansas within fifteen (15) days from the date of this publication. These profests shall be filed oursuant to Commission regulations and must state specific reasons why granting the application may cause waste, violate correlative rights or pollute the natural resources of the State of Kansas.

All persons interested or concerned shall take notice of the foregoing and shall govern themselves accordingly. All person and/or companies wishing to profest this application are required to file a written profest with the Conservation Division of the Kansas Oil and Gas Commission.

Upon the receipt of any protest, the Commission will convene a hearing and profestants will be expected to enter an appearance either through proper legal counsel or as individuals, appearing on their own behalf.

Postrock Midcontinent Production, LLC

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

# 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 McMillen, Billy D 1-1 located in Neosho County, Kansas.

TO: All Oil & Gas Producers, Unleased Mineral Interest Owners, Landowners, and all persons whomever concerned.

You, and each of you, are hereby notified that Postrock Midcontinent Production, LLC has filed an application to commingle the Summit, Mulky, Croweburg, Fleming, Tebo and Bartlesville producing formations at the McMillen, Billy D 1-1, located in the NE SW NE NW, S1-T28S-R17E, Approximately 670 FNL & 1976 FWL, Neosho County, Kansas.

Any persons who object to or protest this application shall be required to file their objections or protest with the Conservation Division of the State Corporation Commission of the State of Kansas within fifteen (15) days from the date of this publication. These protests shall be filed pursuant to Commission regulations and must state specific reasons why granting the application may cause waste, violate correlative rights or pollute the natural resources of the State of Kansas.

All persons interested or concerned shall take notice of the foregoing and shall govern themselves accordingly. All person and/or companies wishing to protest this application are required to file a written protest with the Conservation Division of the Kansas Oil and Gas Commission.

Upon the receipt of any protest, the Commission will convene a hearing and protestants will be expected to enter an appearance either through proper legal counsel or as individuals, appearing on their own behalf.

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

A COPY OF THE AFFIDAVIT OF PUBLICATION MUST ACCOM-PANY ALL APPLICATIONS

# Affidavit of Publication A

STATE OF KANSAS, NEOSHO COUNTY, ss: Rhonda Howerter, being first duly sworn, deposes and says: That she is Classified Manager of THE CHANUTE TRIBUNE, a daily newspaper printed in the State of Kansas, and published in and of general circulation in Neosho County, Kansas, with a general paid circulation on a daily basis in Neosho County, Kansas, and that said newspaper is not a trade, religious or fraternal publication.

Said newspaper is a daily published at least weekly 50 times a year: has been so published continuously and uninterruptedly in said county and state for a period of more than five years prior to the first publication of said notice; and has been admitted at the post office of Chanute, in said county as second class matter.

That the attached notice is a true copy thereof and was published in the regular and entire issue of said newspaper for
, 2012, 2012
, 2012, 2012
Phonda dowertor
Subscribed and sworn to and before me this
My commission expires: January 9, 2015
Printer's Fee\$ 10.14
Affidavit, Notary's Fee\$ 3.00
Additional Copies\$\$
Total Publication Fees\$73,14



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 13, 2012

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

RE: Approved Commingling CO111202

McMillen, Billy D. 1-1, Sec. 1-T28S-R17E, Neosho County

API No. 15-133-26673-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on November 2, 2012, has been reviewed and approved by the Kansas Corporation Commission (KCC) per K.A.R. 82-3-123. Notice was examined and found to be proper per K.A.R. 82-3-135a. No protest had been filed within the 15-day protest period.

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

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

Commingling ID number CO111202 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