



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

OPERATOR: License # \_\_\_\_\_ API No. 15 - \_\_\_\_\_  
Name: \_\_\_\_\_ Spot Description: \_\_\_\_\_  
Address 1: \_\_\_\_\_ - - - - - Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
Address 2: \_\_\_\_\_ Feet from  North /  South Line of Section  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_ Feet from  East /  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): \_\_\_\_\_  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_  
Formation: \_\_\_\_\_ (Perfs): \_\_\_\_\_

2. Estimated amount of fluid production to be commingled from each interval:  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_  
Formation: \_\_\_\_\_ BOPD: \_\_\_\_\_ MCFPD: \_\_\_\_\_ BWPD: \_\_\_\_\_

3. Plat map showing the location of the subject well, all other wells on the subject lease, and all wells on offsetting leases within a 1/2 mile radius of the subject well, and for each well the names and addresses of the lessee of record or operator.

4. Signed certificate showing service of the application and affidavit of publication as required in K.A.R. 82-3-135a.

**For Commingling 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 well.

**For Commingling of FLUIDS ONLY, include the following:**

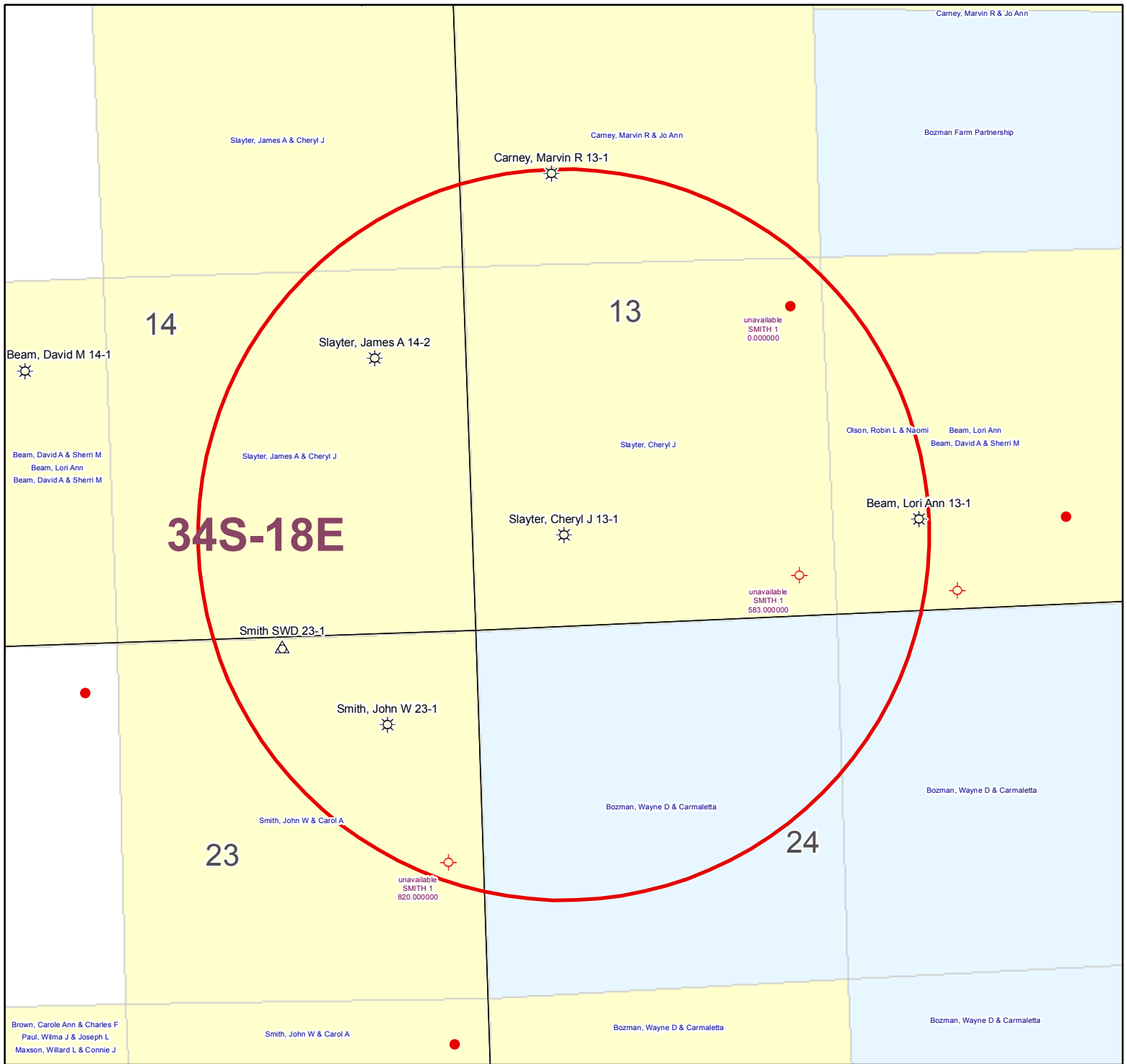
- 7. Well construction diagram of subject well.
- 8. Any available water chemistry data demonstrating the compatibility of the fluids to be commingled.

**AFFIDAVIT:** I am the affiant and hereby certify that to the best of my current information, knowledge and personal belief, this request for commingling is true and proper and I have no information or knowledge, which is inconsistent with the information supplied in this application.

**Submitted Electronically**

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

*Protests may be filed by any party having a valid interest in the application. Protests must be in writing and comply with K.A.R. 82-3-135b and must be filed within 15 days of publication of the notice of application.*



**KGS STATUS**

	DA/PA
	EOR
	GAS
	INJ/SWD
	OIL
	OIL/GAS
	OTHER

Slayter, Cheryl J 13-1  
 13-34S-18E  
 1" = 1,000'

ORIGINAL

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
September 1999  
Form Must Be Typed

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 33344  
Name: Quest Cherokee, LLC  
Address: 211 W. 14th Street  
City/State/Zip: Chanute, KS 66720  
Purchaser: Bluestem Pipeline, LLC  
Operator Contact Person: Jennifer R. Smith  
Phone: (620) 431-9500  
Contractor: Name: MICHAEL DRILLING  
License: 33783  
Wellsite Geologist: Ken Recoy

Designate Type of Completion:  
 New Well  Re-Entry  Workover  
 Oil  SWD  SLOW  Temp. Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, WSW, Expl., Cathodic, etc)

If Workover/Re-entry: Old Well Info as follows:  
Operator: \_\_\_\_\_  
Well Name: \_\_\_\_\_  
Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_  
 Deepening  Re-perf.  Conv. to Enhr./SWD  
 Plug Back \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Dual Completion \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Other (SWD or Enhr.?) \_\_\_\_\_ Docket No. \_\_\_\_\_

<u>7/28/09</u>	<u>7/29/09</u>	<u>7/30/09</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 099-24547-0000  
County: LABETTE  
\_\_\_\_\_ SW \_\_\_\_\_ Sec. 13 Twp. 34 S. R. 18  East  West  
660 feet from (S) N (circle one) Line of Section  
660 feet from E (W) (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
(circle one) NE SE NW SW  
Lease Name: SLAYTER, CHERYL J. Well #: 13-1  
Field Name: Cherokee Basin CBM

Producing Formation: NOT YET COMPLETED  
Elevation: Ground: 889 Kelly Bushing: n/a  
Total Depth: 941 Plug Back Total Depth: 936.22  
Amount of Surface Pipe Set and Cemented at 23 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set \_\_\_\_\_ Feet  
If Alternate II completion, cement circulated from 936.22  
feet depth to surface w/ 125 \_\_\_\_\_ sx cmt.

*AIT 2-Dlg - 10/13/09*

**Drilling Fluid Management Plan**  
(Data must be collected from the Reserve Pit)  
Chloride content \_\_\_\_\_ ppm Fluid volume \_\_\_\_\_ bbls  
Dewatering method used \_\_\_\_\_  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License No.: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Docket No.: \_\_\_\_\_

**INSTRUCTIONS:** An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.

Signature: Jennifer R. Smith  
Title: New Well Development Coordinator Date: 10/12/09  
Subscribed and sworn to before me this 12<sup>th</sup> day of October,  
09.  
Notary Public: Debra Klauman  
Date Commission Expires: 8-4-2010

**KCC Office Use ONLY**  
 Letter of Confidentiality Received  
 If Denied, Yes  Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
**RECEIVED**  
**OCT 13 2009**

**TERRA KLAUMAN**  
Notary Public - State of Kansas  
My Appt. Expires 8-4-2010

**KCC WICHITA**

Operator Name: Quest Cherokee, LLC Lease Name: SLAYTER, CHERYL J. Well #: 13-1  
 Sec. 13 Twp. 34 S. R. 18  East  West County: LABETTE

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach copy of all Electric Wireline Logs surveyed. Attach final geological well site report.

<p>Drill Stem Tests Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <i>(Attach Additional Sheets)</i></p> <p>Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <i>(Submit Copy)</i></p> <p>List All E. Logs Run:</p> <p style="font-size: 1.2em; margin-top: 10px;"><b>Compensated Density Neutron Log Dual Induction Log</b></p>	<p><input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample</p> <p>Name Top Datum</p> <p>See attached</p>
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4	8-5/8"	22	23	"A"	5	
Production	7-7/8	5-1/2	14.5	936.22	"A"	125	

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
___ Perforate				
___ Protect Casing				
___ Plug Back TD				
___ Plug Off Zone				

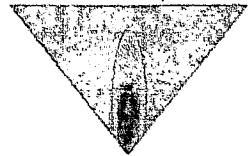
Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth
	WAITING ON PIPELINE		

TUBING RECORD		Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumerd Production, SWD or Enhr.			Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
Estimated Production Per 24 Hours	Oil Bbbs.	Gas Mcf	Water Bbbs.	Gas-Oil Ratio	Gravity

Disposition of Gas	METHOD OF COMPLETION	Production Interval
<input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify) _____	_____

# QUEST

Resource Corporation

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

TICKET NUMBER

6881

FIELD TICKET REF #

FOREMAN DwayneSSI 029310API B-099-24547TREATMENT REPORT  
& FIELD TICKET CEMENT

DATE	WELL NAME & NUMBER			SECTION	TOWNSHIP	RANGE	COUNTY
7-30-09	Slayer Cheryl J 13-1			13	34	18	LB
FOREMAN / OPERATOR	TIME IN	TIME OUT	LESS LUNCH	TRUCK #	TRAILER #	TRUCK HOURS	EMPLOYEE SIGNATURE
Dwayne	6:30	4:00		904850		9.5	<i>Dwayne</i>
Wes	6:30	4:00		903197		9.5	<i>Wes Thain</i>
John	6:30	4:00		903600		9.5	<i>John</i>
Todd	6:30	4:00		Helper		9.5	
Jason	6:30	4:00				9.5	<i>Jason</i>

JOB TYPE Long String HOLE SIZE 7 7/8 HOLE DEPTH 941 CASING SIZE & WEIGHT 5 1/2 / 14 #  
CASING DEPTH 936.22 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
SLURRY WEIGHT 13.5 SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 0  
DISPLACEMENT 22.4 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE 4 BPM

## REMARKS:

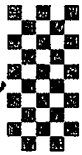
Run IN 936.22 Ft OF 5 1/2 Casing - Then Hook onto well and Break circulation Pump 6 SKs. Prem gel Followed By 15 BBL Dye marker. Start cement and Pump 125 Sacks to get Dye marker Back. Stop and Flush Pump. Then pump wiper Plug to Bottom and Set Float Shoe.

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION OF SERVICES OR PRODUCT	TOTAL AMOUNT
904850	9.5	Foreman Pickup	
903197	9.5	Cement Pump Truck	
903600	9.5	Bulk Truck	
931385	9.5	Transport Truck	
	9.5	Transport Trailer	
	9.5	80 Vac	
	936.22	Casing 5 1/2	
	5	Centralizers	
	1	Float Shoe	
	1	Wiper Plug	
	2	Frac Baffles	
	115 SK	Portland Cement	
	12 SK	Gilsonite	
	1 SK	Flo-Seal	
	18 SK	Premium Gel 12 In Load 6 Ahead of Job	
	3 SK	Cal Chloride	
	1 Gal	KCL	
	7000 Gal	City Water	

RECEIVED

OCT 13 2009

KCC WICHITA



**Michael Drilling, LLC**  
P.O. Box 402  
Iola, KS 66749  
620-365-2755

072909

Company: Quest Cherokee LLC  
Address: 210 Park Ave. Suite 2750  
Oklahoma City, Oklahoma 73102  
Ordered By: Richard Marlin

Date: 07/29/09  
Lease: Slyter, Cheryl J.  
County: Labette  
Well#: 13-1  
API#: 15-099-24547-00-00

**Drilling Log**

FEET	DESCRIPTION	FEET	DESCRIPTION
0-23	Overburden	432-445	Shale
23-154	Shale	445-450	Black Shale and Coal
154-179	Lime	450-538	Shale
179-183	Black Shale	538-540	Black Shale and Coal
183-250	Shale	540-547	Sandy Shale
233	Gas Test. 0"at 1/4" Choke	547-549	Coal
250-280	Lime	549-570	Sandy Shale
280-283	Black Shale	565	Gas Test 48"at 1/2" Choke
283-316	Lime	570-590	Sand
313	Gas Test 5"at 1/2" Choke	590-650	Sandy Shale
316-321	Black Shale	650-667	Sand
321-336	Lime	667-811	Shale
336-340	Shale	740	Went To Water
340	Gas Test 35"at 1/2" Choke	811-813	Coal
340-345	Lime	813-818	Shale
345-390	Shale	815	Gas Test 38"at 1/2" Choke
390-391	Coal	818-940	Mississippi Lime
391-400	Shale	820	Oil Oder
400-401	Coal	840	Gas Test 44"at 1/2" Choke
401-421	Shale	940	Gas Test 44"at 1/2" Choke
421-423	Lime	940	TD
423-425	Black Shale		
425-427	Lime		Surface 23'
427-432	Black Shale and Coal		

RECEIVED

OCT 13 2009

KCC WICHITA

	A	B	C	D	E	F	G	H	I	J	K	
1	Produced Fluids #		1	2	3	4	5		<a href="#">Click here to run SSP</a>  Goal Seek SSP		Click	
2	Parameters	Units	Input	Input	Input	Input	Input					Click
3	Select the brines	Select fluid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Mixed brine:				
4	Sample ID	by checking						Cell H28 is				
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				Click
8	Location		#34-1	#4-1	#5-4	#1	#2	mixed brines				
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 (Final-Initial)	
11	K <sup>+</sup> (if not known =0)	(mg/l)						0.00	Saturation Index values			
12	Mg <sup>2+</sup>	(mg/l)	1,096.00	872.00	1,200.00	953.00	858.00	995.91	Calcite			
13	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	
14	Sr <sup>2+</sup>	(mg/l)						0.00	Barite			
15	Ba <sup>2+</sup>	(mg/l)						0.00				
16	Fe <sup>2+</sup>	(mg/l)	40.00	21.00	18.00	82.00	90.00	50.21	Halite			
17	Zn <sup>2+</sup>	(mg/l)						0.00	-1.77	-1.80	-0.03	
18	Pb <sup>2+</sup>	(mg/l)						0.00	Gypsum			
19	Cl <sup>-</sup>	(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	Hemihydrate			
21	F <sup>-</sup>	(mg/l)						0.00	-3.96	-3.90	0.06	
22	Br <sup>-</sup>	(mg/l)						0.00	Anhydrite			
23	SiO <sub>2</sub>	(mg/l) SiO <sub>2</sub>						0.00	-3.47	-3.36	0.12	
24	HCO <sub>3</sub> Alkalinity**	(mg/l as HCO <sub>3</sub> )	190.00	234.00	259.00	268.00	254.00	241.03	Celestite			
25	CO <sub>3</sub> Alkalinity	(mg/l as CO <sub>3</sub> )										
26	Carboxylic acids**	(mg/l)						0.00	Iron Sulfide			
27	Ammonia	(mg/L) NH <sub>3</sub>						0.00	-0.16	-0.22	-0.06	
28	Borate	(mg/L) H <sub>3</sub> BO <sub>3</sub>						0.00	Zinc 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				
32	H <sub>2</sub> S Gas Analysis***	(%)	0.0289	0.0292	0.0296	0.0306	0.0151	0.0269	Iron Carbonate			
33	Total H <sub>2</sub> Saq	(mgH <sub>2</sub> S/l)	1.00	1.00	1.00	1.00	0.50	0.90	-0.74	-0.51	0.23	
34	pH <sub>i</sub> measured (STP)	pH	5.67	5.76	5.72	5.54	5.55	5.63	Inhibitor needed (mg/L)			
35	Choose one option to calculate SI?	0-CO <sub>2</sub> %+Alk, 1-pH+Alk, 2-CO <sub>2</sub> %+pH	0	0	0	0	0	0	Calcite	NTMP		
36	Gas/day(thousand cf/day)	(Mc/D)						0	0.00	0.00		
37	Oil/Day	(B/D)	0	0	1	1	1	4	Barite	BHPMP		
38	Water/Day	(B/D)	100	100	100	100	100	500	0.00	0.00		
39	For mixed brines, enter values for temperatures and pressures in Cells (H40-H43)								(Enter H40-H43)			
40	Initial T	(F)	66.0	71.0	70.0	41.0	49.0	60.0	5.69	5.60		
41	Final T	(F)	66.0	71.0	70.0	41.0	49.0	89.0	Viscosity (CentiPoise)			
42	Initial P	(psia)	25.0	25.0	25.0	25.0	25.0	25.0	1.196	0.826		
43	Final P	(psia)	25.0	25.0	25.0	25.0	25.0	120.0	Heat Capacity (cal/ml <sup>0</sup> C)			
44	Use TP on Calcite sheet?	1-Yes;0-No							0.955	0.959		
45	API Oil Grav.	API grav.						30.00	Inhibitor needed (mg/L)			
46	Gas Sp.Grav.	Sp.Grav.						0.60	Gypsum	HDTMP		
47	MeOH/Day	(B/D)	0					0	0.00	0.00		
48	MEG/Day	(B/D)	0					0	Anhydrite	HDTMP		
49	Conc. Multiplier								0.00	0.00		
50	H <sup>+</sup> (Strong acid) <sup>†</sup>	(N)										
51	OH <sup>-</sup> (Strong base) <sup>†</sup>	(N)										
52	Quality Control Checks at STP:											
53	H <sub>2</sub> S Gas	(%)										
54	Total H <sub>2</sub> Saq (STP)	(mgH <sub>2</sub> S/l)										
55	pH Calculated	(pH)										
56	PCO <sub>2</sub> Calculated	(%)										
57	Alkalinity Cacluated	(mg/l) as HCO <sub>3</sub>										
58	ΣCations=	(equiv./l)										
59	ΣAnions=	(equiv./l)										
60	Calc TDS=	(mg/l)										
61	Inhibitor Selection	Input	Unit	#	Inhibitor	Unit Converter (From metric to English)						
62	Protection Time	120	min	1	NTMP	From Unit	Value	To Unit	Value			
63	Have ScaleSoftPitzer			2	BHPMP	°C	80	°F	176			
64	pick inhibitor for you?	1	1-Yes;0-No	3	PAA	m <sup>3</sup>	100	ft <sup>3</sup>	3,531			
65	If No, inhibitor # is:	4	#	4	DTPMP	m <sup>3</sup>	100	bb(42 US gal)	629			
66	If you select Mixed,			5	PPCA	MPa	1,000	psia	145,074			
67	1 <sup>st</sup> inhibitor # is:	1	#	6	SPA	Bar	496	psia	7,194			
68	% of 1 <sup>st</sup> inhibitor is:	50	%	7	HEDP	Torr	10,000	psia	193			
69	2 <sup>nd</sup> inhibitor # is:	2	#	8	HDTMP	Gal	10,000	bb(42 US gal)	238			
70	Display act. coeffs?	0	1-Yes;0-No	9	Average	Liters	10,000	bb(42 US gal)	63			
71				10	Mixed							

## 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

Component (mg/L)	Ratio					Mixed Brine
	20% Brine 1	20% Brine 2	20% Brine 3	20% Brine 4	20 Brine 5	
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

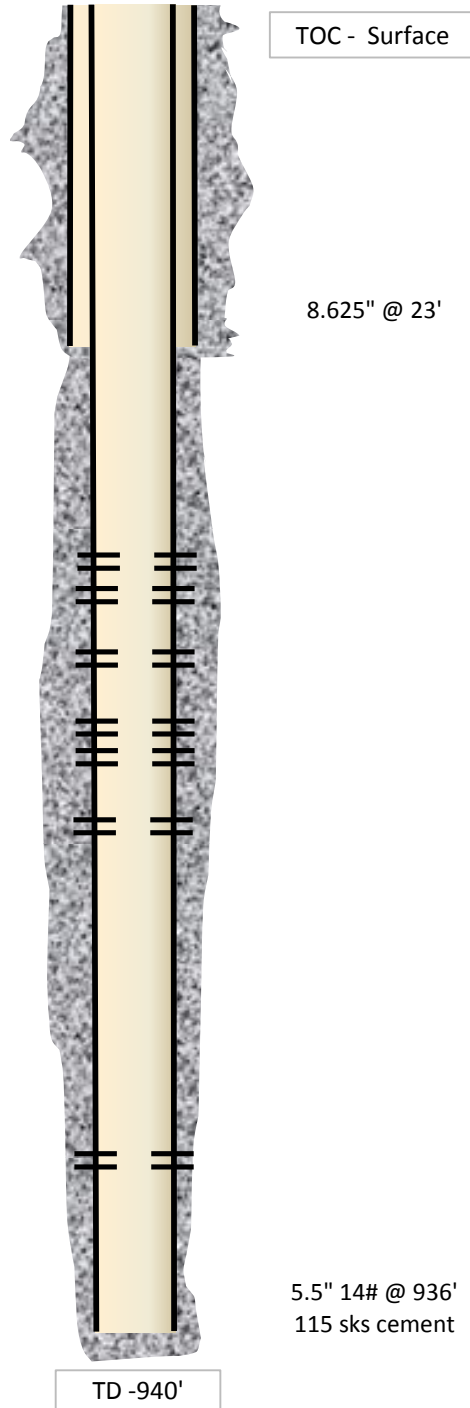




## Wellbore Schematic

**WELL:** Slayter, Cheryl J 13-1  
**SSI:** 629310  
**API:** 15-099-24547-00-00  
**LOCATION:** SW SW Sec. 13-34S-18E  
**COUNTY:** Labette  
**STATE:** Kansas

Casing	8.625" @ 23' 5.5" 14# J-55, 5.01" ID w/ 0.0244 bbl/ft capacity @ 936'
Perforations	Original Perfs: 3/1/2010 - Riverton 809-811 (8) - Tebo 551-553 (8) - Fleming 468-470 (8) - Fleming 453-455 (8) - Iron Post 392-394 (8) - Mulky 319-323 (16) - Summit 289-293 (16)
Completions	Spud Date: 7/28/2009 Completion date: 3/1/2010 Riverton: - 1900# 20/40 - 300 gals 15% - 493 bbls - 11 bpm Tebo/Flem/Iron Post: - 7500# 20/40 - 400 gals 15% - 664 bbls - 16 bpm Mulky/Summit: - 3800# 20/40 - 300 gals 15% - 642 bbls - 16 bpm





SLAYTER, CHERYL J 13-1 - APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

[Redacted]

[Redacted]

**Offset Operators, Unleased Mineral Owners and Landowners acreage**

(Attach additional sheets if necessary)

Name:

Legal Description of Leasehold:

POSTROCK MIDCONTINENT PRODUCTION, LLC

POSTROCK HAS LEASED ALL ACREAGE IN THE 1/2  
MILE RADIUS

[Empty lines for Name]

[Empty lines for Legal Description of Leasehold]

I hereby certify that the statements made herein are true and correct to the best of my knowledge and belief.

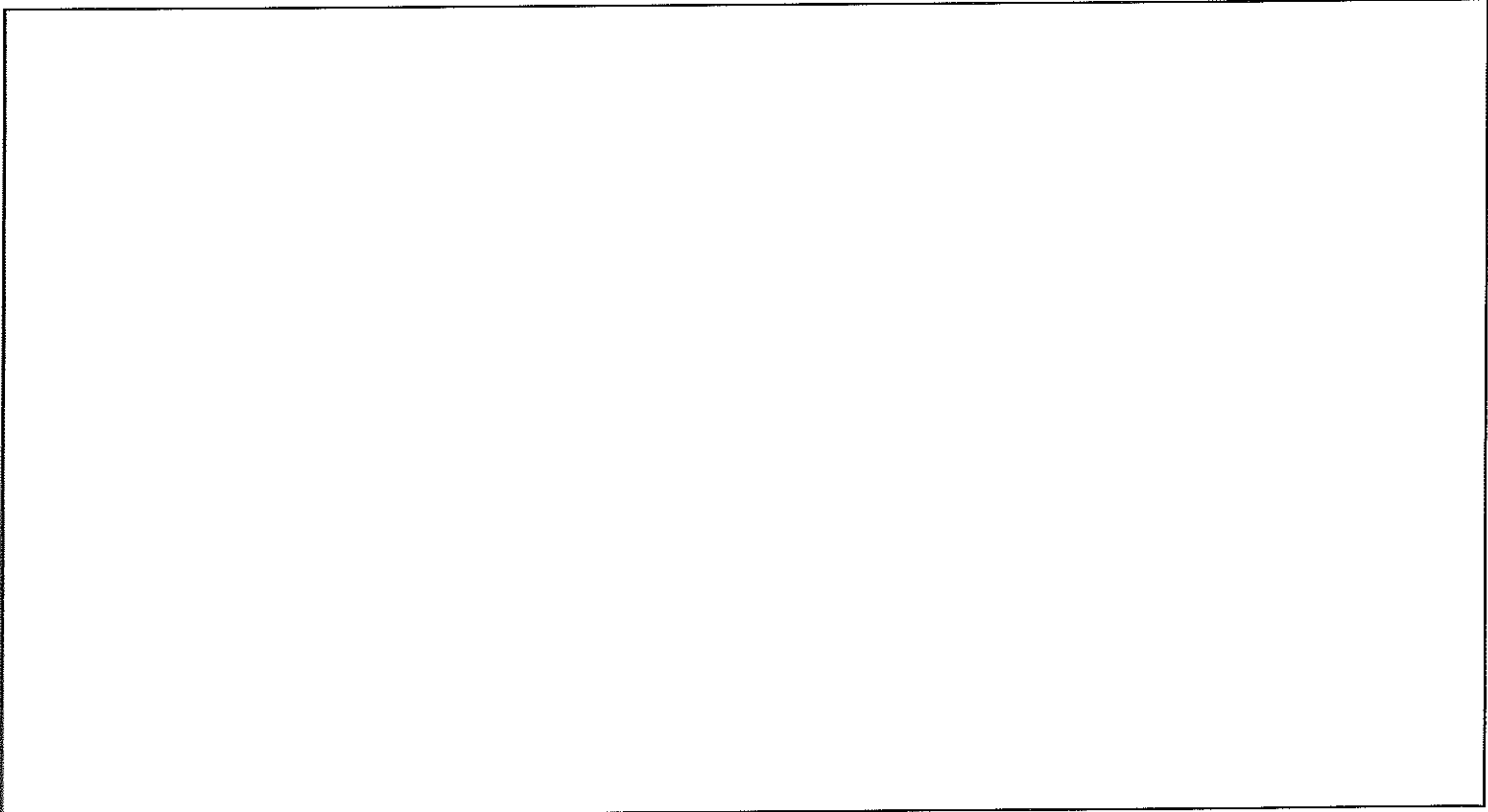
*Jay L Morris*  
Applicant or Duty Authorized Agent

Subscribed and sworn before me this 7<sup>th</sup> day of AUGUST, 2012



*Jennifer R Beal*  
Notary Public

My Commission Expires: July 20, 2016



[ ]

[ ]

**Affidavit of Notice Served**

Re: Application for: APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS ACO-4

Well Name: SLAYTER, CHERYL J 13-1 Legal Location: SWSW S13-T34S-R18E

The undersigned hereby certifies that he / she is a duly authorized agent for the applicant, and that on the day 7TH of AUGUST, 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)
POSTROCK MIDCONTINENT PRODUCTION, LLC	210 PARK AVENUE, SUITE 2750, OKLAHOMA CITY, OK 73102-5641

I further attest that notice of the filing of this application was published in the PARSONS SUN, the official county publication of LABETTE county. A copy of the affidavit of this publication is attached.

Signed this 7TH day of AUGUST, 2012

Jess L Morris  
Applicant or Duly Authorized Agent

Subscribed and sworn to before me this 7th day of AUGUST, 2012



Jennifer R Beal  
Notary Public

My Commission Expires: July 20, 2014

[ ]

# Affidavit of Publication

STATE OF KANSAS, LABETTE COUNTY, ss:  
*Kim Root*, being first duly sworn,  
 deposes and says: That *she* is *Classified Manager*  
 of *PARSONS SUN*, a daily newspaper printed in the State  
 of Kansas, and published in and of general circulation in  
 Labette County, Kansas, with a general paid circulation  
 on a daily basis in Labette 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 unin-  
 interruptedly 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 Parsons, 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 newspa-  
 per for 1 consecutive day, the first publication  
 thereof being made as aforesaid on the 17 day of  
July 2012, with subsequent publications being made  
 on the following dates:

\_\_\_\_\_, 2012 \_\_\_\_\_, 2012


\_\_\_\_\_, 2012 \_\_\_\_\_, 2012

*Kimberly Orose*  
 \_\_\_\_\_

Subscribed and sworn to and before me this 23  
 day of July, 2012

*[Signature]*  
 \_\_\_\_\_  
 Notary Public

My commission expires: January 9, 2015  
 Printer's Fee ..... \$ 73.03  
 Affidavit, Notary's Fee ..... \$ 3.00  
 Additional Copies ..... \$ \_\_\_\_\_  
**Total Publication Fees ..... \$ 76.03**


**SHANNA L. GUIOT**  
 Notary Public - State of Kansas  
 My Appt. Expires 1-9-15

## LEGAL

(Published in the Parsons Sun  
 July 17, 2012)

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

RE: In the Matter of Postrock Mid-  
 continent Production, LLC Appli-  
 cation for Commingling of Production  
 in the Slayter, Cheryl J 13-1 located  
 in Labette County, Kansas.

TO: All Oil & Gas Producers, Un-  
 leased 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 appli-  
 cation to commingle the Riverton,  
 Tebo, Fleming, Iron Post, Mulky,  
 Summit and Bartlesville producing  
 formations at the Slayter, Cheryl J  
 13-1, located in the SW SW,  
 S13-T34S-R18E, Approximately  
 660 FSL & 660 FWL, Labette  
 County, Kansas.

Any persons who object to or pro-  
 test this application shall be re-

quired to file their objections or pro-  
 test with the Conservation Division  
 of the State Corporation Commis-  
 sion of the State of Kansas within  
 fifteen (15) days from the date of  
 this publication. These protests  
 shall be filed pursuant to Commis-  
 sion regulations and must state  
 specific reasons why granting the  
 application may cause waste, vio-  
 late correlative rights or pollute the  
 natural resources of the State of  
 Kansas.

All persons interested or con-  
 cerned shall take notice of the fore-  
 going and shall govern themselves  
 accordingly. All person and/or  
 companies wishing to protest this  
 application are required to file a  
 written protest with the Conserva-  
 tion Division of the Kansas Oil and  
 Gas Commission.

Upon the receipt of any protest,  
 the Commission will convene a  
 hearing and protestants will be ex-  
 pected to enter an appearance ei-  
 ther 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.

July 17

**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 19th of

July 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.

*Mark Fletchall*

Subscribed and sworn to before me this

19th day of July, 2012

PENNY L. CASE
Notary Public - State of Kansas
My Appt. Expires 5/28/2014

*Penny L. Case*
Notary Public Sedgwick County, Kansas

Printer's Fee : \$132.40

**LEGAL PUBLICATION**

PUBLISHED IN THE WICHITA EAGLE
ON JULY 19, 2012 (3196745)
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
Commingle of Production in the
Slayter, Cheryl J 13-1 located in Labette
County, Kansas.

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

You, and each of you, are hereby notified
that Postrock Midcontinent Production, LLC
has filed an application to commingle the
Riverton, Tebo, Fleming, Iron Post, Mulky,
Summit and Bartlesville producing formations
at the Slayter, Cheryl J 13-1, located in the SW
SW, S13-T34S-R18E, Approximately 660 FSL &
660 FWL, Labette 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

August 22 , 2012

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

RE: Approved Commingling CO081210  
Slayter, Cheryl J. 13-1, Sec.13-T34S-R18E, Labette County  
API No. 15-099-24547-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on August 9, 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 Rivertonl 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 CO081210 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