



KANSAS CORPORATION COMMISSION 1089933  
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)

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.*

	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)	(Mcf/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)		pH	
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

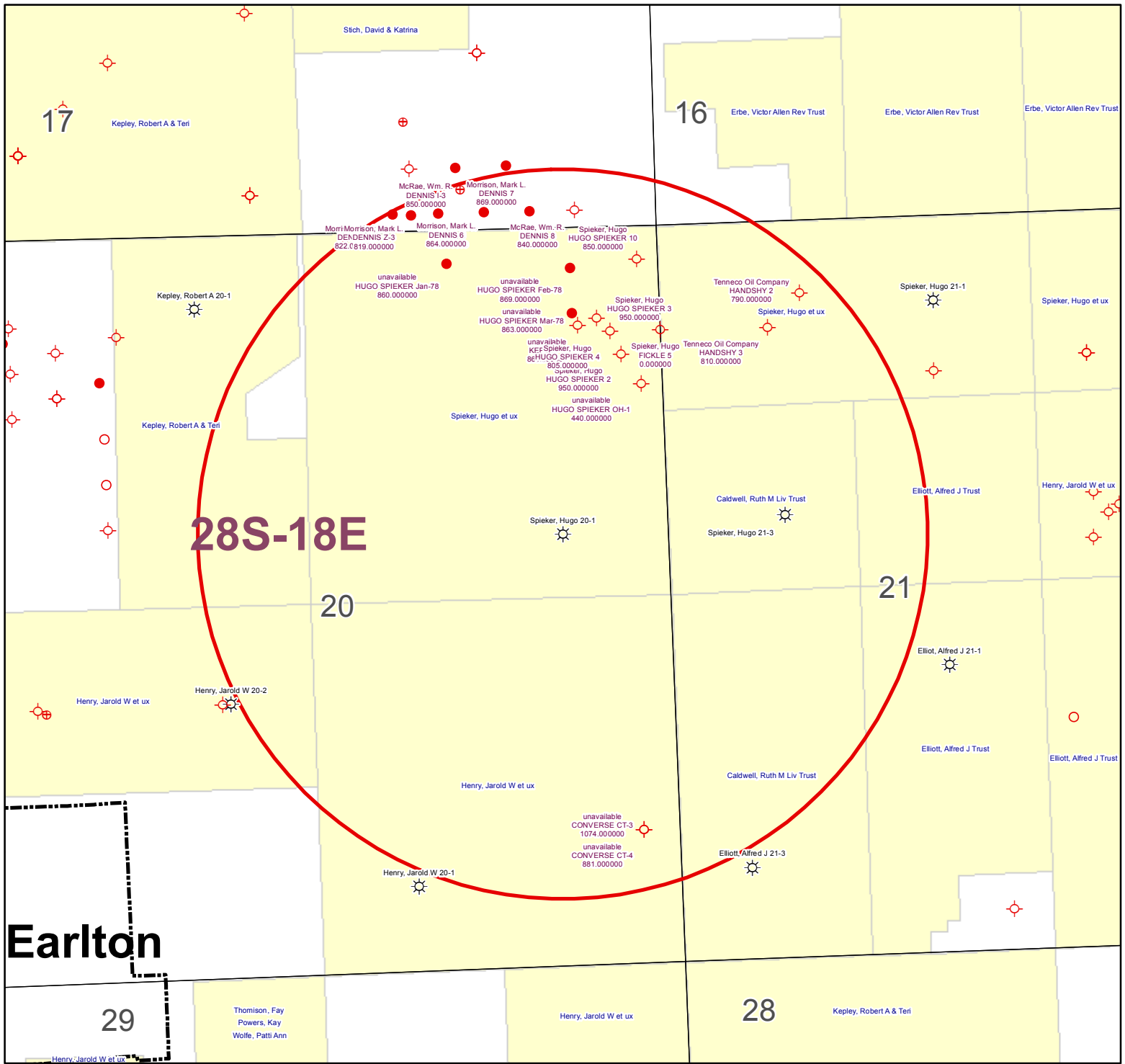
Component (mg/L)	Ratio					Mixed Brine
	20% Brine 1	20% Brine 2	20% Brine 3	20% Brine 4	20 Brine 5	
Calcium	1836	2452	2044	1920	1948	1952
Magnesium	1096	872	1200	953	858	865
Barium	0	0	0	0	0	0
Strontium	0	0	0	0	0	0
Bicarbonate	190	234	259	268	254	253
Sulfate	1	1	8	1	1	1
Chloride	36299	48965	47874	45632	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



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

**Speiker, Hugo 20-1**  
**20-28S-18E**  
**1" = 1,000'**

ORIGINAL

RECEIVED  
KANSAS CORPORATION COMMISSION

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

JUN 20 2006

Form ACO-1  
September 1999  
Form Must Be Typed

WELL COMPLETION FORM CONSERVATION DIVISION  
WELL HISTORY - DESCRIPTION OF WELL & LEASE WICHITA, KS

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: Gary Laswell  
Phone: (620) 431-9500  
Contractor: Name: Well Refined Drilling Company, inc  
License: 33072  
Wellsite Geologist: n/a

Designate Type of Completion:  
 New Well  Re-Entry  Workover  
 Oil  SWD  SIOW  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. \_\_\_\_\_

2/21/06 2/22/06 2/27/06  
Spud Date or Date Reached TD Completion Date or  
Recompletion Date Recompletion Date

API No. 15 - 133-26483-0000  
County: Neosho  
\_\_\_\_\_ se ne Sec. 20 Twp. 28 S. R. 18  East  West  
1980 feet from S /  (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: Spieker, Hugo Well #: 20-1  
Field Name: Cherokee Basin CBM

Producing Formation: Multiple  
Elevation: Ground: 950 Kelly Bushing: n/a  
Total Depth: 1130 Plug Back Total Depth: 1126.28  
Amount of Surface Pipe Set and Cemented at 20 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set \_\_\_\_\_ Feet  
If Alternate II completion, cement circulated from 1126.28  
feet depth to surface w/ 130 <sup>sx cmt.</sup>

**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.: \_\_\_\_\_

Alt 2-Dlg-11/10/08

**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: [Signature]  
Title: Head of Operations Date: 6/19/06  
Subscribed and sworn to before me this 19th day of June,  
20 06.  
Notary Public: Jennifer R. Ammann  
Date Commission Expires: July 30, 2009

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

JENNIFER R. AMMANN  
Notary Public - State of Kansas  
My Appt. Expires 7-30-09

Operator Name: Quest Cherokee, LLC Lease Name: Spieker, Hugo Well #: 20-1  
 Sec. 20 Twp. 28 S. R. 18  East  West County: Neosho

**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.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Submit Copy)</i>  List All E. Logs Run:  <b>Comp. Density/Neutron Log</b> <b>Dual Induction Log</b>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum <b>See Attached</b>
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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"	20#	20	"A"	4	
Production	6-3/4"	4-1/2"	10.5#	1126.28	"A"	130	

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 (Amount and Kind of Material Used)	Depth
4	1014-1018/853-855/870-872/754-756/774-776/715-718	200gal 15% HCL w/ 22 bbls 2% kcl water, 540bbls water w/ 2% KCL, Blockde 4200# 20/40 sand	1014-1018
4	614-618/602-606		
		500gal 15% HCL w/ 38 bbls 2% kcl water, 625bbls water w/ 2% KCL, Blockde 14000# 20/40 sand	853-855/870-872
			754-756
		400gal 15% HCL w/ 48 bbls 2% kcl water, 518bbls water w/ 2% KCL, Blockde 7300# 20/40 sand	614-618/602-606

TUBING RECORD		Size Set At	Packer At	Liner Run
2-3/8"		1044	n/a	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumerd Production, SWD or Enhr. 4/17/06		Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity
	n/a	26.5mcf	78.8bbls	

Disposition of Gas  Vented  Sold  Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify) \_\_\_\_\_

Production Interval \_\_\_\_\_

# QUEST

Resource Corporation

RECEIVED  
KANSAS CORPORATION COMMISSION

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

JUN 20 2006

CONSERVATION DIVISION  
WICHITA, KS

TICKET NUMBER 1255

FIELD TICKET REF # \_\_\_\_\_

FOREMAN Joe

## TREATMENT REPORT & FIELD TICKET CEMENT

DATE	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
6-27-06	Stieber Hugo 20-1	20	28	18	Ne

FOREMAN / OPERATOR	TIME IN	TIME OUT	LESS LUNCH	TRUCK #	TRAILER #	TRUCK HOURS	EMPLOYEE SIGNATURE
Joe F	11:30	7:00		903388		2.5	<i>[Signature]</i>
Tim A	4:30	7:15		903255		2.75	<i>[Signature]</i>
Purcell A	4:30	6:45		903206		2.25	<i>[Signature]</i>
David C	11:30	7:00		903296		2.5	<i>[Signature]</i>
Legg H	11:30	7:45		931500		3.25	<i>[Signature]</i>
MAVERICK D	11:30	7:00		extra		2.5	<i>[Signature]</i>

JOB TYPE log HOLE SIZE 6 3/4 HOLE DEPTH 1130 CASING SIZE & WEIGHT 4 1/2 10.5  
 CASING DEPTH 1126.28 DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT 11.3 SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING 0  
 DISPLACEMENT 17.96 DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE 46 gpm

REMARKS:

Run 2 sks premix gel surf to surface. Installed cement head Run 1 sk premix gel followed by 12 bbl dye + 140 SKS of cement to get dye to surface. Flushed pump. Pumped wiper plug to bottom + set float shoe

	1126.28	Ft 4 1/2 casing	
	5	Cement 112-25	
903139	1.5 hr	Casing truck	
930804	1.05 hr	Casing trailer	

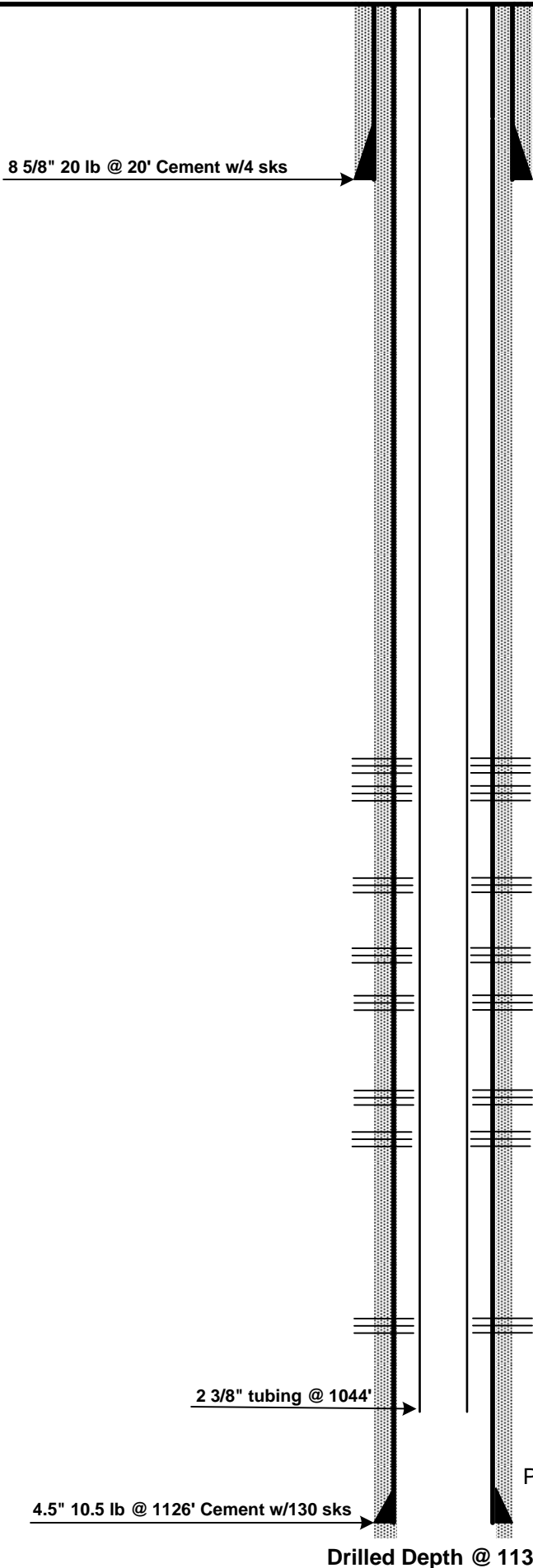
ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION OF SERVICES OR PRODUCT	TOTAL AMOUNT
903388	2.5 hr	Foreman Pickup	
903255	2.75 hr	Cement Pump Truck	
903206	2.25 hr	Bulk Truck	
1104	130 SK	Portland Cement	
1124	2	50/50 POZ Blend Cement Free Baffles 3 1/2 # 3	
1126	1	OWC - Blend Cement 4 1/2 wiper plug	
1110	14 SK	Gilsonite	
1107	15 SK	Flo-Seal	
1118	3 SK	Premium Gel	
1215A	1 gal	KCL	
1111B	3 SK	Sodium Silicate Chloride	
1123	700 gal	City Water	
903296	2.5 hr	Transport Truck	
932152	2.5 hr	Transport Trailer	
931500	3.25 hr	80 Vac	
1	1	4 1/2 Float shoe	



WELL : Spieker, Hugo 20-1  
 FIELD : Cherokee Basin  
 STATE : Kansas  
 COUNTY : Neosho

SPUD DATE : 2/21/2006  
 COMP DATE : 2/27/2006  
 API: 15-133-26483-00-00

LOCATION: 20-28S-18E (SE,NE)  
 ELEVATION: 950'



**Wellhead/Surface Equipment**

Tree Connection	
Tree	
Tubing Head	
Bradenhead	
Pumping Unit	
Compressor	

**Tubular Detail**

Size	Weight	Grade	Cap(bbl/ft)	Date	Depth
8 5/8"	20 lb			2006	20'
4 1/2"	10.5 lb		.0159	2006	1126'
2 3/8"				2006	1044'

**Downhole Equipment Detail**


**Completion Data**

Original as GAS Well per ACO-1
1,100 gals 15% HCL
1,681 bbls water
25,500 lbs 20/40 sand

**Perforations**

Original Completion:
602-606 Summit (17)
614-618 Mulky (17)
715-718 Croweburg (12)
754-756 Fleming (8)
774-776 Fleming (8)
853-855 Weir (8)
870-872 Weir (8)
1014-1018 Riverton (17)

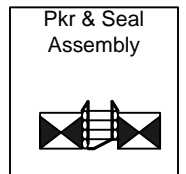
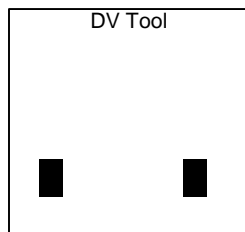
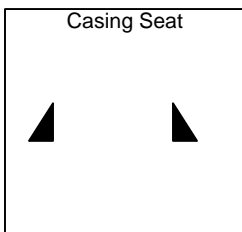
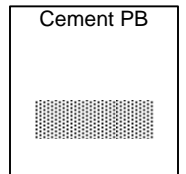
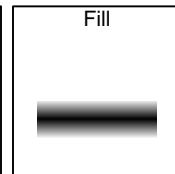
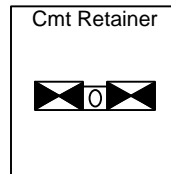
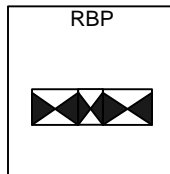
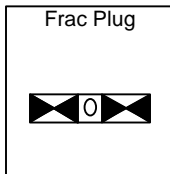
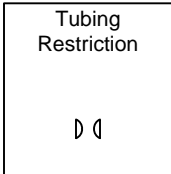
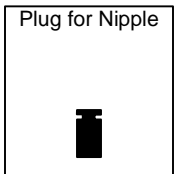
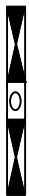
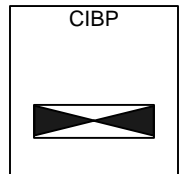
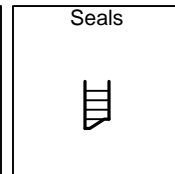
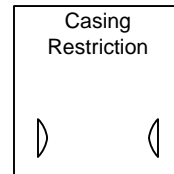
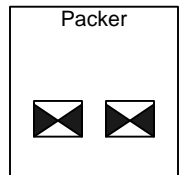
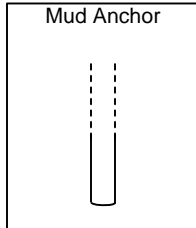
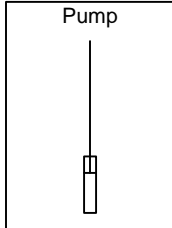
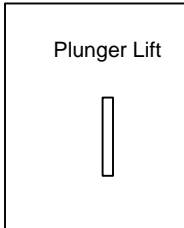
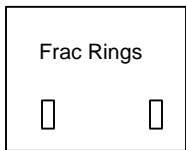
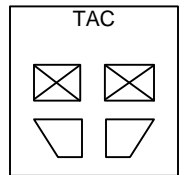
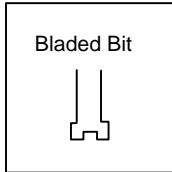
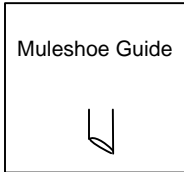
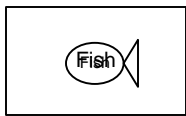
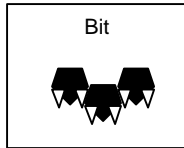
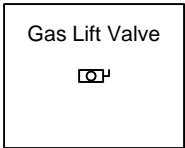
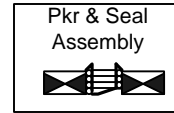
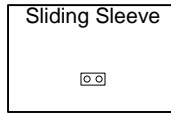
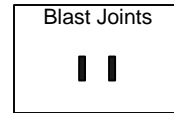
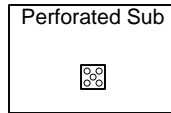
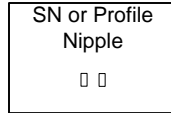
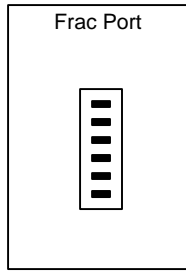
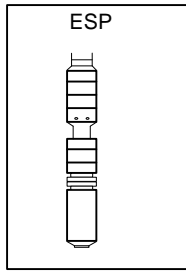


# POSTROCK



## LEGEND

PostRock®



# Affidavit of Publication

RE: In the Matter of **Postrock Midcontinent Production, LLC** Application for Commingling of Production in the **Spieker, Hugo 20-1** 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, Muiky, Croweburg, Fleming, Weir, Riverton and Cattleman** producing formations at the **Spieker, Hugo 20-1**, located in the **NESWSENE S20-T28S-R18E, Approximately 2216 FNL & 764 FEL, 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

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 1 consecutive time, the first publication thereof being made as aforesaid on the 16 day of August 2012, with subsequent publications being made on the following dates:

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

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

*Rhonda Howerter*

Subscribed and sworn to and before me this 16 day of August, 2012

*[Signature]*  
Notary Public

My commission expires: January 9, 2015

Printer's Fee ..... \$ 70.21

Affidavit, Notary's Fee ..... \$ 3.00

Additional Copies ..... \$ \_\_\_\_\_

**Total Publication Fees** ..... \$ 73.21

A COPY OF THE AFFIDAVIT OF PUBLICATION MUST ACCOMPANY ALL APPLICATIONS

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

**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 17th of

August A.D. 2012, with

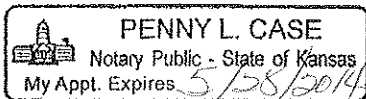
subsequent publications being made on the following dates:

And affiant further says that he has personal knowledge of the statements above set forth and that they are true.

*Mark Fletchall*

Subscribed and sworn to before me this

17th day of August, 2012



*Penny L Case*

Notary Public Sedgwick County, Kansas

Printer's Fee : \$139.60

**LEGAL PUBLICATION**  
PUBLISHED IN THE WICHITA EAGLE  
AUGUST 17, 2012 (3201720)  
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  
Speker, Hugo 20-1 located in Neosho  
County, Kansas.  
TO: All Oil & Gas Producers, Unleased  
Mineral Interest Owners, Landowners,  
and all persons whomsoever concerned.  
You, and each of you, are hereby notified  
that Postrock Midcontinent Production,  
LLC has filed an application to commingle  
the Summit, Mulky, Croweburg, Fleming,  
Weir, Riverton and Cattleman producing  
formations at the Speker, Hugo 20-1,  
located in the NESWSENE S20-T28S-R18E,  
Approximately 2216 FNL & 764 FEL, 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 ACCOMPANY ALL  
APPLICATIONS**



**Affidavit of Notice Served**

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

Well Name: SPIEKER, HUGO 20-1 Legal Location: NESWSENE S20-T28S-R18E

The undersigned hereby certifies that he / she is a duly authorized agent for the applicant, and that on the day 10<sup>th</sup> of SEPTEMBER, 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)
WM R MCRAE	12433 N 71ST ST, SCOTTSDALE, AZ 85254
MARK L MORRISON	1651 50TH RD, YATESCENTER, KS 66783
HUGO SPIEKER	15575 ELK RD, CHANUTE, KS 66720
TENNECO OIL COMPANY	7301 NW EXPRESSWAY, PO BOX 25420, OKLAHOMA CITY, OK 73125
SEE ATTACHED	

I further attest that notice of the filing of this application was published in the THE CHANUTE TRIBUNE, the official county publication of NEOSHO county. A copy of the affidavit of this publication is attached.

Signed this 10<sup>th</sup> day of SEPTEMBER, 2012

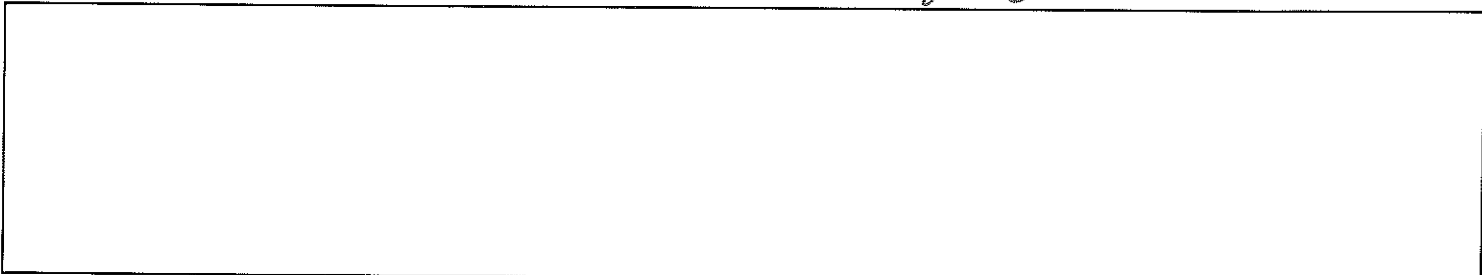
[Signature]  
Applicant or Duly Authorized Agent

Subscribed and sworn to before me this 10<sup>th</sup> day of SEPTEMBER, 2012



[Signature]  
Notary Public

My Commission Expires: July 20, 2016



17-28S-18E

Notes

S2SE4

Daryl D & Julia A Dennis  
4510 160TH RD  
Chanute, KS 66720

Garrett D Larue  
16125 ELK RD  
Chanute, KS 66720

Jack R Cheyney  
15775 IRVING RD  
Chanute, KS 66720

Richard N & Claudette J Dennis  
16225 FORD RD  
Chanute, KS 66720

Ronald S & Rhonda J Larue  
10435 170TH RD  
Chanute, KS 66720

16-28S-18E

per TO dtd 1.13.06

SW4SW4  
(tract of 12.643 acres)

David Dean Hibbs and Carolyn Hibbs  
16010 Elk Rd  
Chanute, KS 66720

(1.25 acres) \*acreage numbers pursuant page 2 of TO attached to e-mail

Rolland Dean Hibbs and Kathryn Evleen Hibbs  
5120 160th Rd  
Chanute, KS 66720

(7.0 acres)

Jerry L Fogle and Helen M Fogle  
16100 Elk Rd  
Chanute, KS 66720

(4.3 acres)

20-28S-18E

NE4NW4  
(5 acre tract)

Earlton Cemetery  
Chanute, KS 66720

\*TO attached to e-mail for your reference

SE4SW4  
(portion)

Jarold W & Marilyn S Henry  
14385 Elk Rd  
Chanute, KS 66720

SPIEKER, HUGO 20-1-APPLICATION FOR COMMINGLING OF PRODUCTION OR FLUIDS

[ ]

[ ]

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

(Attach additional sheets if necessary)

Name:

Legal Description of Leasehold:

SEE ATTACHED

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

*CHL EHL*

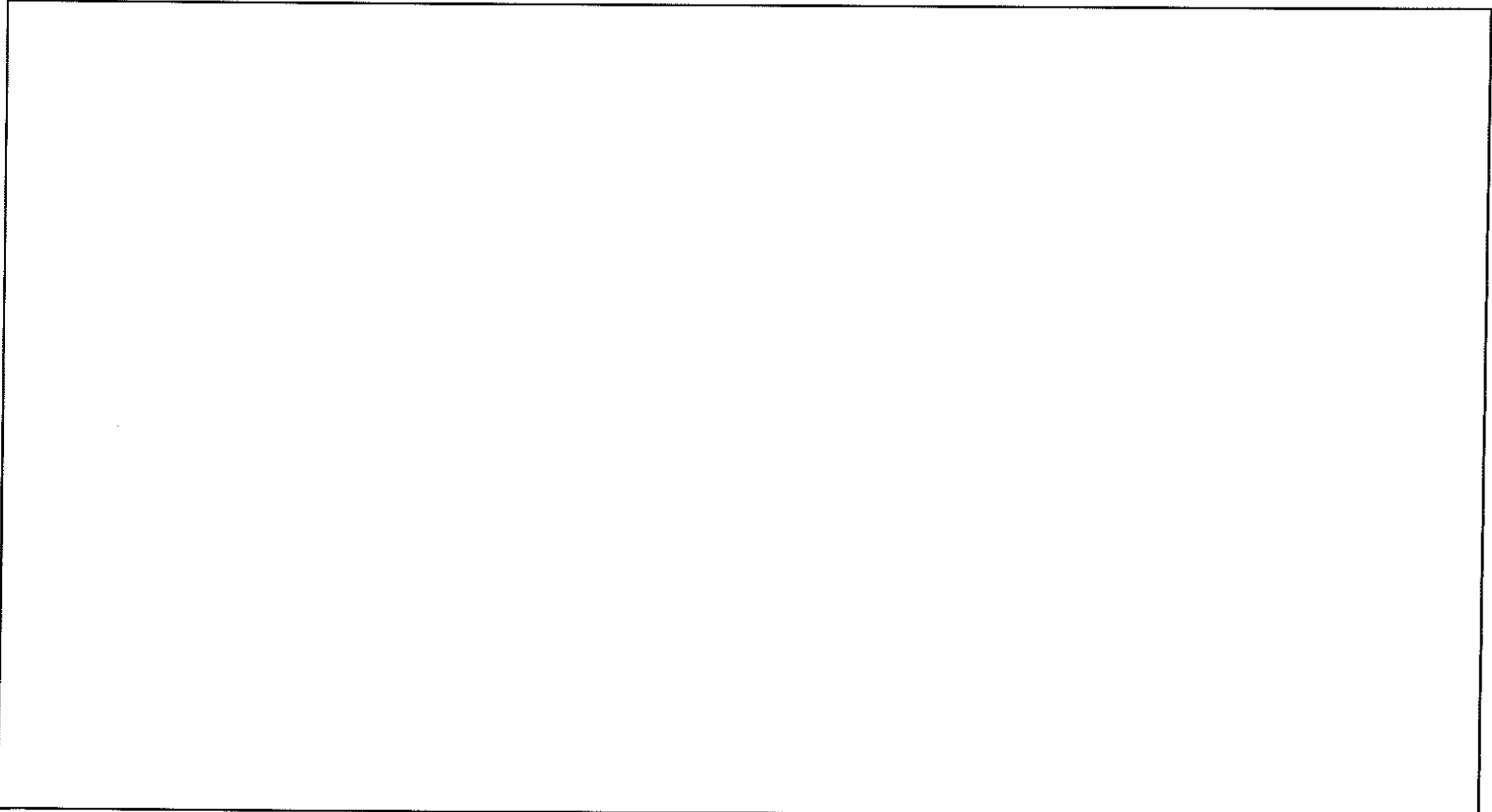
Applicant or Duly Authorized Agent

Subscribed and sworn before me this 10<sup>th</sup> day of SEPTEMBER, 2012



*JRB*  
*Jennifer R Beal*  
Notary Public

My Commission Expires: July 20, 2016



**SPIEKER, HUGO 20-1**

<b>LEGAL LOCATION</b>	<b>SPOT</b>	<b>CURR_OPERA</b>
S17-T28S-R18E	C S2 SE SE	McRae, Wm. R.
S17-T28S-R18E	SE SE	McRae, Wm. R.
S17-T28S-R18E	S2 SW SE	Morrison, Mark L.
S17-T28S-R18E	SE SW SE	Morrison, Mark L.
S17-T28S-R18E	S2 S2 S2 SE	Morrison, Mark L.
S17-T28S-R18E	SW SE SE	Morrison, Mark L.
S17-T28S-R18E	SW SE SW SE	Morrison, Mark L.
S20-T28S-R18E	NW NE	Spieker, Hugo
S20-T28S-R18E	NE NE NE NE	Spieker, Hugo
S20-T28S-R18E	NW SE NE NE	Spieker, Hugo
S20-T28S-R18E	SW NE NE NE	Spieker, Hugo
S20-T28S-R18E	NW SE NE NE	Spieker, Hugo
S21-T28S-R18E	SW NE NW NW	Tenneco Oil Company
S21-T28S-R18E	NE SW NW NW	Tenneco Oil Company



**17-28S-18E**

Notes

S2SE4

Daryl D & Julia A Dennis  
4510 160TH RD  
Chanute, KS 66720

Garrett D Larue  
16125 ELK RD  
Chanute, KS 66720

Jack R Cheyney  
15775 IRVING RD  
Chanute, KS 66720

Richard N & Claudette J Dennis  
16225 FORD RD  
Chanute, KS 66720

Ronald S & Rhonda J Larue  
10435 170TH RD  
Chanute, KS 66720

**16-28S-18E**

*per TO dtd 1.13.06*

**SW4SW4**

(tract of 12.643 acres)

David Dean Hibbs and Carolyn Hibbs  
16010 Elk Rd  
Chanute, KS 66720

(1.25 acres) *\*acreage numbers pursuant page 2 of TO attached to e-mail*

Rolland Dean Hibbs and Kathryn Evleen Hibbs  
5120 160th Rd  
Chanute, KS 66720

(7.0 acres)

Jerry L Fogle and Helen M Fogle  
16100 Elk Rd  
Chanute, KS 66720

(4.3 acres)

**20-28S-18E**

**NE4NW4**

(5 acre tract)

Earlton Cemetery  
Chanute, KS 66720

*\*TO attached to e-mail for your reference*

**SE4SW4**

(portion)

Jarold W & Marilyn S Henry  
14385 Elk Rd  
Chanute, KS 66720

September 25, 2012

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

RE: Approved Commingling CO091201  
Spieker, Hugo 20-1, Sec. 20-T28S-R18E, Neosho County  
API No. 15-133-26483-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on September 11, 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 CO091201 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