KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1103616

Form ACO-4
Form must be typed
March 2009

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

Commingling ID # CO021310

OPERATOR: License # 33343
Name: PostRock Midcontinent Production LLC
Address 1: Oklahoma Tower
Address 2: 210 Park Ave, Ste 2750
City: OKLAHOMA CITY State: OK Zip: 73102 + _ _ _ _
Contact Person: CLARK EDWARDS
Phone: (620) 432-4200

API No. 15 - 15-205-26583-00-00
Spot Description:
SE - NW - NE - NW Sec. 18 Twp. 28 S. R. 17 ☑ East ☐ West
628 Feet from ☑ North / ☐ South Line of Section
1707 Feet from ☐ East / ☑ West Line of Section
County: Wilson
Lease Name: THORSELL WILLIAM R Well #: 18-1

☑ 1. Name and upper and lower limit of each production interval to be commingled:

Formation:	SUMMIT	(Perfs):	835-839
Formation:	MULKY	(Perfs):	848-852
Formation:	TEBO	(Perfs):	1053-1055
Formation:	NEUTRAL	(Perfs):	1190-1192
Formation:	RIVERTON	(Perfs):	1235-1237

☑ 2. Estimated amount of fluid production to be commingled from each interval:

Formation:	SUMMIT	BOPD:	0	MCFPD:	0	BWPD: 0
Formation:	MULKY	BOPD:	0	MCFPD:	0	BWPD: 0
Formation:	TEBO	BOPD:	0	MCFPD:	0	BWPD: 0
Formation:	NEUTRAL	BOPD:	0	MCFPD:	0	BWPD: 0
Formation:	RIVERTON	BOPD:	0	MCFPD:	0	BWPD: 0

☑ 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: 2/23/2013
Approved By: Rick Hestermann Date: 02/27/2013

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 wihin 15 days of publication of the notice of application.

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

	A	B	C	D	E	F	G	H	I	J	K
1	Produced Fluids #		1	2	3	4	5		Click here to run SSP	Click	
2	Parameters	Units	Input	Input	Input	Input	Input				
3	Select the brines	Select fluid	☑	☑	☑	☑	☑	Mixed brine:		Click	
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.	Goal Seek SSP	Click	
6	Operator	Row 3	PostRock	PostRock	PostRock	PostRock	PostRock	Cells H35-38			
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^+	(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^+ (if not known =0)	(mg/l)						0.00	Saturation Index values		
12	Mg^{2+}	(mg/l)	1,096.00	872.00	1,200.00	953.00	858.00	995.91	Calcite		
13	Ca^{2+}	(mg/l)	1,836.00	2,452.00	2,044.00	1920.00	1948.00	2040.23	-0.73	-0.60	0.13
14	Sr^{2+}	(mg/l)						0.00	Barite		
15	Ba^{2+}	(mg/l)						0.00			
16	Fe^{2+}	(mg/l)	40.00	21.00	18.00	82.00	90.00	50.21	Halite		
17	Zn^{2+}	(mg/l)						0.00	-1.77	-1.80	-0.03
18	Pb^{2+}	(mg/l)						0.00	Gypsum		
19	Cl^-	(mg/l)	36,299.00	48,965.00	47,874.00	45632.00	43147.00	44388.44	-3.19	-3.18	0.00
20	SO_4^{2-}	(mg/l)	1.00	1.00	8.00	1.00	1.00	2.40	Hemihydrate		
21	F^-	(mg/l)						0.00	-3.96	-3.90	0.06
22	Br^-	(mg/l)						0.00	Anhydrite		
23	SiO2	(mg/l) SiO2						0.00	-3.47	-3.36	0.12
24	HCO3 Alkalinity**	(mg/l as HCO3)	190.00	234.00	259.00	268.00	254.00	241.03	Celestite		
25	CO3 Alkalinity	(mg/l as CO3)									
26	Carboxylic acids**	(mg/l)						0.00	Iron Sulfide		
27	Ammonia	(mg/L) NH3						0.00	-0.16	-0.22	-0.06
28	Borate	(mg/L) H3BO3						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_2 Gas Analysis	(%)	19.97	18.76	22.41	35.53	33.79	26.16			
32	H_2S Gas Analysis***	(%)	0.0289	0.0292	0.0296	0.0306	0.0151	0.0269	Iron Carbonate		
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)	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-CO2%+Alk, 1-pH+Alk, 2-CO2%+pH	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/^{0}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^+ (Strong acid) †	(N)									
51	OH^- (Strong base) †	(N)									
52	Quality Control Checks at STP:										
53	H_2S Gas	(%)									
54	Total H2Saq (STP)	(mgH2S/l)									
55	pH Calculated	(pH)									
56	PCO2 Calculated	(%)									
57	Alkalinity Caclulated	(mg/l) as HCO3									
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^3	100	ft^3	3,531	
65	If No, inhibitor # is:	4	#	4	DTPMP	m^3	100	bbl(42 US gal)	629	
66	If you select Mixed,			5	PPCA	MPa	1,000	psia	145,074	
67	1st inhibitor # is:	1	#	6	SPA	Bar	496	psia	7,194	
68	% of 1st inhibitor is:	50	%	7	HEDP	Torr	10,000	psia	193	
69	2nd inhibitor # is:	2	#	8	HDTMP	Gal	10,000	bbl(42 US gal)	238	
70	Display act. coefs?	0	1-Yes;0-No	9	Average	Liters	10,000	bbl(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

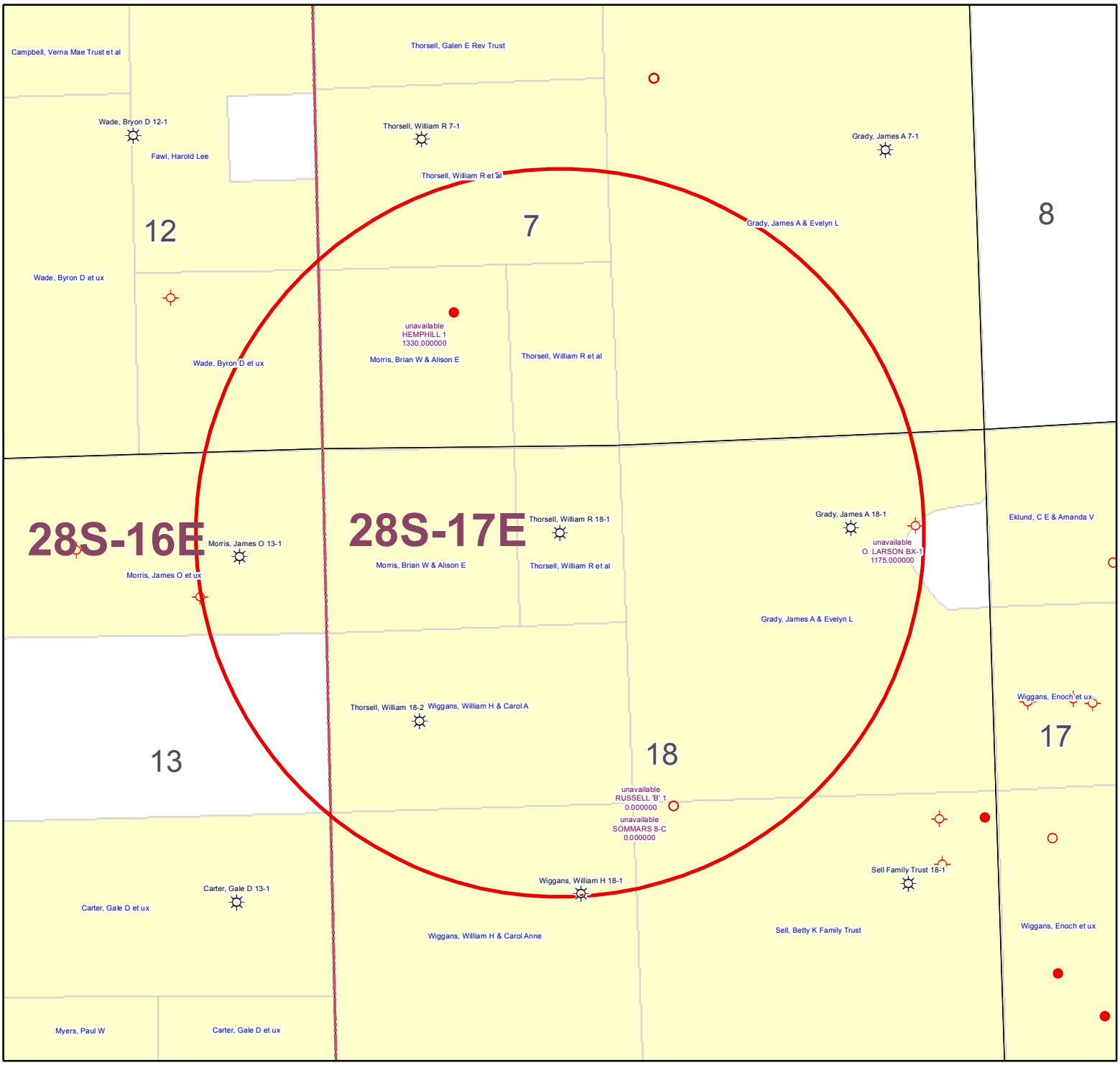
	Ratio					
Component (mg/L)	20% Brine 1	20% Brine 2	20% Brine 3	20% Brine 4	20 Brine 5	Mixed Brine
Calcium	1836	2452	2044	1920	1948	1952
Magnesium	1096	872	1200	953	858	865
Barium	0	0	0	0	0	0
Strontium	0	0	0	0	0	0
Bicarbonate	190	234	259	268	254	253
Sulfate	1	1	8	1	1	1
Chloride	36299	48965	47874	45632	43147	43206
CO_2 in Brine	246	220	264	422	405	401
Ionic Strength	1.12	1.48	1.46	1.38	1.31	1.31
Temperature (°F)	89	89	89	89	89	89
Pressure (psia)	50	50	120	120	120	119

Saturation Index

Calcite	-1.71	-1.41	-1.48	-1.68	-1.69	-1.69
Gypsum	-3.71	-3.64	-2.82	-3.73	-3.72	-3.69
Hemihydrate	-3.70	-3.65	-2.83	-3.74	-3.71	-3.69
Anhydrite	-3.89	-3.79	-2.97	-3.89	-3.88	-3.85
Barite	N/A	N/A	N/A	N/A	N/A	N/A
Celestite	N/A	N/A	N/A	N/A	N/A	N/A

PTB

Calcite	N/A	N/A	N/A	N/A	N/A	N/A
Gypsum	N/A	N/A	N/A	N/A	N/A	N/A
Hemihydrate	N/A	N/A	N/A	N/A	N/A	N/A
Anhydrite	N/A	N/A	N/A	N/A	N/A	N/A
Barite	N/A	N/A	N/A	N/A	N/A	N/A
Celestite	N/A	N/A	N/A	N/A	N/A	N/A



KGS STATUS

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

Thorsell, William R 18-1
18-28S-17E
1" = 1,000'

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

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. Ammann
Phone: (620) 431-9500
Contractor: Name: Michael Drilling, LLC
License: 33783
Wellsite Geologist: Ken Recoy
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.

5/30/06	5/31/06	6/9/06
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 205-26583-00-00
County: Wilson
__ - w/2 - ne - nw Sec. 18 Twp. 28 S. R. 17 ✓ East ☐ West
660 feet from S / (N) (circle one) Line of Section
1750 feet from E / (W) (circle one) Line of Section
Footages Calculated from Nearest Outside Section Corner:
(circle one) NE SE NW SW
Lease Name: Thorsell, William R. Well #: 18-1
Field Name: Cherokee Basin CBM
Producing Formation: Multiple
Elevation: Ground: 1070 Kelly Bushing: n/a
Total Depth: 1309 Plug Back Total Depth: 1304.72
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 1304.72
feet depth to surface w/ 135 sx cmt.
A142 - Dg - 11-25-08

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
Quarter ____ Sec. ____ Twp. ____ S. R. ____ ☐ East ☐ West
County: ____ Docket No.

RECEIVED
KANSAS CORPORATION COMMISSION
SEP 27 2006
CONSERVATION DIVISION
WICHITA, KS

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. Ammann
Title: New Well Development Coordinator Date: 9/26/06
Subscribed and sworn to before me this 26 day of September,
20 06 .
Notary Public: Denise V. Venneman
Date Commission Expires: 7-1-08

DENISE V. VENNEMAN
NOTARY PUBLIC
STATE OF KANSAS
MY APPT. EXPIRES 7-1-08

KCC Office Use ONLY
N Letter of Confidentiality Received
If Denied, Yes ☐ Date:
____ Wireline Log Received
____ Geologist Report Received
____ UIC Distribution

Side Two

Operator Name: Quest Cherokee, LLC Lease Name: Thorsell, William R. Well #: 18-1

Sec. 18 Twp. 28 S. R. 17 ☑ East ☐ West County: Wilson

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 ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No
(Submit Copy)

List All E. Logs Run:

Dual Induction Log
Compensated Density/Neutron Log
Gamma Ray CCL

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name: See attached Top: Datum:

CASING RECORD ☐ New ☐ 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	23	"A"	4	
Production	6-3/4	4-1/2	10.5#	1304.72	"A"	135	

ADDITIONAL CEMENTING / SQUEEZE RECORD

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

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	1235-1237/1190-1192/1053-1055	400gal 15%HCLw/ 50 bbls 2%kcl water, 601bbls water w/ 2% KCL, Biocide, 9500# 20/40 sand	1235-1237/1190-1192
			1053-1055
4	848-852/835-839	400gal 15%HCLw/ 65 bbls 2%kcl water, 626bbls water w/ 2% KCL, Biocide, 13700# 20/40 sand	848-852/835-839

TUBING RECORD	Size	Set At	Packer At	Liner Run
	2-3/8"	1270	n/a	☐ Yes ☑ No

Date of First, Resumerd Production, SWD or Enhr.	Producing Method
8/28/06	☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	n/a	0mcf	38.5bbls		

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

134

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: 05/31/06
Lease: Thorsell, William R.
County: Wilson
Well#: 18-1
API#: 15-205-26583-00-00

Drilling Log

FEET	DESCRIPTION
0-5	Overburden
5-23	Lime
23-105	Shale
105-130	Lime
130-220	Shale
220-289	Lime
289-330	Shale
330-356	Lime and Shale
356-430	Lime
430-435	Shale
435-439	Lime
439-480	Sandy Shale
480-484	Lime
484-489	Shale with Lime streaks
489-545	Lime
545-568	Sandy Shale
568-569	Coal Streaks
569-588	Black Shale
588-628	Shale
628-674	Sandy Shale
674-687	Lime Streaks
687-708	Shale
708-709	Coal Streaks
709-751	Sandy Shale

FEET	DESCRIPTION
751-752	Coal Streaks
752-780	Lime
780-782	Black Shale
782-783	Coal Streaks
783-789	Shale
789-810	Sandy Shale
810-828	Lime
828-835	Black Shale
835-845	Lime
845-848	Black Shale
848-849	Coal
849-910	Shale
858	Gas Test 4" at 1/4" Choke
910-960	Sandy Shale
960-1014	Water and Sand
1014-1015	Coal
1015-1024	Lime
1024-1050	Sand
1050-1057	Shale
1057-1058	Coal
1058-1090	Shale
1090-1160	Sandy Shale
	To Much Water For Gas Test
1160-1180	Water and Sand

135

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: 05/31/06
Lease: Thorsell, William R.
County: Wilson
Well#: 18-1
API#: 15-205-26583-00-00

Drilling Log

FEET	DESCRIPTION	FEET	DESCRIPTION
1180-1182	Coal		
1182-1188	Shale		
1188-1189	Coal		
1189-1231	Shale		
1231-1232	Coal		
1232-1241	Shale		
1241-1309	Missippi Lime		
1309	To Much Water For Gas Test		
1309	TD		
	Surface 23'		

QUEST

Resource Corporation

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

TICKET NUMBER 1548

FIELD TICKET REF # _____

FOREMAN Craig / Joe

TREATMENT REPORT & FIELD TICKET CEMENT

DATE	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
June 7 2006	Thornell Williams R. 13-1	13	28	17	Wilson

FOREMAN / OPERATOR	TIME IN	TIME OUT	LESS LUNCH	TRUCK #	TRAILER #	TRUCK HOURS	EMPLOYEE SIGNATURE
Joe. B Craig. G	7:00 7:00	11:45		903880			
Tim. M.	6:30			903255			
Robert. W	7:00			903103			
David. C	7:00			903139	932452		
Larry. M	7:00			931420			
Russell. A	6:30	↓		extra			

JOB TYPE Longstring HOLE SIZE 6 3/4 HOLE DEPTH 1309 CASING SIZE & WEIGHT 4½ x 10.5

CASING DEPTH 1304.72 DRILL PIPE _____ TUBING _____ OTHER _____

SLURRY WEIGHT 14.5 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 0

DISPLACEMENT 20.80 DISPLACEMENT PSI _____ MIX PSI _____ RATE 4-2 bpm

REMARKS:

Ran 2 sks premigel swept to surface. Installed cement head Ran 2 sks gel & 12 bbl dye & 135 sks of cement To Surface. Flush pump Pump wiper plug to bottom & set Floatshoe.

	1304.72	Ft 4½ casing
	6	centralizers
931300	2 hr	casing tractor
932900	2 hr	casing trailor
	1	4½ Casing Clamp

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION OF SERVICES OR PRODUCT	TOTAL AMOUNT
903398	4.75 hr	Foreman Pickup	
903255	5.25 hr	Cement Pump Truck	
903	4.75 hr	Bulk Truck	
1104	127 SK	Portland Cement	
1124	1	~~50/50 POZ Blend Cement~~ Baffles 3"	
1126	1	~~OWC - Blend Cement~~ wiper plug 4½"	
1110	14 SK	Gilsonite	
1107	1.5 SK	Flo-Seal	
1118	4 SK	Premium Gel	
1215A	1 gal	KCL	
1111B	3 SK	~~Sodium Silicate~~ Calchloride	
1123	7000 gals	City Water	
903139	4.75 hr	Transport Truck	
932452	4.75 hr	Transport Trailer	
931420	4.75 hr	80 Vac	
Ravin 4513	1	4½ Floatshoe	

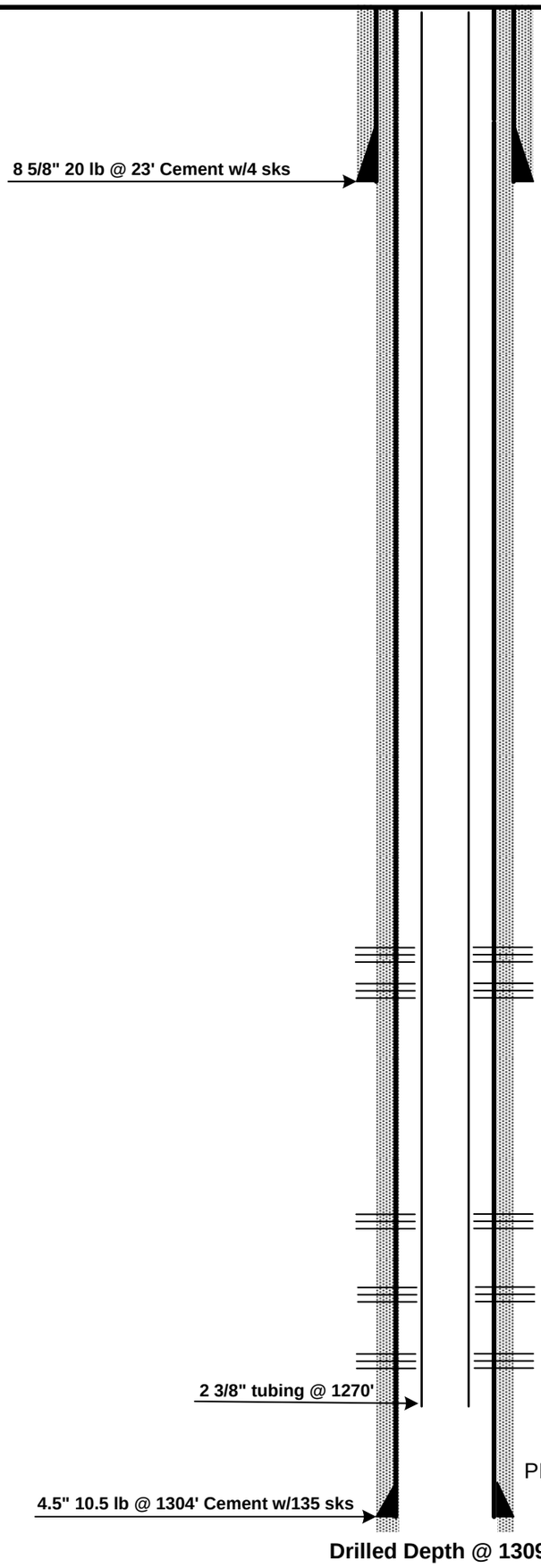
RECEIVED
KANSAS CORPORATION COMMISSION
SEP 27 2006
CONSERVATION DIVISION
WICHITA, KS

POSTROCK	PostRock	Current Completion

WELL : Thorsell, William R 18-1
FIELD : Cherokee Basin
STATE : Kansas
COUNTY : Wilson

SPUD DATE : 5-30-2006
COMP. Date : 6-9-2006
API: 15-205-26583-00-00

LOCATION: 18-28S-17E (NE,NW)
ELEVATION: 1070'



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	23'
4 ½"	10.5 lb		.0159	2006	1304'
2 3/8"				2006	1270'

Downhole Equipment Detail

Completion Data

Original as GAS Well per ACO-1

800 gals 15% HCL
1,227 bbls water
23,200 lbs 20/40 sand

Perforations

Original Completion: 4 spf
835-839 Summit (17)
848-852 Mulky (17)
1053-1055 Tebo (9)
1190-1192 Neutral (9)
1235-1237 Riverton (9)

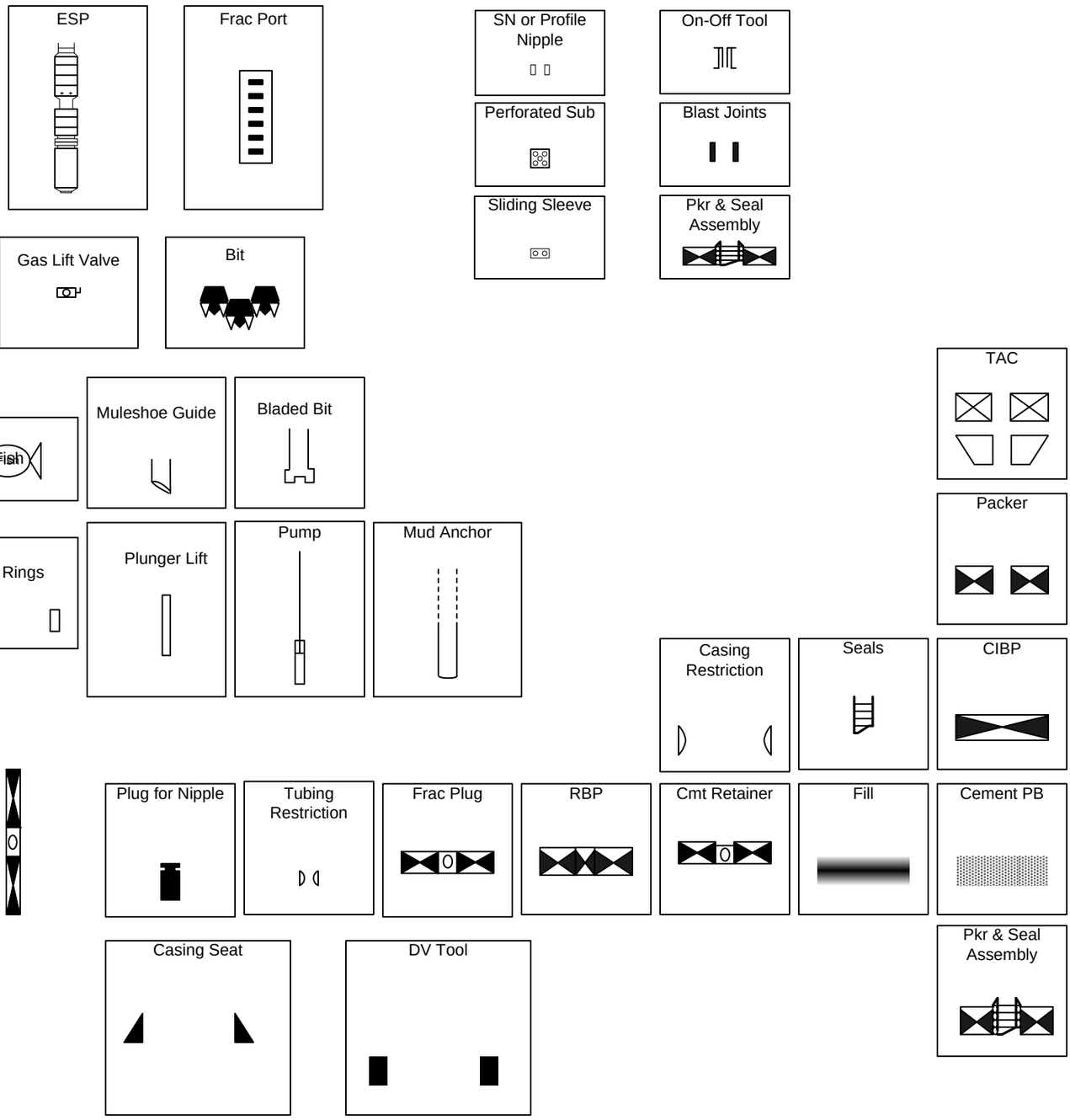
PREPARED BY: POSTROCK **DATE:** Dec, 2012

APPROVED BY: _____ **DATE:** _____

POSTROCK

PostRock

LEGEND



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

January A.D. **2013**, 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 January, 2013

PENNY L. CASE
Notary Public - State of Kansas
My Appt. Expires 5/28/14

Penny L. Case

Notary Public Sedgwick County, Kansas

Printer's Fee : **$132.40**

LEGAL PUBLICATION

PUBLISHED IN THE WICHITA EAGLE
JANUARY 17, 2013 (3227051)
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 **Thorsell, William R 18-1** located in Wilson County, Kansas.

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

You, and each of you, are hereby notified that **Postrock Midcontinent Production, LLC** has filed an application to commingle the **Summit, Mulky, Tebo, Neutral, Riverton and Cattleman** producing formations at the **Thorsell, William R 18-1**, located in the **W2 NE NW, S18-T28S-R17E, Approximately 628 FNL & 1707 FWL, Wilson** County, Kansas.

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

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

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

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

PROOF OF PUBLICATION

STATE OF KANSAS
Wilson County - SS

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

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

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

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

THE ATTACHED was published on the following dates in a regular issue of said newspaper:

1st publication was made on the 21st day of January, 20 13

2nd publication was made on the _____ day of _____, 20____

3rd publication was made on the _____ day of _____, 20____

4th publication was made on the _____ day of _____, 20____

5th publication was made on the _____ day of _____, 20____

6th publication was made on the _____ day of _____, 20____

TOTAL PUBLICATION FEE: $ 37.73

(Signed) Joseph S. Relph

Subscribed and sworn to before me, this 22nd day of January, 20 13

Rita M. Relph (Notary Public)

My commission expires Aug. 30, 2014

(Published in the Wilson County Citizen on Monday, January 21, 2013.)

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

NOTICE OF FILING APPLICATION

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Postrock Midcontinent Production, LLC
210 Park Avenue, Suite 2750
Oklahoma City, Oklahoma 73102
(405) 660-7704
97 1 cpy.

STATE OF KANSAS

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

THORSELL, WILLIAM R 18-1

1 NAME & UPPER & LOWER LIMIT OF EACH PRODUCTION INTERVAL TO BE COMMINGLED

FORMATION:	CATTLEMAN	(PERFS):	964	-	972
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	
FORMATION:		(PERFS):		-	

2 ESTIMATED AMOUNT OF FLUID PRODUCTION TO BE COMMINGLED FROM EACH INTERVAL

FORMATION:	CATTLEMAN	BOPD:	3	MCFPD:	0	0	BWPD:	20
FORMATION:	0	BOPD:		MCFPD:			BWPD:	
FORMATION:	0	BOPD:		MCFPD:			BWPD:	
FORMATION:	0	BOPD:		MCFPD:			BWPD:	
FORMATION:	0	BOPD:		MCFPD:			BWPD:	
FORMATION:	0	BOPD:		MCFPD:			BWPD:	
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FORMATION:	0	BOPD:		MCFPD:			BWPD:	
FORMATION:	0	BOPD:		MCFPD:			BWPD:	
FORMATION:	0	BOPD:		MCFPD:			BWPD:	
FORMATION:	0	BOPD:		MCFPD:			BWPD:	

Affidavit of Notice Served

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

Well Name: THORSELL, WILLIAM R 18-1 Legal Location: W2NENW S18-T28S-R17E

The undersigned hereby certificates that he / she is a duly authorized agent for the applicant, and that on the day 8th of FEBRUARY, 2013, 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)*

SEE ATTACHED

I further attest that notice of the filing of this application was published in the WILSON COUNTY CITIZEN, the official county publication of WILSON county. A copy of the affidavit of this publication is attached.

Signed this 8th day of FEBRUARY, 2013

Applicant or Duly Authorized Agent

Subscribed and sworn to before me this 8th day of FEBRUARY, 2013

NOTARY PUBLIC OFFICIAL SEAL STATE OF KANSAS
JENNIFER R. BEAL
MY COMMISSION EXPIRES
7-20-2016

Notary Public

My Commission Expires: July 20, 2016

THORSELL, WILLIAM R 18-1

13-28S-16E

S2 NE4

Max Robert Travis Jr and Helen Irene Travis
21903 1300 RD
Chanute, KS 66720

18-28S-17E

Tract in NE/4
William H. & Carol A. W iggins Living Trst
16633 Udall Rd
Altoona, KS 66710

THORSELL, WILLIAM R 18-1-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.

Applicant or Duly Authorized Agent

Subscribed and sworn before me this 8th day of FEBRUARY 2013

NOTARY PUBLIC OFFICIAL SEAL STATE OF ILLINOIS
JENNIFER R. BEAL
MY COMMISSION EXPIRES
7-20-2016

Notary Public Jennifer R. Beal

My Commission Expires: July 20, 2016

THORSELL, WILLIAM R 18-1

13-28S-16E

S2 NE4

Max Robert Travis Jr and Helen Irene Travis
21903 1300 RD
Chanute, KS 66720

18-28S-17E

Tract in NE/4
William H. & Carol A. W iggins Living Trst
16633 Udall Rd
Altoona, KS 66710

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

February 25, 2013

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

RE: Approved Commingling CO021310
Thorsell, William R. 18-1, Sec. 18-T28S-R17E, Wilson County
API No. 15-205-26583-00-00

Dear Mr. Edwards:

Your Application for Commingling (ACO-4) for the above described well, received by the KCC on February 11, 2013, 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 CO021310 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