

**JUL 0 2 2003**

**KCC WICHITA**

MERITAGE KCM EXPLORATION, LLC  
1600 Broadway, Suite 1360  
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Petrie Trust 5-12 Core Report

Location: Sec.5-23S-22E; C SW NW, 1980' FNL,  
660' FWL; Linn County, Kansas

Date Drilled: Nov .28-30, 2002

Driller: Layne Christensen Canada, Ltd. Rig #219

Core Bit: 6 1/2", Reamed: 7 7/8" Bit, Core Size: 3"

Surface Casing: 21' of 8 5/8"

Cored Interval: 327'-836'

### CORE DESCRIPTION

327'-373.8: Shale, med-drk gray, finely laminated with med gray siltstone in part

373.8'-375.2': (Sharp upper contact); 1.4' coal

375.2'-459': Ls, drk gray, organic, fossiliferous in part; shale, black some med gray

459'-471.8': 12.8' Ls, Oswego, lt.-med. gray, fossiliferous, occasional stylolites

471.8'- 495.1': Shale, blk, organic; Ls, lt gray

495.1'-524.5': 29.4' Shale, lt.-med. gray, silty in part, 502'-503'

524.5'-526.5': 2', Ls, very shaley, fossiliferous

526.5'-552': 25.5' Shale, laminated lt. And dark gray (1/2" - 1/16" laminations)

552'-561': Shale, blk, organic, fissile

561'-561.5': 0.5' ss, argillaceous, med. gray, no visible porosity

561.5'-565.4': 4.5' Shale, dark gray, fossiliferous in part; laminations of lighter gray shale

565.4'-566': 0.6' Coal

566'-572': 6' Shale, lt. Gray

572'-575': 3' Shale, dark gray, fissile, fossiliferous in part

575'-575.6': 0.6' coal & shale, interbedded

575.6'-577.6': 2' Shale, dark gray

577.6'-587.6': 10', Shale, med. Gray

587.6'-590.5': 2.9' Shale, dark gray, fossiliferous

590.5'-591.4': 0.9', Coal

591.4'-598': 6.4', Shale, lt. gray

598'-599': 1', Shale, med. gray, fissile

599'-603': 4', Shale, lt.-med. Gray

603'-606': 3' Shale, med.-dark gray, fissile, broken in part

606'-610': 4' Shale, lt. gray, some solution Or soft sediment deformation,

610'-611': 1' Shale, black, highly organic

611'-611.2': 0.3' Coal

611.2'-632.5': Shale, lt-med gray, calcareous in part

632.5'-632.8': 0.3' Interbedded black shale and Coal

632.8'-633.4': 0.6' Coal

633.4'-636': 2.6' Shale, lt. Gray

636'--649.1': Shale, blackl

649.1'-650.2': 1,1' Coal, several vertical fractures in coal

650.2'-676': Shale, lt gray

676'-676.4': 0.4' Coal,

676.4'-693.9': Shale, lt and drk gray

693.9'-696': 2.1' Sand, silty, argillaceous

696'-701': 5' Shale, lt. gray

701'-701.4': 0.4' Coal,

701.4'-706.3': 5.9' Shale, lt. gray, very silty, finely laminated lt. & dark shale in part

706.3'-707.9': 1.6' Shale, black, lower contact unconformable

707.9'-714': 6.1' Shale, lt. gray, very silty

714'-728': 14' Finely laminated lt. gray shale and med. gray siltstone

728'-731': 3' Shale, med. Gray  
731'-735.6': 4.6' Shale, black  
735.6'-736': 0.4' Coal,  
736'-753.1': Shale, drk gray  
753.1'-753.6': 0.5' Coal fine vertical fractures  
753.1'-757.5': Shale, lt. gray  
757.5'-768.9': 11.4' Laminated lt. and dark shale, 1/64" - 1/2" laminations silty  
768.9'-769.2': 0.3' Coal  
769.2'-772.1': Shale, lt. gray  
772.1'-772.4': 0.3' Coal, fair show  
772.4'-777.5': 5.1' Shale, lt. gray  
777.5"-778': 0.5' Shale, black  
778"-778.4': 0.4' Coal  
778.4'-779.2': Shale, med. Gray  
779.2'-789.2': 10' Shale, black, slickensides, 1" layers of lt. gray shale  
789.2'-791.7': Shale, black  
791.7"-792.8': 1.1' Coal  
792.8'-795.3': 2.5' Shale, lt. gray,  
795.3'-797.4': 2.1' Shale, lt. and dark, laminated  
797.4'- 800.8': Shale, black,  
800.8'-801.8': 1.0' Coal  
801.8'-804.8': Shale, slightly laminated lt. and med. Gray  
804.8'-817.4': 12.6' Shale, black, lower 12' has some lt. gray laminations 1/16"-3/8"  
817.4'-819.5': 2.1' Coal  
819.5'-822.8': 3.3" Shale, finely laminated lt. and dark  
822.8'-825.6': 2.8' Shale, black, occasional burrows and fossils  
825.6'-836.9': 11.3' Conglomerate, shale fragments, lt. & dark gray, lt. greenish-gray clay matrix