

# ABERCROMBIE RTD, INC.

150 N. MAIN, SUITE 801  
WICHITA, KANSAS 67202  
(316)262-1841

## COX #4-12

1990' FSL & 2050' FEL  
Section 12-28S-33W  
Haskell County, KS

OPERATOR: Abercrombie Energy, LLC  
CONTRACTOR: Abercrombie RTD, Inc.  
RIG #:3  
JOB #: 2005306  
PTD: 5650'

Abercrombie Energy, LLC  
150 N. Main, Suite 801  
Wichita, KS 67202  
(316) 262-1841

ELEVATION: 2957' GL  
2965' KB

API #15-081-21623-0000

## TIGHT HOLE

Page 1

- 10-07-05 Building location; plan to move rotary rig in Monday or Tuesday.
- 10-10-05 Location built. Waiting on weather and truck availability.
- 10-11-05 Waiting on weather; there has been considerable rain and the earliest projected move-in date is Thursday.
- 10-12-05 Waiting on weather
- 10-13-05 Waiting on weather; will probably move in and rig up on Saturday
- 10-14-05 Waiting on weather.
- 10-15-05 Waiting on weather.
- 10-16-05 MIRU
- 10-17-05 690' - Drilling. Drilled 683' - 24 hrs., drilling 9 1/4 hrs., rig check 1/2 hr., repairs 4 hrs., RU 9 1/4 hrs., drill rathole 1 hr. Bit #1, 12 1/4" Varel CH1GJMS, SN: 200562, in @ 7'. Cut 683' - 9 1/4 hrs. Mud weight 9.5, Viscosity 40, LCM 8#. Spud @ 9:15 p.m. 10-16-05. Mud mix: gel 130 sks., lime 6 sks., hulls 95 sks. Bit weight 15-20,000, 1000# pump, rot 140, SPM 56. Spud @ 9:15 p.m. 10-16-05.
- 10-18-05 1867' - Circ. for short trip. Drilled 1177' - 24 hrs., drilling 20 1/2 hrs., trip 2 3/4 hrs., rig check 1/2 hr., circulate 1/4 hr. Bit #1, 12 1/4" Varel CH1GJMS, SN: 200562, in @ 7'; out @ 1130'. Cut 1123' - 16 1/4 hrs. Bit #2, 12 1/4" Varel CH5GJMS, SN: 214630, in @ 1130', out @ 1867'. Cut 737' - 13 1/4 hrs. Mud weight 9.6, Viscosity 38, PV/YP 6/10, Gels 6/19, pH 7.0, Chlorides 200, Solids 9.1%, Sand 5.0%, LCM 12#. Daily Mud \$2,570.00, Accum. Mud \$2,570.00. Mud mix: gel 68 sks., lime 4 sks., hulls 175 sks. Bit weight 30-35,000, 1000# pump, rot 140, SPM 57.
- 10-19-05 1867' - TIH w/bit. Trip 5 3/4 hrs., circulate 1 1/4 hrs., run casing 2 1/2 hrs., cementing 1 1/2 hrs., cellar work 7 hrs., repairs 1/2 hr., WOC 4 hrs., test BOP 1 1/2 hrs. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Mud properties - water. Accum. Mud \$2,570.00. Deviation - 1/2° @ 1867'. Ran 46 jts. new J-55 24# 8 5/8", set @ 1865'. Cemented w/400 sks. A-Con, 3% cc, 1/4# flocele and 150 sks. Class A, 2% cc, 1/4# flocele. Cement did circulate. Plug down @ 5:00 p.m. 10-18-05. Job by Acid Services.
- 10-20-05 2910' - Drilling. Drilled 1043' - 24 hrs., drilling 21 hrs., trip 1/2 hrs., rig check 1/2 hr., jet pits 1/2 hr., repairs 1/4 hr., drill cement 1 1/4 hrs. Bit #3, 7 7/8" HTC F271, SN: PC2294, in @ 1867'. Cut 1043' - 21 hrs. Mud weight 8.7, Viscosity 40, LCM 4#. Daily Mud \$2,430.00, Accum. Mud \$5,025.00. Mud mix: gel 160 sks., soda ash 5 sks., hulls 93 sks., desco 2 sk. Bit weight 40,000, 1200# pump, rot 70-80, SPM 56.

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10-21-05 3645' - Drilling. Drilled 735' - 24 hrs., drilling 22 3/4 hrs., rig check 3/4 hr., repairs 1/2 hr. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 1778' - 43 3/4 hrs. Mud weight 9.0, Viscosity 45, PV/YP 13/16, Gels 11/33, pH 7.0, Chlorides 2,800, Solids 2.3%, LCM 6#. Daily Mud \$2,968.00, Accum. Mud \$7,968.00. Mud mix: gel 80 sks., caustic 4 sks., soda ash 12 sks., lignite 4 sks., drispac 1 sk., hulls 120 sks. Bit weight 40,000, 1200# pump, rot 75-80, SPM 56.

10-22-05 4345' - Drilling. Drilled 700' - 24 hrs., drilling 23 hrs., rig check 3/4 hr., jet pits 1/4 hr. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 2478' - 66 3/4 hrs. Mud weight 9.0, Viscosity 50, PV/YP 10/14, Gels 9/23, water loss 10.4, pH 8.0, Chlorides 5,700, Solids 6#, LCM 5#. Daily mud \$3,054.00, Accum Mud \$11,194. Mud mix: gel 65 sks., caustic 3 sks., soda ash 2 sks., lignite 2 sks., drispac 1 sk., hulls 110 sks. Bit weight 40,000, 1000# pump, rot 70, SPM 54.

10-23-05 4762' - Drilling. Drilled 417' - 24 hrs., drilling 22 3/4 hrs., rig check 3/4 hr., jet pits 1/4 hr., repairs 1/4 hr. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 2895' - 89 1/4 hrs. Mud weight 8.9, Viscosity 54, PV/YP 13/18, Gels 11/44, Water loss 8.8, pH 10.0, Chlorides 2,700, Solids 4.0%, LCM 4. Daily Mud \$3,081.00, Accum. Mud \$14,101.00. Mud mix: gel 95 sks., caustic 5 sks., soda ash 4 sks., lignite 3 sks., drispac 1 sk., hulls 75 sks. Bit weight 40,000, 1000# pump, rot 70, SPM 54.  
DST#1 4749' - 4775' (Marmaton 'B' Zone)

Open 30-60-60-90

Strong blow gts 18 min. Gauged: 7.4 MCF 20 min., 8.6 MCF 30 min. 2<sup>nd</sup> opening gauged 8.8 MCF 10 min., gradually increased to 19.6 MCF 60 min. 1050 BTU

Recovered: 120' GC Wtry Mud (10% gas, 90% mud, trace to 1% wtr.)

ICIP: 1392#

IFP: 26-44#

FCIP: 1205#

FFP: 34-92#

BHT: 118°

Note: Strange looking DST chart - O rings may have been leaking.

10-24-05 4792' - Drilling. Drilled 30' - 24 hrs., drilling 1 1/2 hrs., trip 13 hrs., rig check 1/2 hr., circulate 3 1/4 hrs., testing 4 1/4 hrs., PU & lay down tool 1 hr., PU DST stds 1/2 hr. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 2925' - 91 hrs. Mud weight 9.0, Viscosity 52, PV/YP 14/20, Gels 12/44, Water loss 8.0, pH 10.0, Chlorides 2,400, Solids 3.5%, LCM 4#. Daily Mud \$2,400.00, Accum. Mud \$16,501.00. Mud mix: gel 40 sks., caustic 1 sk., soda ash 2 sks., lignite 2 sks., drispac 1 sk., hulls 15 sks. Deviation - 1° @ 4775'. Bit weight 40,000, 1000# pump, rot 70, SPM 54. Pipe strap @ 4775' - off .40'.

DST#2 4821' - 4853' (Pawnee)

30-60-60-90

GTS 35 min. Maximum gauge at end of 2<sup>nd</sup> opening 9.1 MCF.

Recovered 90' Mud (ssgas)

ICIP: 1458#

IFP: 22-38#

FCIP: 1458#

FFP: 25-58#

BHT: 122°

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Page 3

- 10-25-05 4915' - Drilling. Drilled 123' - 24 hrs., drilling 7 hrs., trip 10 hrs., circulate 2 hrs., testing 4 hrs., PU & lay down tool 1 hr. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 3048' - 98 hrs. Mud weight 8.9, Viscosity 50, PV/YP 14/22, Gels 11/44, Water loss 7.6, pH 9.0, Chlorides 2,600, Solids 3.5%, LCM 43. Daily Mud \$800.00, Accum. Mud \$17,301.00. Mud mix: caustic 1 sk., hulls 15 sks. Bit weight 40,000, 1000# pump, rot 70, SPM 54.
- 10-26-05 5039' - TOH w/DST #3. Drilled 124' - 24 hrs., drilling 8 1/4 hrs., trip 8 1/4 hrs., rig check 1/4 hr., circulate 2 3/4 hrs., testing 4 hrs., tool 1/2 hr. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 3172' - 106 1/4 hrs. Mud weight 8.8, Viscosity 50, PV/YP 13/19, Gels 11/41, Water loss 7.2, pH 10.0, Chlorides 2,600, Solids 3.5%, LCM 4#. Daily Mud \$304.00, Accum. Mud \$17,606.00. Mud mix: gel 60 sks., caustic 2 sks., soda ash 2 sks., lignite 2 sks., drispac 1 sk., hulls 25 sks. Deviation - Misrun @ 5039'. Bit weight 40,000; 1000# pump, rot 70, SPM 54.  
DST#3 - 4982' - 5039' (Atoka)  
30-60-60-90  
Strong blow - Bottom of Bucket In 12 min.  
Recovered: 1000' GIP and 60' gassy muddy oil (20% gas, 30% oil, 50% mud)  
ICIP: 483# IFP: 20-26#  
FCIP: 393# FFP: 22-33#  
BHT - 121°
- 10-27-05 5220' - TIH - DST #4. Drilled 181' - 24 hrs., drilling 11 1/4 hrs., trip 8 1/2 hrs., rig check 1/4 hr., jet pits 1/4 hr., circulate 2 1/2 hrs., pu & lay down tool 1 1/4 hrs. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 3353' - 117 1/2 hrs. Mud weight 8.9, Viscosity 56, PV/YP 15/23, Gels 12/46, Water loss 7.2, pH 10.0, Chlorides 2,100, Solids 4.2%, LCM 4#. Daily Mud \$1,143.00, Accum. Mud \$18,749.00. Mud mix: gel 55 sks., caustic 2 sks., soda ash 2 sks., lignite 2 sks., drispac 1 1/2 sks., hulls 50 sks. Deviation - 3/4° @ 5220'. Bit weight 36,000, 850# pump, rot 70, SPM 50.  
DST#4 5131' - 5220' (Morrow Sand)  
30-60-30-60  
Weak building to 1" blow on initial opening, no blow on second opening.  
Recovered: 62' Sli. OCM (trace oil)  
ICIP: 57# IFP: 28/34#  
FCIP: 48# FFP: 33/40#  
BHT - 119°
- 10-28-05 5368' - CFS. Drilled 148' - 24 hrs., drilling 11 3/4 hrs., trip 8 hrs., rig check 1/4 hr., circulate 1/2 hr., testing 3 hrs., lay down tool 1/2 hr. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 3501' - 129 1/4 hrs. Mud weight 8.9, Viscosity 60, PV/YP 12/24, Gels 14/49, Water loss 7.2, pH 9.0, Chlorides 2,100, Solids 4.8%, tr/sand, LCM 5#. Daily Mud \$1,481.28, Accum. Mud \$20,231.12. Mud mix: caustic 3 sks., hulls 60 sks. Bit weight 36,000, 850# pump, rot 70, SPM 48. Coming out of the hole for DST #5 5316' - 5350' (Chester Sand) The Chester Sand is 10' thick w/poor visible porosity, poor show, and a 9 unit gas kick. Looks like it is just a remnant of the producing sand.

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10-29-05 5435' - Drilling. Drilled 67' last 24 hours, drilling 6 1/4 hrs., trip 11 1/4 hrs., circulate 2 1/2 hrs., testing 3 hrs., MU tool 1 1/2 hrs., break down tool 1/2 hr. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867'. Cut 3568' - 134 1/2 hrs. Mud weight 8.7, Viscosity 70, PV/YP 15/9, Gels 6/27, Filtrate 8.8, pH 9.5, LCM 3#, Chlorides 3200. Daily Mud \$2,015.30, Accum. Mud \$22,246.42. Mud mix: gel 75 sks., caustic 4 sks., soda ash 5 sks., lignite 2 sks., drispac 1 sk., hulls 25 sks. Bit weight 40,000, 850# pump, rot 70, SPM 48.

### DST #5 5316' - 5350' (Chester Sand)

30-60-30-30

Weak surface blow built to 1" on initial open, no blow on second open

Recovered: 62' Oil spotted mud

ICIP: 1397# IFP: 23-35#

FCIP: 1299# FFP: 41-51#

BHT 123°

Bottom packer failed so we effectively tested the interval from 5316' - 5368'

10-30-05 5610' - Logging. Drilled 175' - 24 hrs., drilling 12 1/4 hrs., trip 4 1/2 hrs., rig check 1/4 hr., jet pits 1/4 hr., circulate 2 1/4 hrs., logging 4 1/2 hrs. Bit #3, 7 7/8" STC F271, SN: PC2294, in @ 1867', out @ 5610'. Cut 3743' - 146 3/4 hrs. Mud weight 8.8, Viscosity 61, PV/YP 17/15, Gels 11/43, Water loss 8.8, pH 9.5, Chlorides 3,000, Solids 3.4%, tr/sand, LCM 3#. Daily Mud \$935.06, Accum. Mud \$29,141.88. Mud mix: Caustic 2 sks., lignite 1 sks., hulls 10 sks. Bit weight 40,000, 1000# pump, rot 70, SPM 54. LTD - 5614' Reached TD @ 8:30 p.m. 10-29-05.

10-31-05 5610' - Rig shut down. Trip 2 hrs., logging 2 1/2 hrs., cellar work 2 1/2 hrs., lay down pipe 2 3/4 hrs., plugging 3 3/4 hrs., tear down 2 hrs., lay down collars 1 1/2 hrs., WO cementers 1 hr. Plugged D&A, 1<sup>st</sup> plug @ 3300' w/100 sks., 2<sup>nd</sup> plug @ 1890' w/50 sks., 3<sup>rd</sup> plug @ 820' w/50 sks., 4<sup>th</sup> plug @ 40' w/15 sks., 15 sks. in rathole, 230 sks. total 60/40 Pozmix, 6% gel. Well plugged @ 8:30 p.m. 10-30-05. Job by Acid Services. Plugging orders by Steve Pfeifer - KCC.

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## TIGHT HOLE

### STRUCTURAL COMPARISON

Abercrombie's Cox #4-12  
10' N & 70' W OF C NW SE Sec. 12-28S-33W

Abercrombie's #2-12 Cox  
2160' FNL & 2360' FWL Sec. 12-28S-33W

	SAMPLE TOPS		LOG TOPS		LOG DATUMS	COMPARISON
Heebner	4110	-1145	4110'	-1145	-1155	+10'
Lansing	4188	-1223	4194'	-1229	-1236	+7'
Lansing G	4437'	-1472	4434'	-1469	-1487	+18'
Kansas City A	4597'	-1632	4596'	-1631	-1646	+15'
Kansas City B	4648'	-1683	4653'	-1688	-1706	+18'
Marmaton	4737'	-1772	4732'	-1767	-1784	+17'
Marmaton "B"	4763'	-1798	4762'	-1797	-1821	+24'
Pawnee	4834'	-1869	4835'	-1870	-1878	+8'
Ft. Scott	4867'	-1902	4869'	-1904	-1910	+6'
Cher. Shale	4879'	-1914	4880'	-1915	-1921	+6'
Atoka	4979'	-2014	4980'	-2015	-2024	+9'
Morrow Sh.	5140'	-2175	5142'	-2177	-2186	+9'
Upper Morrow SS	5190'	-2225	5190'	-2225	-2226	+1'
Chester	5292'	-2327	5290'	-2325	-2315	-10'
Chester SS	5330'	-2365	5330'	-2365	-2348	-17'
St. Genevieve	5402	-2437	5395'	-2430	-2445	+15'
St. Louis			5448'	-2483	-2490	+7'
St. Louis B	5492'	-2527	5492'	-2527	-2548	+21'
St. Louis C	Not Developed				-2608	
St. Louis D	5603'	-2638	5603'	-2638	-2652	+14'
Total Depth	5610'	-2645	5614'	-2649	-2666	