

OPERATOR

Company: TDI, INC.
Address: 1310 BISON ROAD
HAYS, KANSAS 67601

Contact Geologist:	TOM DENNING		
Contact Phone Nbr:	785-628-2593		
Well Name:	YOUNGER # 1		
Location:	SW NE NW SW Sec.7-15s-19w	API:	15-051-26,595-00-00
Pool:	WILDCAT	Field:	UNNAMED
State:	KANSAS	Country:	USA



Scale 1:240 Imperial

Well Name:	YOUNGER # 1		
Surface Location:	SW NE NW SW Sec.7-15s-19w		
Bottom Location:			
API:	15-051-26,595-00-00		
License Number:	4787		
Spud Date:	10/26/2013	Time:	7:00 PM
Region:	ELLIS COUNTY		
Drilling Completed:	10/31/2013	Time:	6:35 PM
Surface Coordinates:	1985' FSL & 835' FWL		
Bottom Hole Coordinates:			
Ground Elevation:	2006.00ft		
K.B. Elevation:	2016.00ft		
Logged Interval:	2900.00ft	To:	3700.00ft
Total Depth:	3700.00ft		
Formation:	LANSING-KANSAS CITY		
Drilling Fluid Type:	CHEMICAL/FRESH WATER GEL		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:	-99.4825058	Latitude:	38.7601823
N/S Co-ord:	1985' FSL		
E/W Co-ord:	835' FWL		

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
Address: 108 W 35TH
HAYS, KS 67601

Phone Nbr: (785) 639-1337
 Logged By: Geologist Name: HERB DEINES

CONTRACTOR

Contractor:	SOUTHWIND DRILLING, INC.		
Rig #:	1		
Rig Type:	MUD ROTARY		
Spud Date:	10/26/2013	Time:	7:00 PM
TD Date:	10/31/2013	Time:	6:35 PM
Rig Release:	11/2/2013	Time:	3:00 PM

ELEVATIONS

K.B. Elevation: 2016.00ft Ground Elevation: 2006.00ft
K.B. to Ground: 10.00ft

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF THREE DSTS

OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY LOG

OPEN HOLE TESTING BY TRILOBITE TESTERS INC: THREE (3) STRADDLE TESTS

FORMATION TOPS SUMMARY AND CHRONOLGY OF DAILY ACTIVITY

YOUNGER # 1
SW NE NW SW
SEC.7-15S-19W
2006'GL 2016'KB

ORVILLE # 1
NE NE SW SE
SEC.7-15S-19W

FORMATION

SAMPLE TOPS

LOG TOPS

COMPARISON


Anhydrite	1256 ± 760	1252 ± 764	± 760
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Anhydrite	1256 +760	1252 +764	+ 760
B-Anhydrite	1295 +721	129 +721	+ 721
Topeka		3002 -986	- 987
Heebner Shale	3264-1248	3260-1244	-1247
Toronto	3283-1267	3283-1267	-1267
LKC	3309-1293	3307-1291	-1293
BKC	3560-1544	3549-1533	-1545
Marmaton	3588-1572	3589-1573	
Congl. Sand	3630-1614	3630-1614	-1626
Arbuckle	3643-1627	3642-1626	-1644
Reagan Sand		3674-1658	-1655
RTD	3700-1684	3698-1682	

SUMMARY OF DAILY ACTIVITY

10-26-13	RU, Spud 7:00PM
10-27-13	630', drilling surface hole
10-28-13	1265', set 8 5/8" surface casing to 1269' w/ 375 sxs SMD, slope ¾ degree, plug down 3:10AM, WOC 12 hrs
10-29-13	2113', drilling
10-30-13	2868', drilling, displaced 2775'-2804'
10-31-13	3480', drilling, RTD 3700' @6:55PM, ST, CCH, TOWB, logs
11-01-13	3700', finish logging, straddle DST # 1 3321'-3378' "C-D" LKC, straddle DST # 2 3420'-3470' "H" LKC, TIWB, CCH, straddle DST #3 3420'-3470' Arbuckle
11-02-13	3700', finish DST # 3, P & A

DST # 1 STRADDLE TEST SUMMARY BOTTOM PACKER HELD



TRILOBITE

TESTING, INC.

DRILL STEM TEST REPORT

TDI, Inc.

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

7-15-19,Ellis,KS

Younger #1

Job Ticket: 55309 DST#: 1

Test Start: 2013.11.01 @ 05:10:00

GENERAL INFORMATION:

Formation:

KC "C-D"

Deviated:

No Whipstock:

ft (KB)

Time Tool Opened:

07:45:30

Time Test Ended:

12:21:45

Interval:

3321.00 ft (KB) To 3378.00 ft (KB) (TVD)

Total Depth:

3699.00 ft (KB) (TVD)

Hole Diameter:

7.88 inchesHole Condition: Fair

Test Type:

Conventional Straddle (Initial)

Tester:

Brett Dickinson

Unit No:

59

Reference Elevations:

2036.00 ft (KB)

2026.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8736

Inside

Press@RunDepth:

61.13 psig @ 3357.00 ft (KB)

Start Date:

2013.11.01

End Date:

2013.11.01

Start Time:

05:10:05

End Time:

12:21:44

Capacity:

8000.00 psig

Last Calib.:

2013.11.01

Time On Btm:

2013.11.01 @ 07:45:00

Time Off Btm:

2013.11.01 @ 10:53:00

TEST COMMENT:

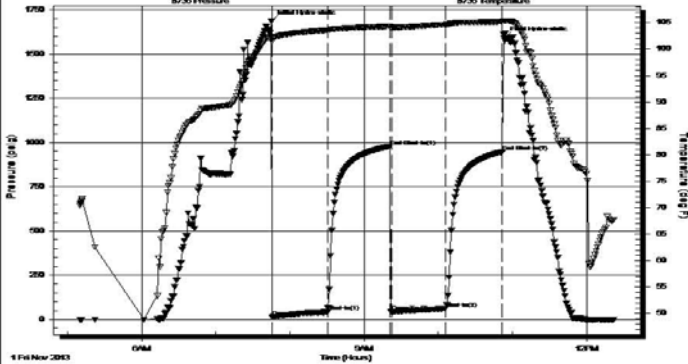
IF-6 1/4in blow

ISI-No blow

FF-1 1/2in blow

FSI-No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1686.65	102.42	Initial Hydro-static
1	14.17	101.43	Open To Flow (1)
46	41.99	103.57	Shut-In(1)
96	979.31	104.29	End Shut-In(1)
97	42.18	104.05	Open To Flow (2)
141	61.13	104.64	Shut-In(2)
187	947.52	105.15	End Shut-In(2)
188	1592.99	105.36	Final Hydro-static


Recovery

Length (ft)	Description	Volume (bbl)
60.00	WCM 25%W 75%M	0.84
50.00	Mud	0.70

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DST # 2 STRADDLE TEST SUMMARY BOTTOM PACKER HELD



TRILOBITE

TESTING, INC.

DRILL STEM TEST REPORT

TDI, Inc.

7-15-19,Ellis,KS

1310 Bison Rd
Hays KS 67601

Younger #1

ATTN: Herb D

Job Ticket: 55310 DST#: 2

Test Start: 2013.11.01 @ 12:45:00

GENERAL INFORMATION:

Formation: KC"H"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:55:00

Time Test Ended: 16:59:15

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3420.00 ft (KB) To 3470.00 ft (KB) (TVD)

Reference Elevations: 2036.00 ft (KB)

Total Depth: 3699.00 ft (KB) (TVD)

2026.00 ft (CF)

Hole Diameter: 7.88 inchesHole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6753 Outside

Press@RunDepth: 45.19 psig @ 3456.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.01 End Date: 2013.11.01

Last Calib.: 2013.11.01

Start Time: 12:45:05 End Time: 16:59:15

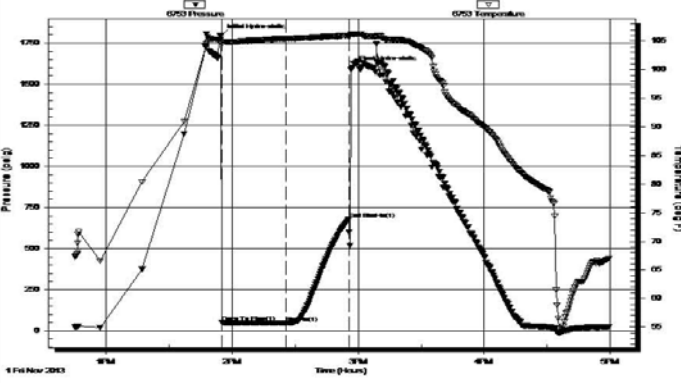
Time On Btm: 2013.11.01 @ 13:54:30

Time Off Btm: 2013.11.01 @ 14:57:15

TEST COMMENT: IF-1/4in blow

ISI-No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1795.81	105.34	Initial Hydro-static
1	50.61	104.44	Open To Flow (1)
31	45.19	105.34	Shut-In(1)
61	678.94	105.91	End Shut-In(1)
63	1603.15	106.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.07

* Recovery from multiple tests

Gas Rates


Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Trilobite Testing, Inc

Ref. No: 55310

Printed: 2013.11.01 @ 22:50:41

DST # 3 STRADDLE TEST SUMMARY BOTTOM PACKER HELD



TRILOBITE

TESTING, INC.

DRILL STEM TEST REPORT

TDI, Inc.

7-15-19,Ellis,KS

1310 Bison Rd
Hays KS 67601

Younger #1

ATTN: Herb D

Job Ticket: 55311 DST#: 3

Test Start: 2013.11.01 @ 21:40:00

GENERAL INFORMATION:

Formation: Arb.

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:27:00

Time Test Ended: 04:09:45

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3617.00 ft (KB) To 3672.00 ft (KB) (TVD)

Reference Elevations: 2036.00 ft (KB)

Total Depth: 3699.00 ft (KB) (TVD)

2026.00 ft (CF)

Hole Diameter: 7.88 inchesHole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6753 Outside

Press@RunDepth: 1046.91 psig @ 3658.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.01 End Date: 2013.11.02

Last Calib.: 2013.11.02

Start Time: 21:40:05 End Time: 04:09:44

Time On Btm: 2013.11.02 @ 00:26:00

Time Off Btm: 2013.11.02 @ 01:13:30

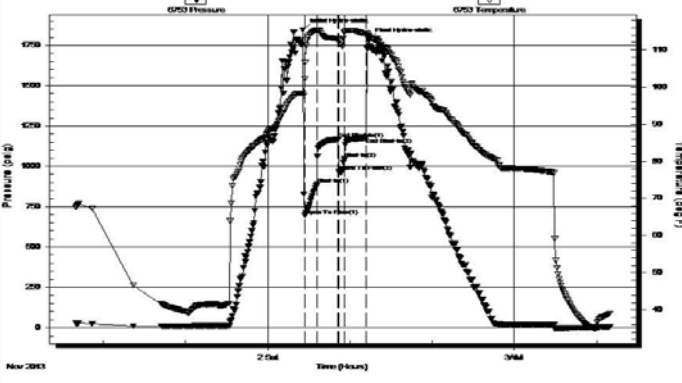
TEST COMMENT: IF-BOB in 30sec

ISI-No blow

FF-BOB in 30sec

FSI-No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1847.02	98.32	Initial Hydro-static
1	694.77	102.13	Open To Flow (1)
10	889.46	115.32	Shut-In(1)
26	1169.10	112.96	End Shut-In(1)
26	967.55	112.86	Open To Flow (2)
31	1046.91	114.87	Shut-In(2)
46	1180.17	114.25	End Shut-In(2)
48	1788.93	113.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	SMCW 10%M 90%W	2.52
180.00	SWCM 15%W 85%M	2.52
1480.00	SMCW 15%M 85%W	20.76
120.00	MCW 40%M 60%W	1.68
160.00	VSWCM 5%W 95%M	2.24

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Trilobite Testing, Inc

Ref. No: 55311

Printed: 2013.11.02 @ 06:32:54

Dolprim

Dol Lime

Lmst fw<7

Lmst fw7>

Lscongl

shale, grn

shale, gry

Carbon Sh

shale, red

Shcol

Ss

CglSandy

ROCK TYPES

MINERAL

Varicolored chert

ACCESSORIES

