

DRILL STEM TEST REPORT

Prepared For: **Colbalt Energy LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Ben Landes

Stum-Harris A #1-5

5-20S-23W Ness,KS

Start Date: 2017.08.08 @ 10:41:00

End Date: 2017.08.08 @ 17:30:00

Job Ticket #: 62631 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.08.10 @ 10:38:24



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Colbalt Energy LLC

5-20S-23W Ness, KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

Job Ticket: 62631

DST#: 1

ATTN: Ben Landes

Test Start: 2017.08.08 @ 10:41:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:52:30

Time Test Ended: 17:30:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4320.00 ft (KB) To 4367.00 ft (KB) (TVD)

Reference Elevations: 2292.00 ft (KB)

Total Depth: 4367.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8354 Inside

Press@RunDepth: 97.22 psig @ 4321.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.08.08 End Date: 2017.08.08

Last Calib.: 2017.08.08

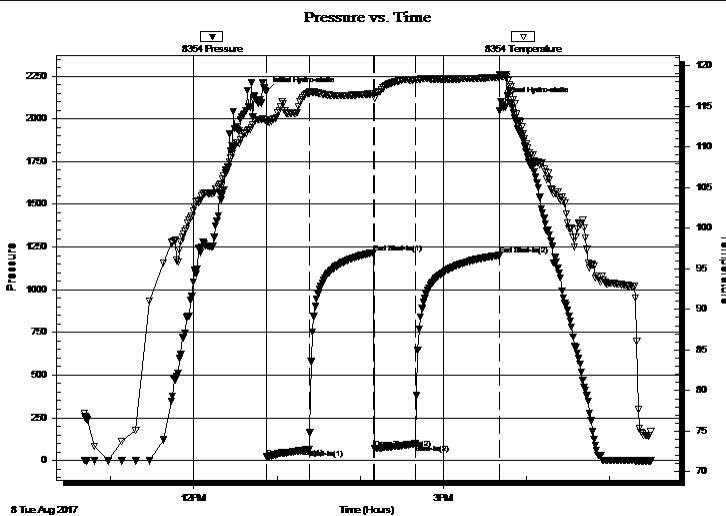
Start Time: 10:41:05 End Time: 17:29:59

Time On Btm: 2017.08.08 @ 12:52:00

Time Off Btm: 2017.08.08 @ 15:41:30

TEST COMMENT: IFP 30 Minutes Blow built to 1 1/2"
ISI 45 Minutes No blow back
FFP 30 Minutes Blow built to 1 1/2"
FSI 60 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2161.08	113.37	Initial Hydro-static
1	21.57	113.06	Open To Flow (1)
31	64.07	116.70	Shut-In(1)
78	1216.43	116.56	End Shut-In(1)
79	69.29	116.03	Open To Flow (2)
108	97.22	118.32	Shut-In(2)
168	1201.03	118.58	End Shut-In(2)
170	2101.42	118.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
170.00	SOCM w/ inch of oil top Oil 3% Mud 97%	0.84

Gas Rates

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



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Time Test Ended: 17:30:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4320.00 ft (KB) To 4367.00 ft (KB) (TVD)

Reference Elevations: 2292.00 ft (KB)

Total Depth: 4367.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8960 Outside

Press@RunDepth: 1200.31 psig @ 4322.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.08.08

End Date:

2017.08.08

Last Calib.:

2017.08.08

Start Time: 10:41:05

End Time:

17:29:59

Time On Btm:

2017.08.08 @ 12:52:00

Time Off Btm:

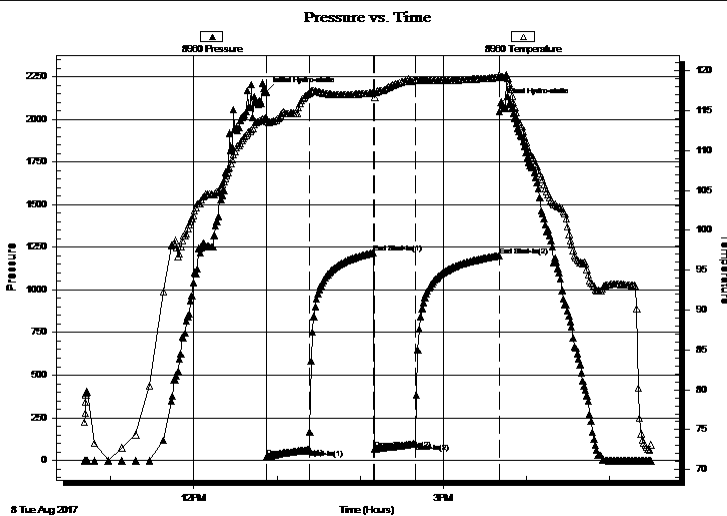
2017.08.08 @ 15:41:30

TEST COMMENT: IFP 30 Minutes Blow built to 1 1/2"

ISI 45 Minutes No blow back

FFP 30 Minutes Blow built to 1 1/2"

FSI 60 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2159.91	114.08	Initial Hydro-static
1	20.69	113.59	Open To Flow (1)
31	63.76	117.16	Shut-In(1)
78	1216.32	117.23	End Shut-In(1)
79	67.26	116.59	Open To Flow (2)
108	98.34	118.87	Shut-In(2)
168	1200.31	119.13	End Shut-In(2)
170	2099.55	119.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
170.00	SOCM w/ inch of oil top Oil 3% Mud 97%	0.84

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Colbalt Energy LLC

5-20S-23W Ness,KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

Job Ticket: 62631

DST#: 1

ATTN: Ben Landes

Test Start: 2017.08.08 @ 10:41:00

Tool Information

Drill Pipe:	Length: 4124.00 ft	Diameter: 3.80 inches	Volume: 57.85 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 58.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	4320.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.30 ft			
Tool Length:	75.30 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-In Tool	5.00			4297.00	
Hydraulic tool	5.00			4302.00	
Jars	6.00			4308.00	
Safety Joint	2.00			4310.00	
Top Packer	5.00			4315.00	
Packer	5.00			4320.00	28.00 Bottom Of Top Packer
Recorder	1.00	8354	Inside	4321.00	
Recorder	1.00	8960	Outside	4322.00	
Anchor	9.00			4331.00	
Change Over Sub	1.00			4332.00	
Drill Pipe	31.30			4363.30	
Change Over Sub	1.00			4364.30	
Bullnose	3.00			4367.30	47.30 Anchor Tool

Total Tool Length: 75.30



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Colbalt Energy LLC

5-20S-23W Ness,KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

Job Ticket: 62631

DST#: 1

ATTN: Ben Landes

Test Start: 2017.08.08 @ 10:41:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
170.00	SOCM w / inch of oil top Oil 3% Mud 97%	0.836

Total Length: 170.00 ft Total Volume: 0.836 bbl

Num Fluid Samples: 0

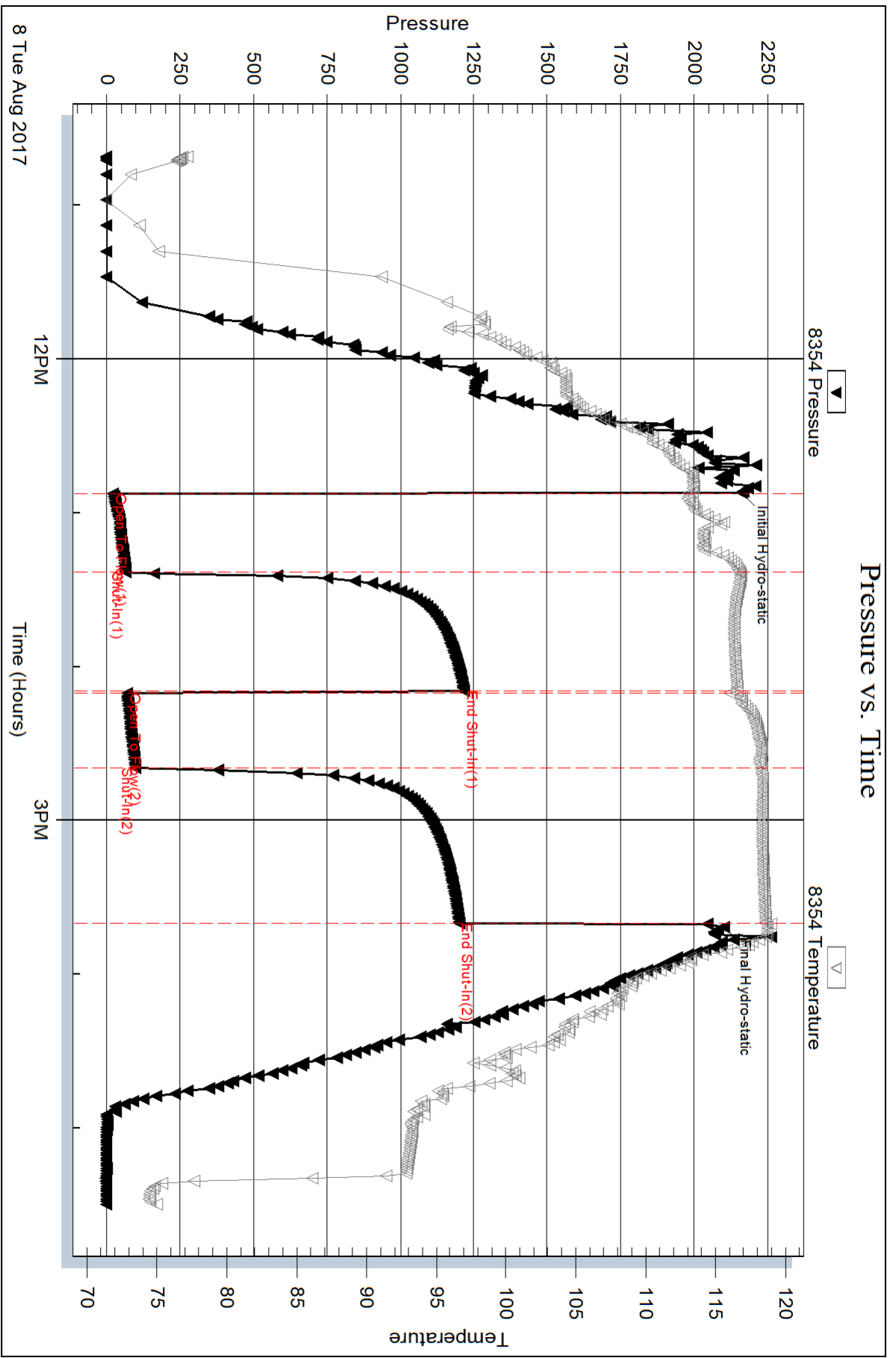
Num Gas Bombs: 0

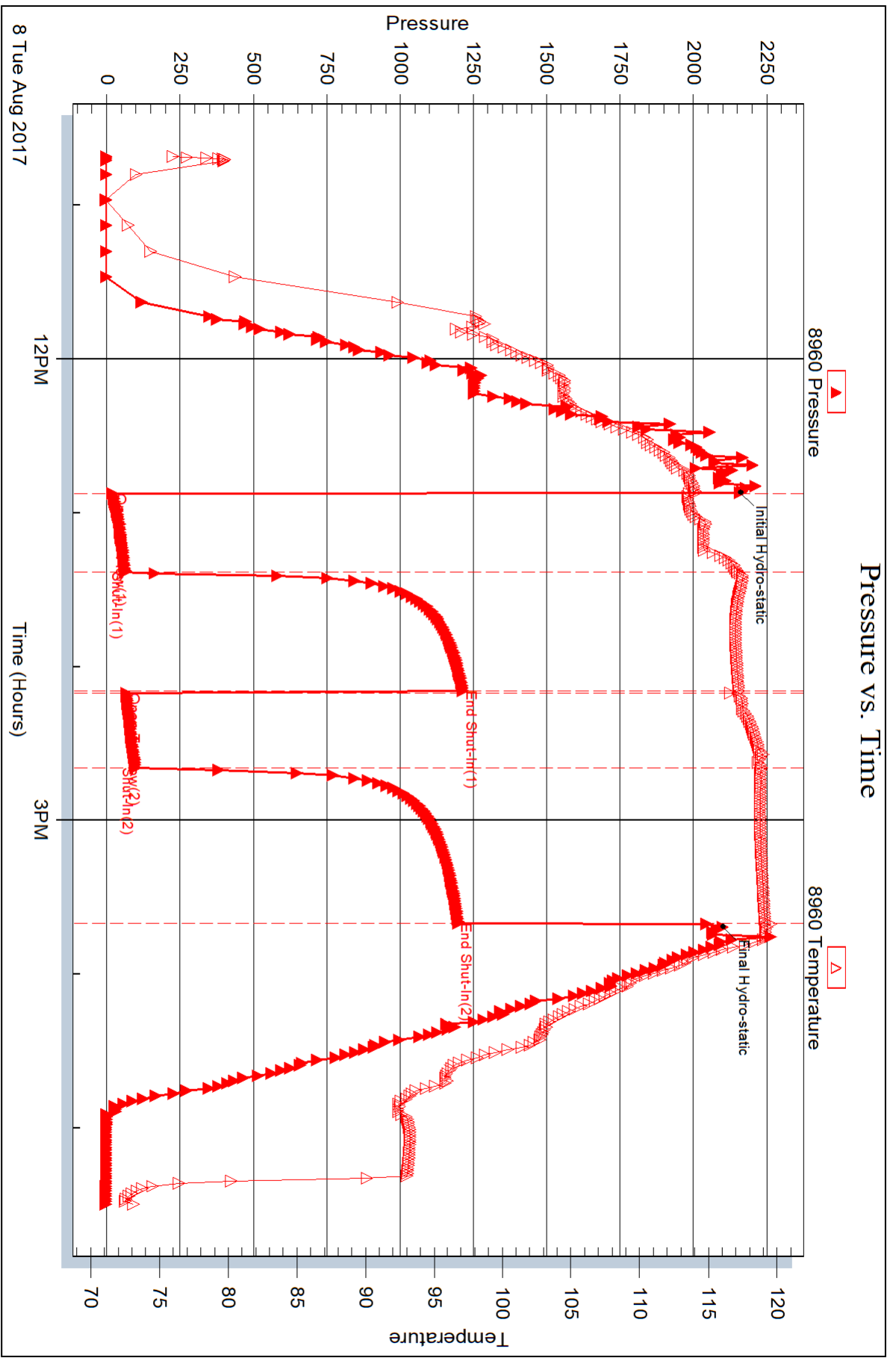
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







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Prepared For: **Colbalt Energy LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Ben Landes

Stum-Harris A #1-5

5-20S-23W Ness,KS

Start Date: 2017.08.08 @ 23:43:00

End Date: 2017.08.09 @ 08:02:30

Job Ticket #: 62632 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.08.10 @ 10:37:52



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Colbalt Energy LLC

5-20S-23W Ness, KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

ATTN: Ben Landes

Job Ticket: 62632

DST#: 2

Test Start: 2017.08.08 @ 23:43:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:07:30

Time Test Ended: 08:02:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4318.00 ft (KB) To 4380.00 ft (KB) (TVD)

Reference Elevations: 2292.00 ft (KB)

Total Depth: 4380.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8354 Inside

Press@RunDepth: 134.82 psig @ 4319.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.08.08

End Date:

2017.08.09

Last Calib.: 2017.08.09

Start Time: 23:43:05

End Time:

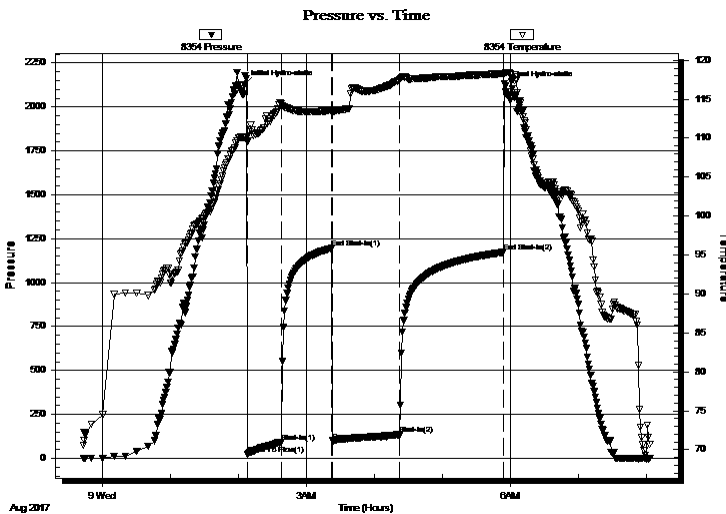
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Time On Btm: 2017.08.09 @ 02:05:00

Time Off Btm: 2017.08.09 @ 05:55:00

TEST COMMENT: IFP 30 Minutes Blow built to 5"
ISI 45 Minutes No blow back
FFP 60 Minutes Blow built to 7"
FSI 90 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2124.12	110.11	Initial Hydro-static
3	23.36	109.55	Open To Flow (1)
33	91.64	114.43	Shut-In(1)
77	1195.26	113.56	End Shut-In(1)
78	99.09	113.39	Open To Flow (2)
137	134.82	117.52	Shut-In(2)
229	1172.56	118.26	End Shut-In(2)
230	2119.02	118.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	OCWM Oil 5% Water 45% Mud 50%	0.61
139.00	Emulsified OCM E oil 10% Mud 90%	1.42

Gas Rates

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



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Job Ticket: 62632

DST#: 2

Test Start: 2017.08.08 @ 23:43:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:07:30

Time Test Ended: 08:02:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4318.00 ft (KB) To 4380.00 ft (KB) (TVD)

Reference Elevations: 2292.00 ft (KB)

Total Depth: 4380.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8960 Outside

Press@RunDepth: 1171.57 psig @ 4320.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.08.08

End Date:

2017.08.09

Last Calib.: 2017.08.09

Start Time: 23:43:05

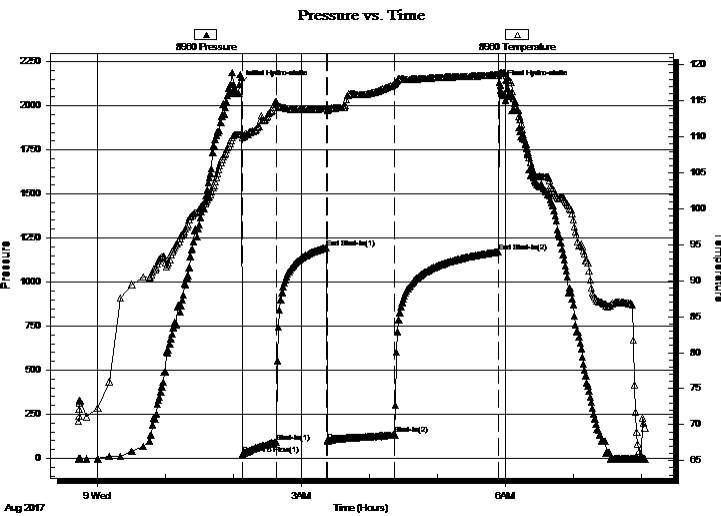
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Time On Btm: 2017.08.09 @ 02:05:00

Time Off Btm: 2017.08.09 @ 05:55:00

TEST COMMENT: IFP 30 Minutes Blow built to 5"
ISI 45 Minutes No blow back
FFP 60 Minutes Blow built to 7"
FSI 90 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2120.09	110.31	Initial Hydro-static
3	21.54	109.95	Open To Flow (1)
33	92.06	114.90	Shut-In(1)
77	1195.55	113.96	End Shut-In(1)
78	97.34	113.83	Open To Flow (2)
137	134.24	117.38	Shut-In(2)
229	1171.57	118.62	End Shut-In(2)
230	2118.28	118.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	OCWM Oil 5% Water 45% Mud 50%	0.61
139.00	Emulsified OCM E oil 10% Mud 90%	1.42

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Colbalt Energy LLC

5-20S-23W Ness,KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

Job Ticket: 62632

DST#: 2

ATTN: Ben Landes

Test Start: 2017.08.08 @ 23:43:00

Tool Information

Drill Pipe:	Length: 4124.00 ft	Diameter: 3.80 inches	Volume: 57.85 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 58.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	4318.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.30 ft			
Tool Length:	90.30 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Shut-In Tool	5.00			4295.00	
Hydraulic tool	5.00			4300.00	
Jars	6.00			4306.00	
Safety Joint	2.00			4308.00	
Top Packer	5.00			4313.00	
Packer	5.00			4318.00	28.00 Bottom Of Top Packer
Recorder	1.00	8354	Inside	4319.00	
Recorder	1.00	8960	Outside	4320.00	
Anchor	24.00			4344.00	
Change Over Sub	1.00			4345.00	
Drill Pipe	31.30			4376.30	
Change Over Sub	1.00			4377.30	
Bullnose	3.00			4380.30	62.30 Anchor Tool

Total Tool Length: 90.30



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DRILL STEM TEST REPORT

FLUID SUMMARY

Colbalt Energy LLC

5-20S-23W Ness,KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

Job Ticket: 62632

DST#: 2

ATTN: Ben Landes

Test Start: 2017.08.08 @ 23:43:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

17000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
124.00	OCWM Oil 5% Water 45% Mud 50%	0.610
139.00	Emulsified OCM E oil 10% Mud 90%	1.421

Total Length: 263.00 ft Total Volume: 2.031 bbl

Num Fluid Samples: 0

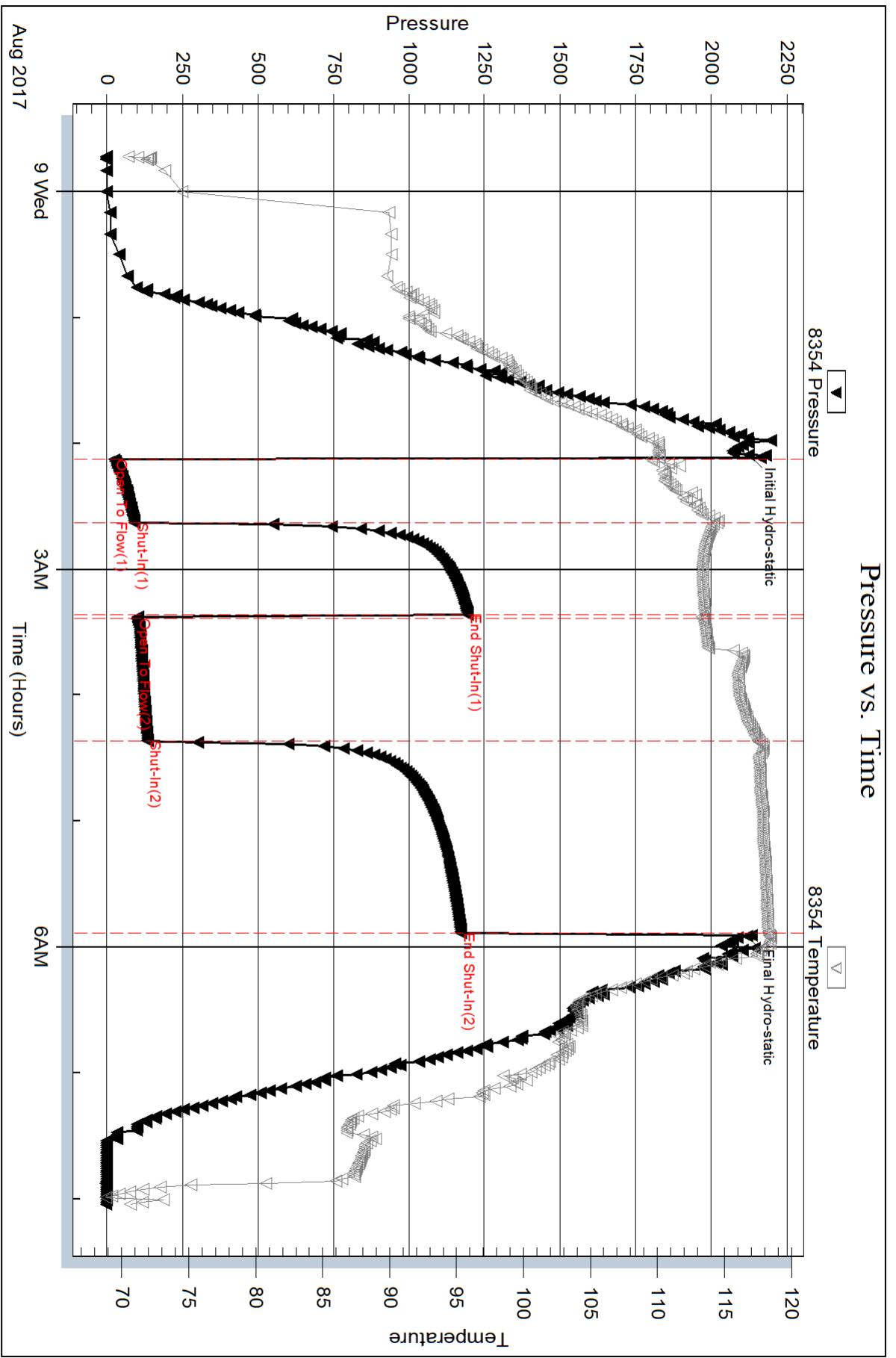
Num Gas Bombs: 0

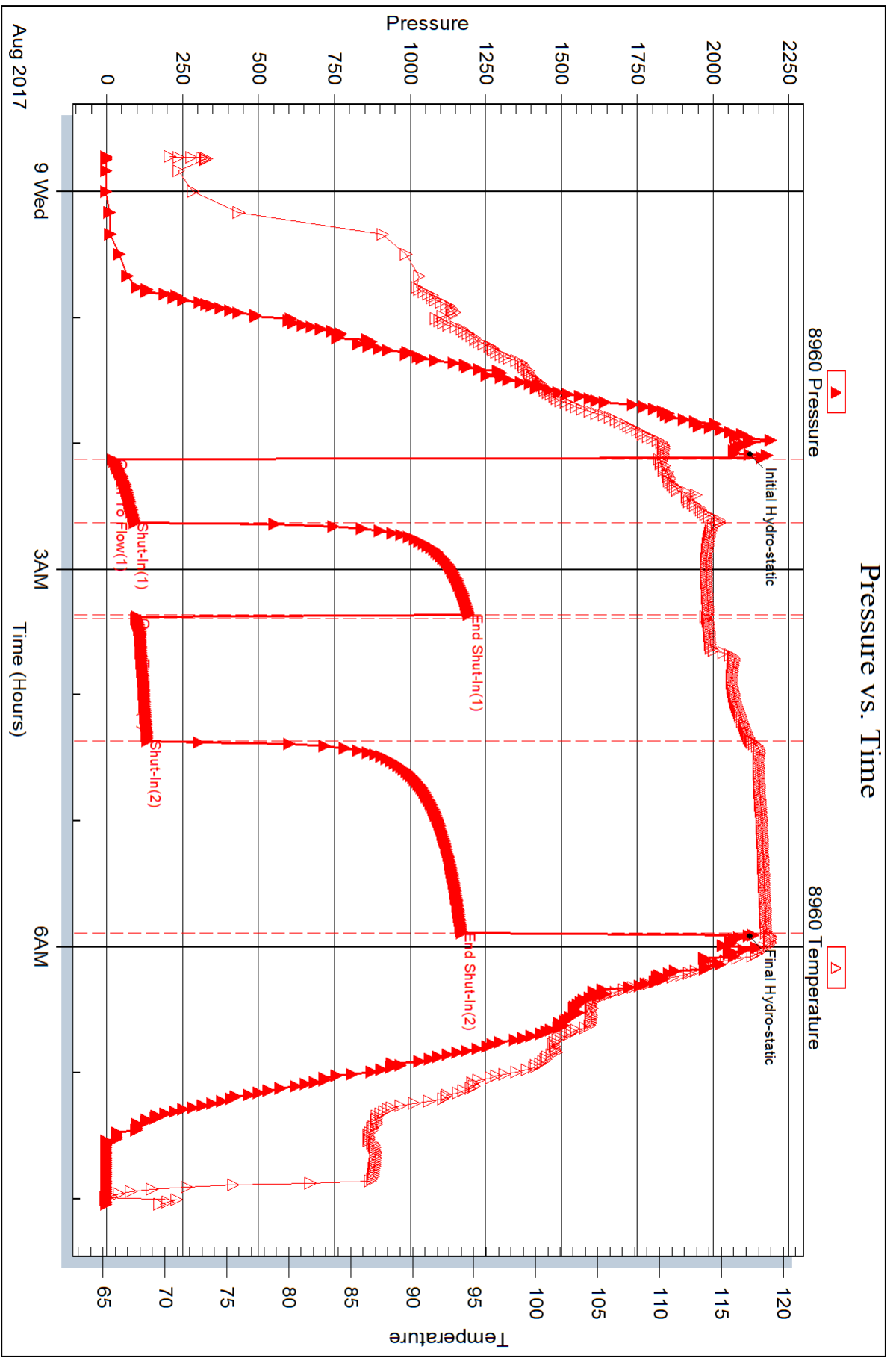
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Recovery Resistivity .36 ohms @ 72 deg







DRILL STEM TEST REPORT

Prepared For: **Colbalt Energy LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Ben Landes

Stum-Harris A #1-5

5-20S-23W Ness,KS

Start Date: 2017.08.09 @ 14:58:00

End Date: 2017.08.09 @ 22:30:30

Job Ticket #: 62633 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.08.10 @ 10:35:14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Colbalt Energy LLC

5-20S-23W Ness, KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

Job Ticket: 62633

DST#: 3

ATTN: Ben Landes

Test Start: 2017.08.09 @ 14:58:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:49:30

Time Test Ended: 22:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: **4381.00 ft (KB) To 4402.00 ft (KB) (TVD)**

Reference Elevations: 2292.00 ft (KB)

Total Depth: 4402.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8354

Inside

Press@RunDepth: 256.18 psig @ 4382.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.08.09

End Date:

2017.08.09

Last Calib.:

2017.08.09

Start Time:

14:58:05

End Time:

22:30:29

Time On Btm:

2017.08.09 @ 16:48:30

Time Off Btm:

2017.08.09 @ 20:35:00

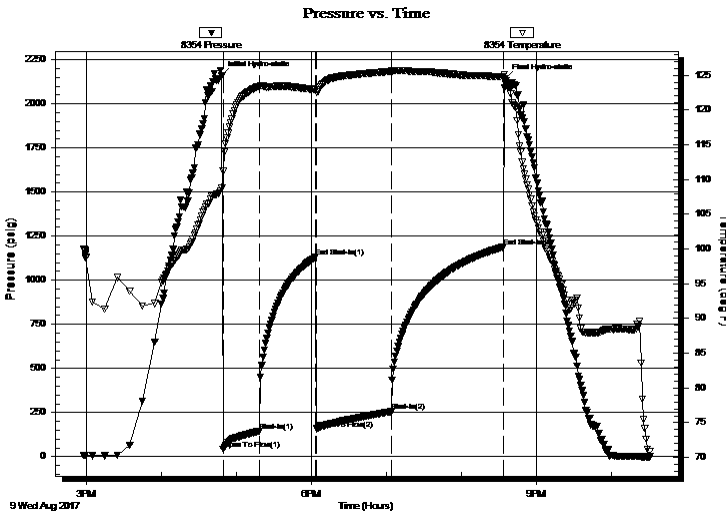
TEST COMMENT: IFP 30 Minutes Blow built to 3 1/2" in 5 minutes then died to 1 1/2"

ISI 45 Minutes No blow back

FFP 60 Minutes Blow built to BOB in 28 1/2 minutes

FSI 90 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2159.38	108.73	Initial Hydro-static
1	41.97	111.18	Open To Flow (1)
30	145.09	123.40	Shut-In(1)
75	1131.24	122.93	End Shut-In(1)
76	158.94	122.56	Open To Flow (2)
136	256.18	125.51	Shut-In(2)
225	1188.70	124.78	End Shut-In(2)
227	2143.23	124.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
541.00	MW Mud 5% Water 95%	5.93

Gas Rates

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



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Stum-Harris A #1-5

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Job Ticket: 62633

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Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4381.00 ft (KB) To 4402.00 ft (KB) (TVD)

Reference Elevations: 2292.00 ft (KB)

Total Depth: 4402.00 ft (KB) (TVD)

2285.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8960 Outside

Press@RunDepth: 1191.01 psig @ 4383.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.08.09

End Date: 2017.08.09

Last Calib.: 2017.08.09

Start Time: 14:58:05

End Time: 22:30:29

Time On Btm: 2017.08.09 @ 16:48:30

Time Off Btm: 2017.08.09 @ 20:35:00

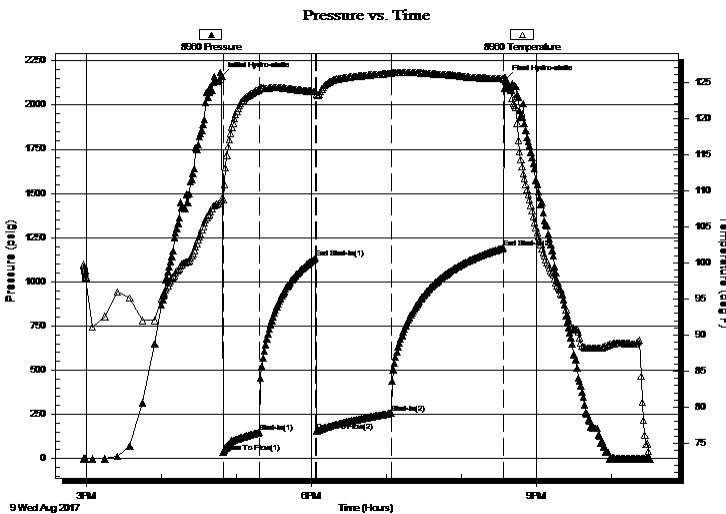
TEST COMMENT: IFP 30 Minutes Blow built to 3 1/2" in 5 minutes then died to 1 1/2"

ISI 45 Minutes No blow back

FFP 60 Minutes Blow built to BOB in 28 1/2 minutes

FSI 90 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2160.20	108.80	Initial Hydro-static
1	37.66	108.81	Open To Flow (1)
30	146.82	124.01	Shut-In(1)
75	1133.73	123.70	End Shut-In(1)
76	154.62	123.36	Open To Flow (2)
136	256.48	126.24	Shut-In(2)
225	1191.01	125.46	End Shut-In(2)
227	2144.30	125.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
541.00	MW Mud 5% Water 95%	5.93

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Colbalt Energy LLC

5-20S-23W Ness,KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

Job Ticket: 62633

DST#: 3

ATTN: Ben Landes

Test Start: 2017.08.09 @ 14:58:00

Tool Information

Drill Pipe:	Length: 4186.00 ft	Diameter: 3.80 inches	Volume: 58.72 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 182.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 59.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 69000.00 lb
Depth to Top Packer:	4381.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	48.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-In Tool	5.00			4359.00	
Hydraulic tool	5.00			4364.00	
Jars	5.00			4369.00	
Safety Joint	2.00			4371.00	
Top Packer	5.00			4376.00	
Packer	5.00			4381.00	27.00 Bottom Of Top Packer
Recorder	1.00	8354	Inside	4382.00	
Recorder	1.00	8960	Outside	4383.00	
Anchor	16.00			4399.00	
Bullnose	3.00			4402.00	21.00 Anchor Tool
Total Tool Length:	48.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Colbalt Energy LLC

5-20S-23W Ness,KS

PO Box 8037
Wichita, KS 67208

Stum-Harris A #1-5

Job Ticket: 62633

DST#: 3

ATTN: Ben Landes

Test Start: 2017.08.09 @ 14:58:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

24000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 12.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
541.00	MW Mud 5% Water 95%	5.931

Total Length: 541.00 ft Total Volume: 5.931 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Recovery Resistivity .271 ohms @ 69 deg.

Serial #: 8354

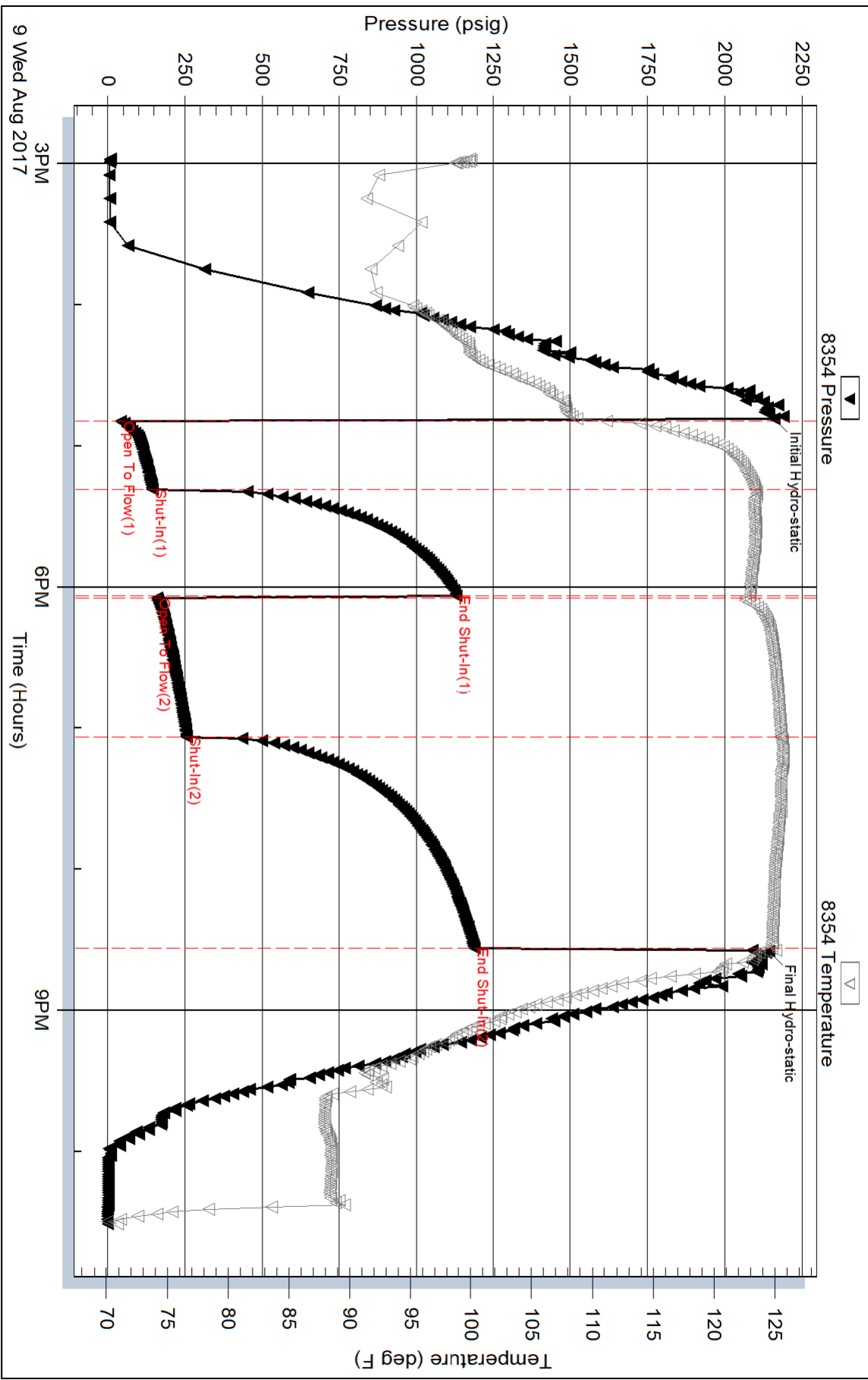
Inside

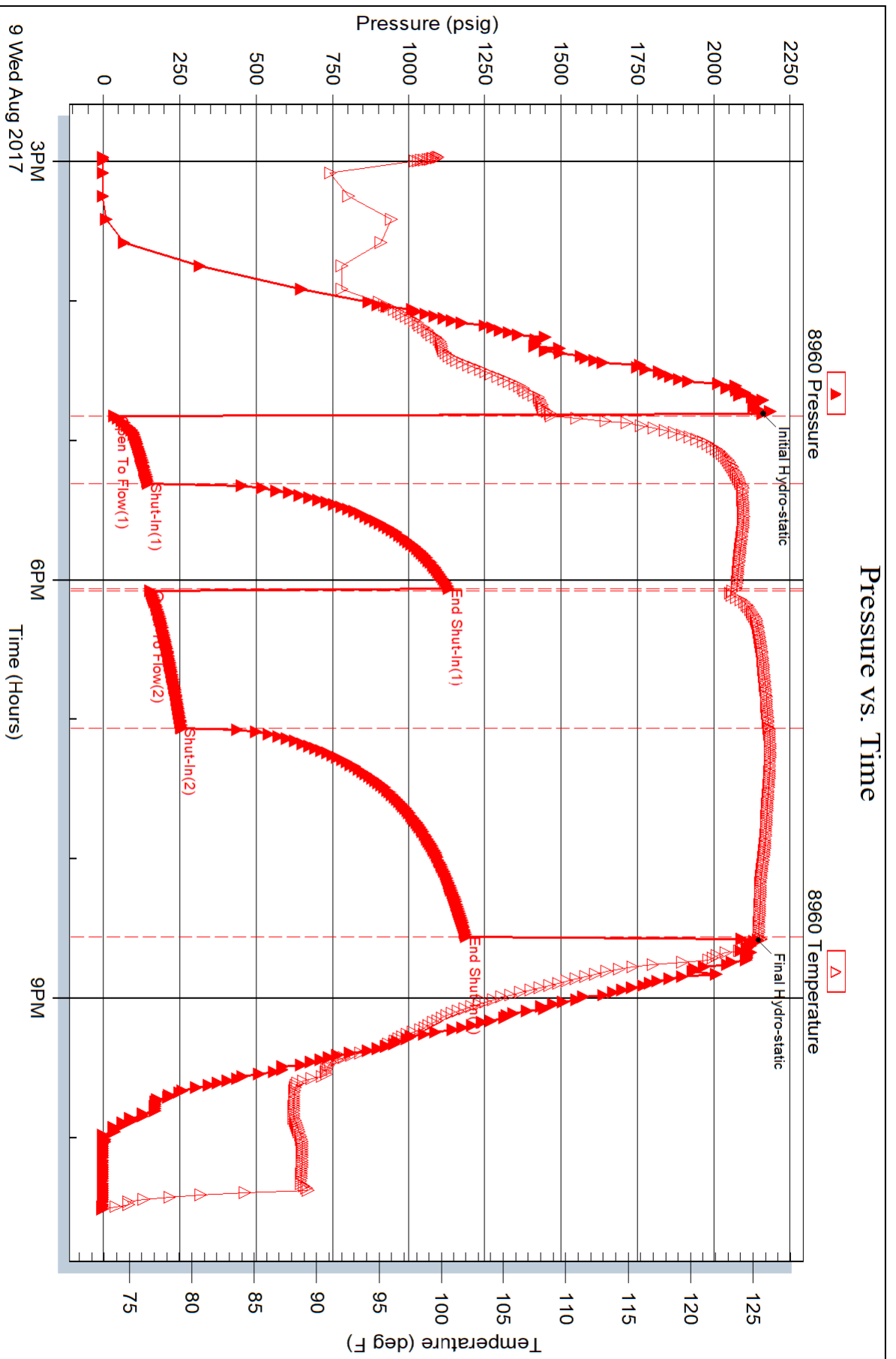
Colbalt Energy LLC

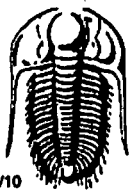
Sturm-Harris A #1-5

DST Test Number: 3

Pressure vs. Time







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62631

Well Name & No. Stum-Harris A #1-5 Test No. 1 Date 8 AUG 17
 Company Cobalt Energy LLC Elevation 2292 KB 2285 GL
 Address 115 S Belmont #12 PO Box 8037 Wichita KS 67208
 Co. Rep / Geo. Ben Landes Rig Pickrel Rig 10
 Location: Sec. 5 Twp. 20S Rge. 23W Co. Ness State KS

Interval Tested 4320-4367 Zone Tested Cherokee Sand
 Anchor Length 47 Drill Pipe Run 4124 Mud Wt. 9.3
 Top Packer Depth 4315 Drill Collars Run 182 Vis 51
 Bottom Packer Depth 4320 Wt. Pipe Run - WL 10.8
 Total Depth 4367 Chlorides 7300 ppm System LCM 2#

Blow Description I.F. Blow built to 1 1/2 inch
I.S.I No blowback
F.F. Blow built to 1 1/2 inch
F.S.I No blowback

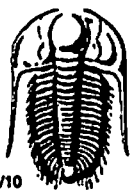
Rec	Feet of	%gas	%oil	%water	%mud
<u>170</u>	<u>Oil Cut Mud</u>		<u>3</u>		<u>27</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 170 BHT 118 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2161</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>9:44 am</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:41 am</u>
(C) First Final Flow <u>64</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:52 pm</u>
(D) Initial Shut-In <u>1216</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>3:37 pm</u>
(E) Second Initial Flow <u>69</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>5:29 pm</u>
(F) Second Final Flow <u>97</u>	<input checked="" type="checkbox"/> Mileage <u>170</u> 127.50	Comments _____
(G) Final Shut-In <u>1201</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2901</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1602.50</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1602.50</u>	

Approved By Ben Landes Our Representative [Signature]

TriLOBite Testing Inc. shall not be liable for damaged of any kind of the property or personal of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62632

Well Name & No. Stum-Harris A #1-5 Test No. 2 Date 8 Aug 17
 Company Cobalt Energy LLC Elevation 2292 KB 2285 GL
 Address 115 S Belmont #12 PO Box 8037 Wichita KS 67208
 Co. Rep / Geo. Ben Landes Rig Pickrell Rig 10
 Location: Sec. 5 Twp. 20S Rge. 23W Co. Ness State KS

Interval Tested 4318-4380 Zone Tested Cherokee Sand
 Anchor Length 62 Drill Pipe Run 4124 Mud Wt. 9.3
 Top Packer Depth 4313 Drill Collars Run 182 Vis 51
 Bottom Packer Depth 4318 Wt. Pipe Run — WL 10.8
 Total Depth 4380 Chlorides 7300 ppm System LCM 2#
 Blow Description I.F. Blow built to 5 inches
I.S.I. No Blowback
F.F. Blow built to 7 inches
F.S.I. No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>	<u>Oil cut Watery Mud</u>	<u>5</u>	<u>4.5</u>	<u>50</u>	<u>50</u>
<u>139</u>	<u>Emulsified Oil cut Mud</u>	<u>10</u>		<u>90</u>	<u>90</u>

Rec Total 263 BHT 118 Gravity — API RW .36 @ 72 °F Chlorides 17000 ppm

(A) Initial Hydrostatic 2124 Test 1150 T-On Location stayed on location
 (B) First Initial Flow 23 Jars 250 T-Started 11:45 pm
 (C) First Final Flow 91 Safety Joint 75 T-Open 2:38 am
 (D) Initial Shut-In 1195 Circ Sub _____ T-Pulled 5:53 am
 (E) Second Initial Flow 99 Hourly Standby _____ T-Out 8:02 am
 (F) Second Final Flow 134 Mileage 170 127.50
 (G) Final Shut-In 1172 Sampler _____
 (H) Final Hydrostatic 2119 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

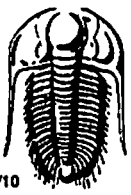
Initial Open 30
 Initial Shut-In 45
 Final Flow 60
 Final Shut-In 90

Sub Total 1602.50

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1602.50
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62633

Well Name & No. Stum-Harris A # 1-5 Test No. 3 Date 9 AUG 17
 Company Cobalt Energy LLC Elevation 2292 KB 2285 GL
 Address 115 S Belmont #12 PO Box 8037 Wichita Kansas 67208
 Co. Rep / Geo. Ben Landes Rig Pickrell Rig 10
 Location: Sec. 5 Twp. 20S Rge. 23W Co. Ness State KS

Interval Tested 4381-4402 Zone Tested Cherokee Sand
 Anchor Length 21 Drill Pipe Run 4186 Mud Wt. 9.4
 Top Packer Depth 4376 Drill Collars Run 182 Vis 52
 Bottom Packer Depth 4381 Wt. Pipe Run - WL 12.8
 Total Depth 4402 Chlorides 8500 ppm System LCM 1 #

Blow Description I.F. Blow built to 3 1/2 inches in 5 minutes then died to 1 1/2 inches
I.S.I. No blow back
F.F. Blow built to B.O.B. in 28 1/2 minutes
F.S.I. No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>541</u>	<u>Muddy Water</u>			<u>5%</u>	<u>95%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 541 BHT _____ Gravity _____ API RW .271 @ 69 °F Chlorides 24000 ppm
 (A) Initial Hydrostatic 2159 Test 1150 T-On Location 1:54 pm
 (B) First Initial Flow 41 Jars 250 T-Started 2:58 pm
 (C) First Final Flow 145 Safety Joint 75 T-Open 4:49 pm
 (D) Initial Shut-In 1131 Circ Sub _____ T-Pulled 8:34 pm
 (E) Second Initial Flow 158 Hourly Standby _____ T-Out 10:31 pm
 (F) Second Final Flow 256 Mileage 170 127.50
 (G) Final Shut-In 1188 Sampler _____
 (H) Final Hydrostatic 2143 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1602.50
 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 45
 Final Flow 60
 Final Shut-In 90

Sub Total 1602.50

Approved By [Signature]

Our Representative [Signature]