



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1158702
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., 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 Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

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: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that 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.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



1158702

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



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

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

September 17, 2013

Nicholas D. Hess
Cobalt Energy LLC
115 S. BELMONT #12
PO BOX 8037
WICHITA, KS 67208

Re: ACO1
API 15-065-23959-00-00
SD Unit 'A' 1-19
SE/4 Sec.19-06S-25W
Graham County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Nicholas D. Hess

ALLIED OIL & GAS SERVICES, LLC 060214

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT
Oakley, KS

DATE <u>8-20-13</u>	SEC. <u>19</u>	TWP. <u>6E</u>	RANGE <u>25</u>	CALLED OUT	ON LOCATION <u>7:30pm</u>	JOB START <u>7:30pm</u>	JOB FINISH <u>8:00pm</u>
LEASE <u>SPU unit</u>	WELL # <u>1-19</u>	LOCATION <u>Spudley (1074 N) Rd. East of</u>		COUNTY <u>Graham</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one) <u>Unit</u>							

CONTRACTOR Marfan 16

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 346.8'

CASING SIZE 8 1/2 DEPTH 245.87

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 151

PERFS.

DISPLACEMENT 21.18

OWNER Same

CEMENT

AMOUNT ORDERED 2 50 sfs com 32 cc

2 bags

EQUIPMENT

PUMP TRUCK CEMENTER LaRone & Co

423/281 HELPER Paul Beaver

BULK TRUCK

347 DRIVER Chris Helpingstone

BULK TRUCK

DRIVER

COMMON 25094 @ 19.70 4975.00

POZ MIX @

GEL 580 @ 23.40 117.00

CHLORIDE 754 @ 69.00 576.00

ASC @

HANDLING 270.33 @ 2.48 670.42

MILEAGE 1239 km X 65 X 2.60 2083.46

REMARKS:

Mix 250 spec cement

Displace with water

Cement did circulate

Thank you

CHARGE TO: Cobalt Energy

STREET

CITY STATE ZIP

TOTAL 7723.88

SERVICE

DEPTH OF JOB 345.87'

PUMP TRUCK CHARGE 1312.25

EXTRA FOOTAGE @

MILEAGE M.I.H.U 65 @ 7.70 500.50

MANIFOLD Sevadge @ 273.00

M.I.H.U 65 @ 4.90 386.00

TOTAL 2573.75

PLUG & FLOAT EQUIPMENT

@

@

@

@

@

TOTAL

To: Allied Oil & Gas Services, LLC.

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME AFD

SIGNATURE Ag Seibel

SALES TAX (if Any)

TOTAL CHARGES 10,497.63

DISCOUNT 2,309.47 IF PAID IN 30 DAYS

8,188.15 Net.



CHARGE TO: **COBALT ENERGY**
 ADDRESS:
 CITY, STATE, ZIP CODE:

TICKET
 N° 24600

PAGE 1 OF 2

SERVICE LOCATIONS: 1. **Ness City, KS.**

WELL/PROJECT NO. **SDWIT "A" 1-19** LEASE **GRAHAM** COUNTY/PARISH **KS.** CITY **STUDLEY, KS.** DATE **17 AUG 13** OWNER

TICKET TYPE SERVICE SALES CONTRACTOR **MURFIN DRILLING #16** RIG NAME/NO. SHIPPED VIA DELIVERED TO ORDER NO.

WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **5 1/2 LONGSTRING** WELL PERMIT NO. WELL LOCATION **10 1/2 N, 1/2 E, N INTO**

REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE #115	80	MIL			60 ⁰⁰	4800 ⁰⁰
579					Pump CHARGE	1	JOB			2000 ⁰⁰	2000 ⁰⁰
402					CENTRALIZERS	7	EA.			70 ⁰⁰	490 ⁰⁰
403					CEMENT BASKET	1	EA.			285 ⁰⁰	285 ⁰⁰
407					INSERT FLOAT SHADE W/AUTO FILL	1	EA.			375 ⁰⁰	375 ⁰⁰
408					DV TOOL & PLUG SET	1	EA.			3300 ⁰⁰	3300 ⁰⁰
417					DV LATCH DOWN PLUG & BAFFLE	1	EA.			200 ⁰⁰	200 ⁰⁰
419					ROTATING HEAD RENTAL		KDB			200 ⁰⁰	200 ⁰⁰
281					MUD FLUSH	500	92			125	625 ⁰⁰
221					LIQUID RCL	4	92			25 ⁰⁰	100 ⁰⁰

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED: **17 AUG 13** TIME SIGNED: **1445** A.M. P.M.

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE		
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				PAGE TOTAL 1	8,055 ⁰⁰
WE UNDERSTOOD AND MET YOUR NEEDS?				2	10,876 ⁸⁰
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				Subtotal	18,931 ⁸⁰
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Graham TAX 7.4%	1,019 ⁶⁵
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	19,951 ⁴⁵
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR *[Signature]* APPROVAL

Thank You!



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 241600

CUSTOMER **COALBALT ENERGY** WELL **SDUWIT A 1-19** DATE **17 AUG 13** PAGE **2** OF **2**

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY		UNIT PRICE	AMOUNT
		LOS	ACCT	DF			QTY	UM		
276						FLOCELE	110	lbs	2.00	220.00
283						SALT	1000	lbs	0.20	200.00
284						CALSEAL	9	bx	35.00	315.00
285						CFR-1	100	lbs	4.00	400.00
290						D-AIR	4 1/2	gal	42.00	189.00
325						STANDARD CEMENT EA-2	200	bx	14.00	2800.00
330						SMD CEMENT	240	bx	17.00	4080.00
581						SERVICE CHARGE		CUBIC FEET	2.00	880.00
583						MILEAGE CHARGE		TON MILES	1.00	1792.80

TOTAL WEIGHT **47820** LOADED MILES **80**

CONTINUATION TOTAL **10,876.80**



DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita KS 67208

ATTN: Paul Gunzelman

SD Unit "A" #1-19

19-6s-25w Graham,KS

Start Date: 2013.08.14 @ 06:48:22

End Date: 2013.08.14 @ 15:02:22

Job Ticket #: 041073 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.20 @ 16:02:57



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041073

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.08.14 @ 06:48:22

GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:25:22

Time Test Ended: 15:02:22

Test Type: Conventional Bottom Hole (Initial)

Tester: Jeff Brown

Unit No: 67

Interval: 3688.00 ft (KB) To 3728.00 ft (KB) (TVD)

Reference Elevations: 2602.00 ft (KB)

Total Depth: 3728.00 ft (KB) (TVD)

2597.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 167.12 psig @ 3723.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.14

End Date:

2013.08.14

Last Calib.:

2013.08.14

Start Time: 06:48:23

End Time:

14:58:22

Time On Btm:

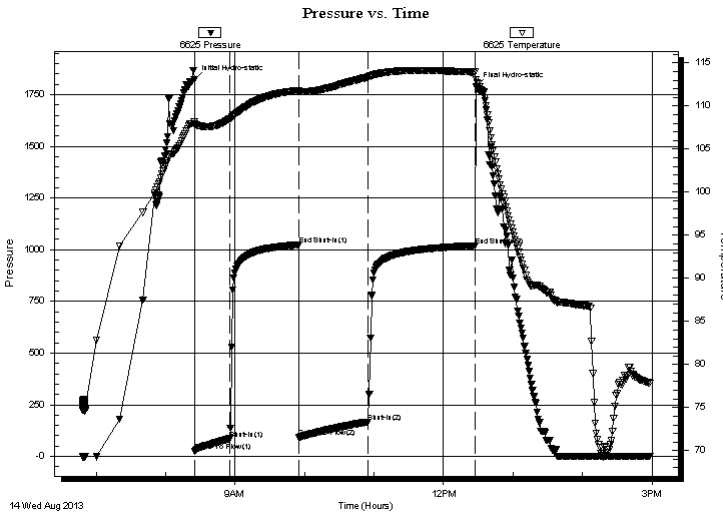
2013.08.14 @ 08:24:52

Time Off Btm:

2013.08.14 @ 12:27:52

TEST COMMENT: IFP=Good blow BOB in 12 min
ISI=Weak blow built to 1/4"
FFP=Good blow BOB in 17 min
FSI=Weak blow back built to 1/4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1824.34	108.14	Initial Hydro-static
1	25.25	107.88	Open To Flow (1)
31	85.10	108.52	Shut-In(1)
90	1023.52	111.80	End Shut-In(1)
91	93.78	111.68	Open To Flow (2)
150	167.12	113.34	Shut-In(2)
242	1019.85	113.93	End Shut-In(2)
243	1790.21	113.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
252.00	MW with a scum of oil 10%M 90%W	3.28
63.00	V SOCGWM 2%O 8%G 20%W 70%M	0.88
63.00	GMCO 5%G 40%M 55%O	0.88
25.00	Gassy Oil 10%G 90%O	0.35
0.00	283-GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041073

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.08.14 @ 06:48:22

Tool Information

Drill Pipe:	Length: 3646.00 ft	Diameter: 3.80 inches	Volume: 51.14 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 28.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 51.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3688.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3661.00	
Shut In Tool	5.00			3666.00	
Hydraulic tool	5.00			3671.00	
Jars	5.00			3676.00	
Safety Joint	3.00			3679.00	
Packer	4.00			3683.00	28.00 Bottom Of Top Packer
Packer	5.00			3688.00	
Stubb	1.00			3689.00	
Perforations	2.00			3691.00	
Change Over Sub	1.00			3692.00	
Drill Pipe	30.00			3722.00	
Change Over Sub	1.00			3723.00	
Recorder	0.00	6625	Outside	3723.00	
Recorder	0.00	8679	Inside	3723.00	
Perforations	2.00			3725.00	
Bullnose	3.00			3728.00	40.00 Bottom Packers & Anchor
Total Tool Length:	68.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041073

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2013.08.14 @ 06:48:22

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
252.00	MW with a scum of oil 10%M 90%W	3.280
63.00	VSOCGWM 2%O 8%G 20%W 70%M	0.884
63.00	GMCO 5%G 40%M 55%O	0.884
25.00	Gassy Oil 10%G 90%O	0.351
0.00	283-GIP	0.000

Total Length: 403.00 ft

Total Volume: 5.399 bbl

Num Fluid Samples: 0

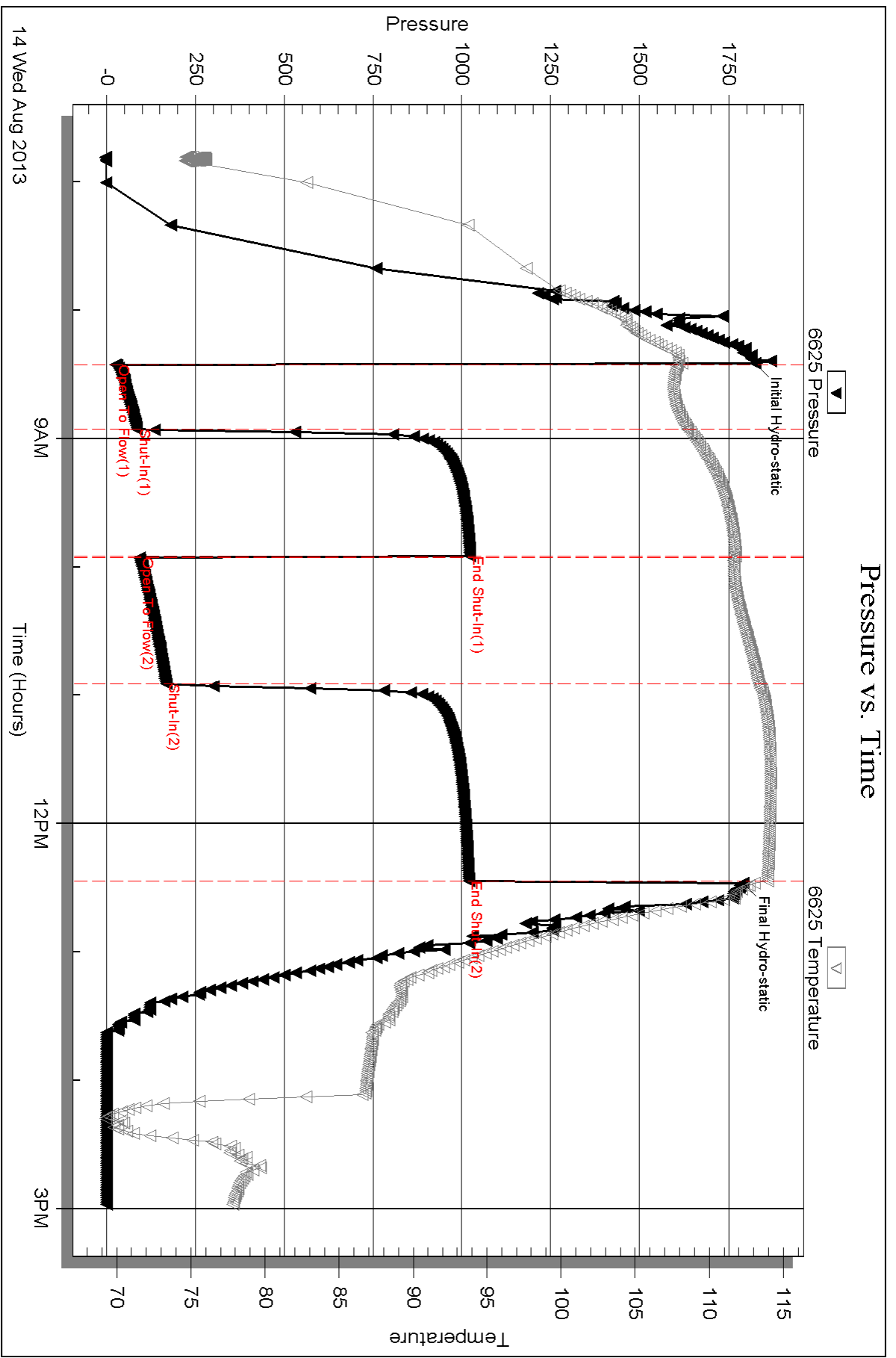
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



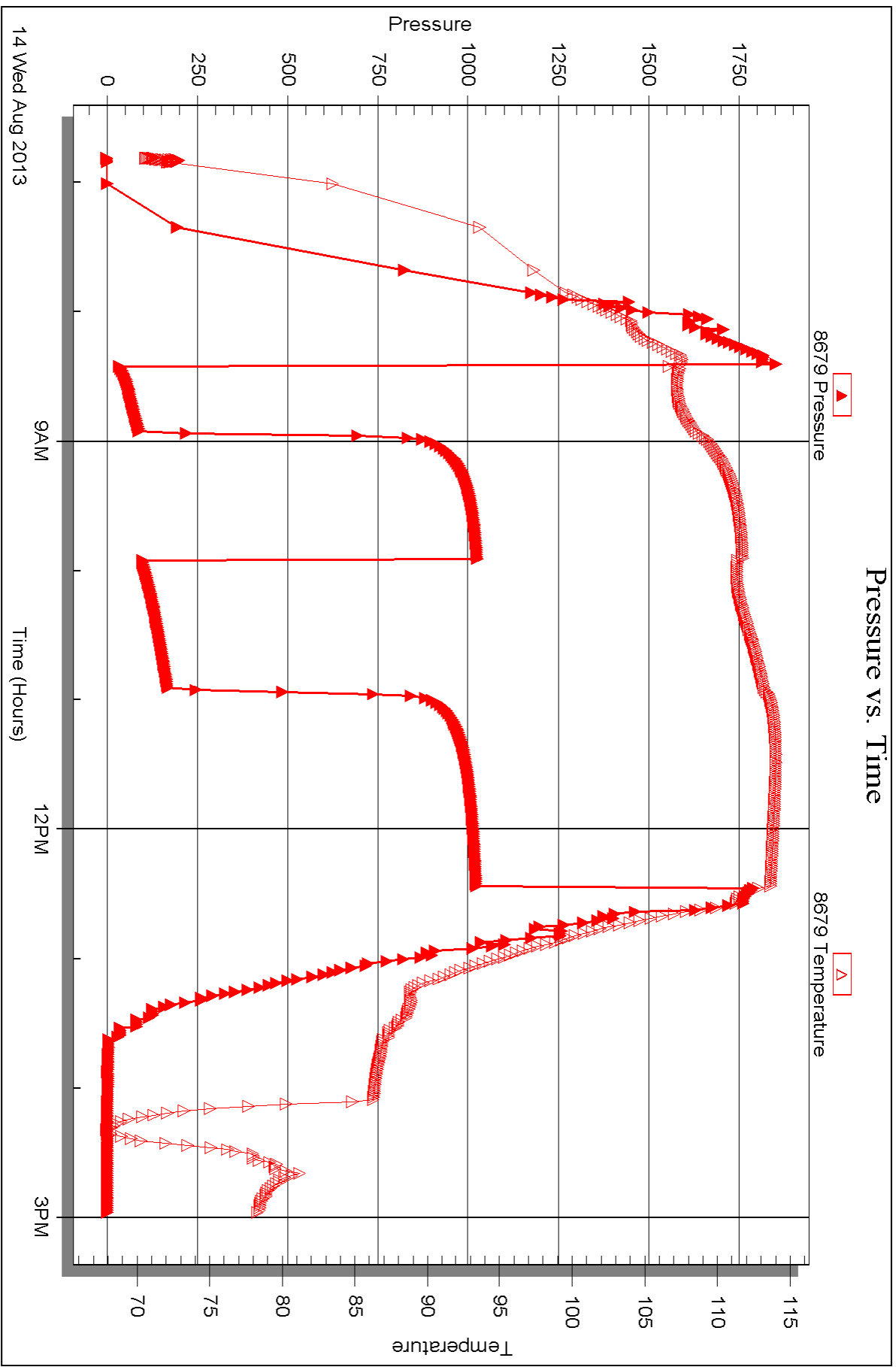
Serial #: 8679

Inside

Cobalt Energy LLC

SD Unit "A" #1-19

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita KS 67208

ATTN: Paul Gunzelman

SD Unit "A" #1-19

19-6s-25w Graham,KS

Start Date: 2013.08.14 @ 22:51:41

End Date: 2013.08.15 @ 06:01:11

Job Ticket #: 041074 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.20 @ 16:01:58



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

ATTN: Paul Gunzelman

Job Ticket: 041074

DST#: 2

Test Start: 2013.08.14 @ 22:51:41

GENERAL INFORMATION:

Formation: **LKC E-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:15:41

Time Test Ended: 06:01:11

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 67

Interval: 3727.00 ft (KB) To 3774.00 ft (KB) (TVD)

Reference Elevations: 2602.00 ft (KB)

Total Depth: 3728.00 ft (KB) (TVD)

2597.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 51.10 psig @ 3766.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.14

End Date:

2013.08.15

Last Calib.:

2013.08.15

Start Time: 22:51:42

End Time:

06:01:11

Time On Btm:

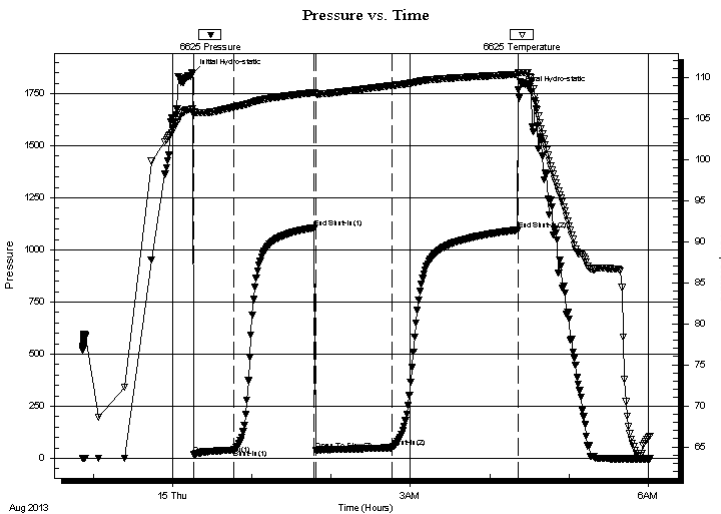
2013.08.15 @ 00:15:11

Time Off Btm:

2013.08.15 @ 04:21:41

TEST COMMENT: IFP=Weak blow built to 3 1/4"
ISI=Dead no blow back
FFP=Fair blow built to 8"
FSI=Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1846.61	106.15	Initial Hydro-static
1	17.98	105.40	Open To Flow (1)
31	41.28	106.36	Shut-In(1)
92	1107.26	108.13	End Shut-In(1)
93	39.75	107.98	Open To Flow (2)
151	51.10	108.98	Shut-In(2)
246	1095.57	110.34	End Shut-In(2)
247	1766.28	110.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	HOCGM 10%G 25%O 65%M	0.80
0.00	79-GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041074

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.08.14 @ 22:51:41

Tool Information

Drill Pipe:	Length: 3678.00 ft	Diameter: 3.80 inches	Volume: 51.59 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 28.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 51.73 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3727.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	75.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3700.00	
Shut In Tool	5.00			3705.00	
Hydraulic tool	5.00			3710.00	
Jars	5.00			3715.00	
Safety Joint	3.00			3718.00	
Packer	4.00			3722.00	28.00 Bottom Of Top Packer
Packer	5.00			3727.00	
Stubb	1.00			3728.00	
Perforations	5.00			3733.00	
Change Over Sub	1.00			3734.00	
Drill Pipe	31.00			3765.00	
Change Over Sub	1.00			3766.00	
Recorder	0.00	6625	Outside	3766.00	
Recorder	0.00	8679	Inside	3766.00	
Perforations	5.00			3771.00	
Bullnose	3.00			3774.00	47.00 Bottom Packers & Anchor
Total Tool Length:	75.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041074

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2013.08.14 @ 22:51:41

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	HOCGM 10%G 25%O 65%M	0.797
0.00	79-GIP	0.000

Total Length: 75.00 ft Total Volume: 0.797 bbl

Num Fluid Samples: 0

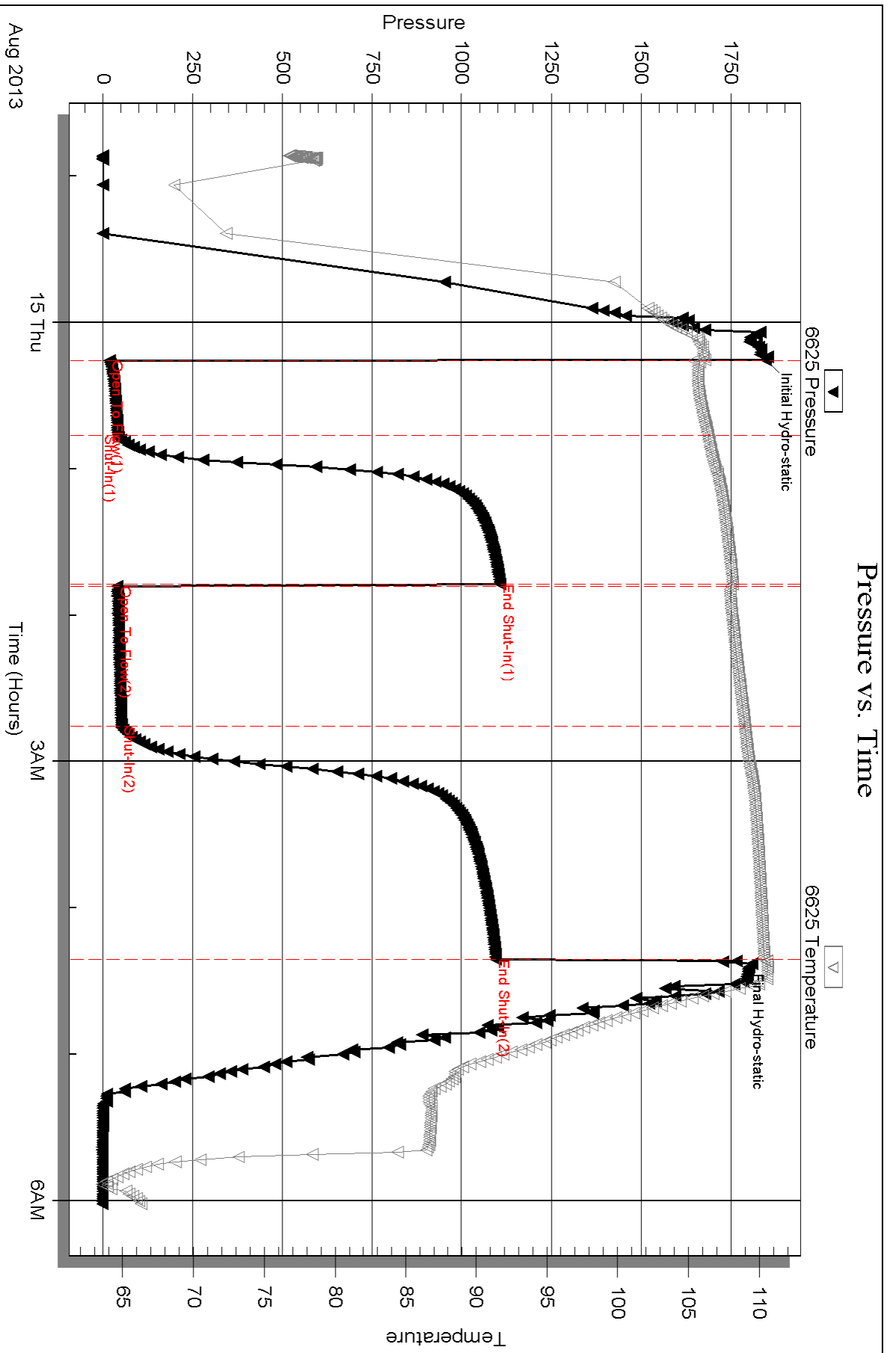
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



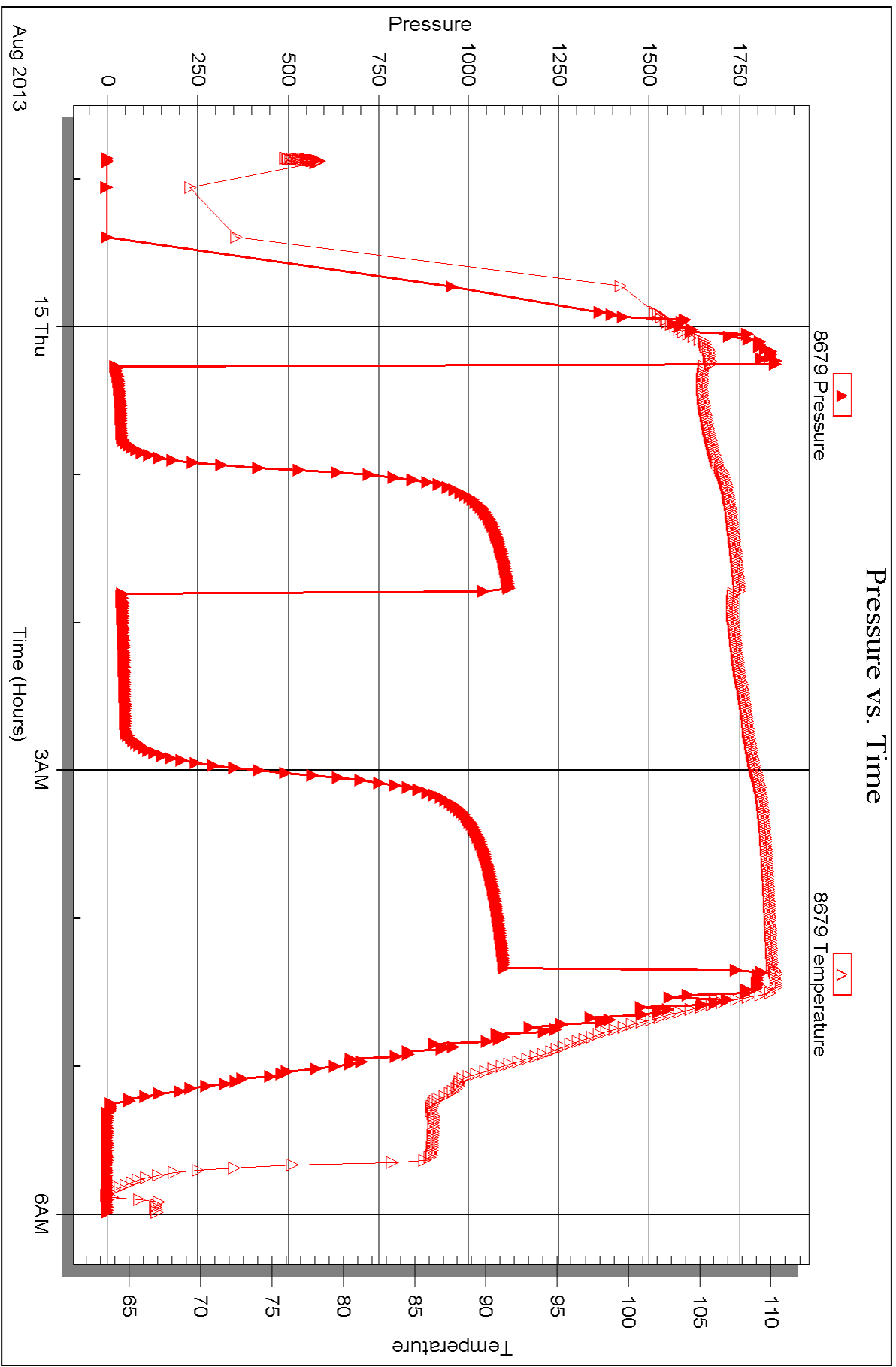
Serial #: 8679

Inside

Cobalt Energy LLC

SD Unit "A" #1-19

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita KS 67208

ATTN: Paul Gunzelman

SD Unit "A" #1-19

19-6s-25w Graham,KS

Start Date: 2013.08.15 @ 13:30:50

End Date: 2013.08.15 @ 22:48:20

Job Ticket #: 041075 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.20 @ 16:01:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

ATTN: Paul Gunzelman

Job Ticket: 041075

DST#: 3

Test Start: 2013.08.15 @ 13:30:50

GENERAL INFORMATION:

Formation: **LKC-H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:02:50

Time Test Ended: 22:48:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 67

Interval: 3776.00 ft (KB) To 3830.00 ft (KB) (TVD)

Reference Elevations: 2602.00 ft (KB)

Total Depth: 3830.00 ft (KB) (TVD)

2597.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 676.38 psig @ 3813.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.15

End Date:

2013.08.15

Last Calib.: 2013.08.15

Start Time: 13:30:51

End Time:

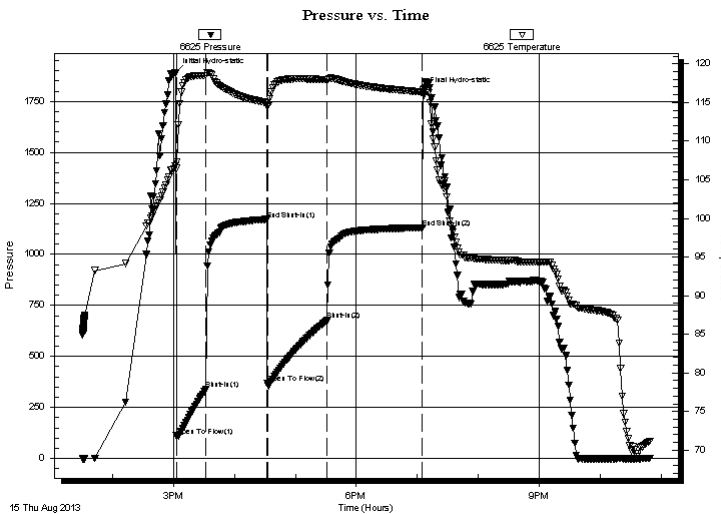
22:48:20

Time On Btm: 2013.08.15 @ 15:02:20

Time Off Btm: 2013.08.15 @ 19:05:50

TEST COMMENT: IFP=Strong blow BOB in 1 1/2 min
ISI=Good blow back BOB in 5 min
FFP=Strong blow BOB in 2 min
FSI=Good blow back BOB in 22 min. Gas to surface

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1891.82	106.85	Initial Hydro-static
1	110.46	106.51	Open To Flow (1)
30	337.52	118.50	Shut-In(1)
90	1171.60	114.98	End Shut-In(1)
90	367.62	114.60	Open To Flow (2)
149	676.38	117.94	Shut-In(2)
243	1131.32	116.35	End Shut-In(2)
244	1799.07	116.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
123.00	MCO 40%M 60%O	1.47
1588.00	Gassy OIL 25%G 75%O	22.28
0.00	GTS	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041075

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.08.15 @ 13:30:50

Tool Information

Drill Pipe:	Length: 3741.00 ft	Diameter: 3.80 inches	Volume: 52.48 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 28.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	69000.00 lb
			<u>Total Volume: 52.62 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3776.00 ft			Final	62000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	54.00 ft				
Tool Length:	82.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3749.00	
Shut In Tool	5.00			3754.00	
Hydraulic tool	5.00			3759.00	
Jars	5.00			3764.00	
Safety Joint	3.00			3767.00	
Packer	4.00			3771.00	28.00 Bottom Of Top Packer
Packer	5.00			3776.00	
Stubb	1.00			3777.00	
Perforations	3.00			3780.00	
Change Over Sub	1.00			3781.00	
Drill Pipe	31.00			3812.00	
Change Over Sub	1.00			3813.00	
Recorder	0.00	6625	Outside	3813.00	
Recorder	0.00	8679	Inside	3813.00	
Perforations	14.00			3827.00	
Bullnose	3.00			3830.00	54.00 Bottom Packers & Anchor
Total Tool Length:	82.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041075

DST#: 3

ATTN: Paul Gunzelman

Test Start: 2013.08.15 @ 13:30:50

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
123.00	MCO 40%M 60%O	1.470
1588.00	Gassy OIL 25%G 75%O	22.275
0.00	GTS	0.000

Total Length: 1711.00 ft Total Volume: 23.745 bbl

Num Fluid Samples: 0

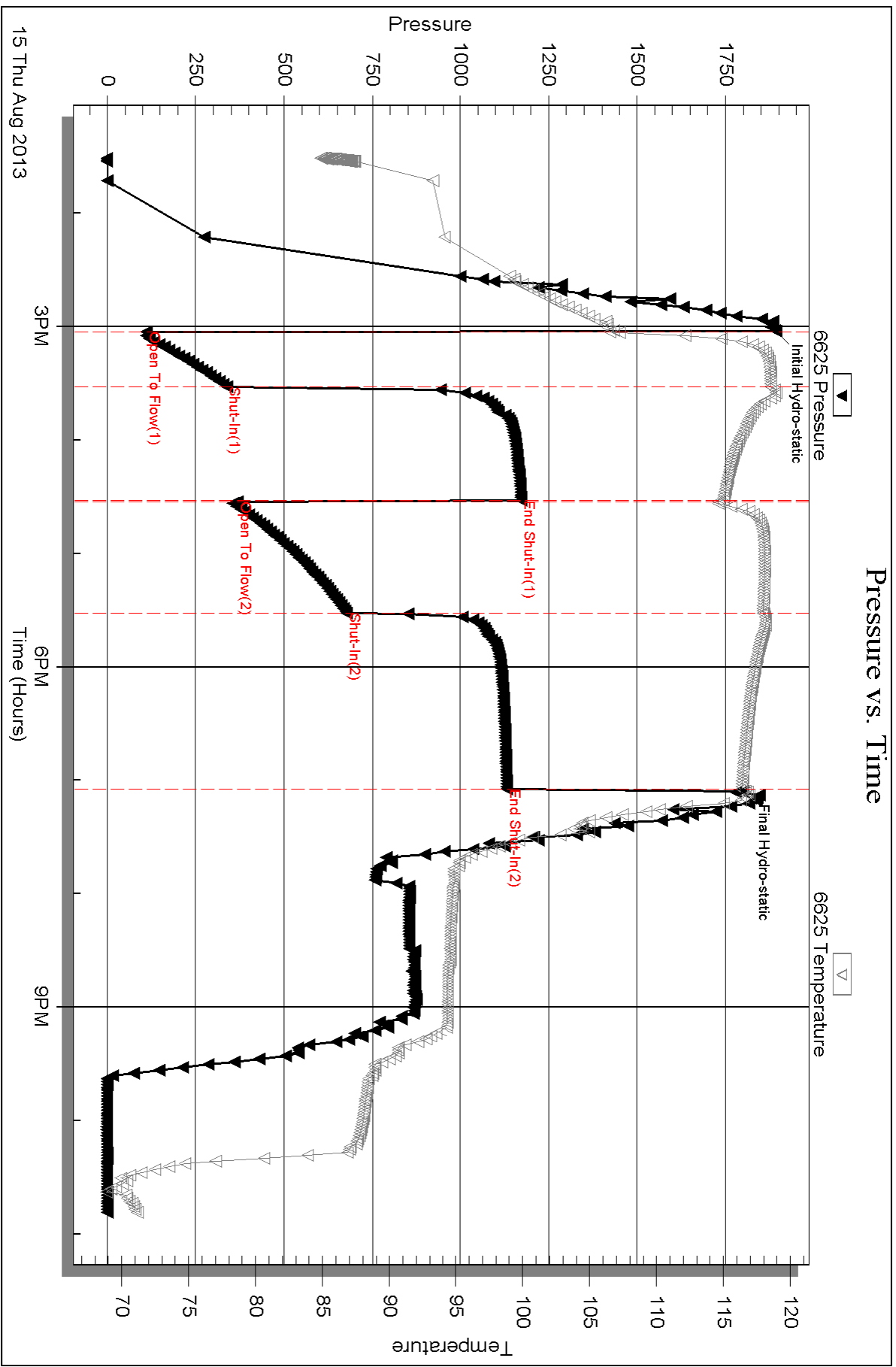
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



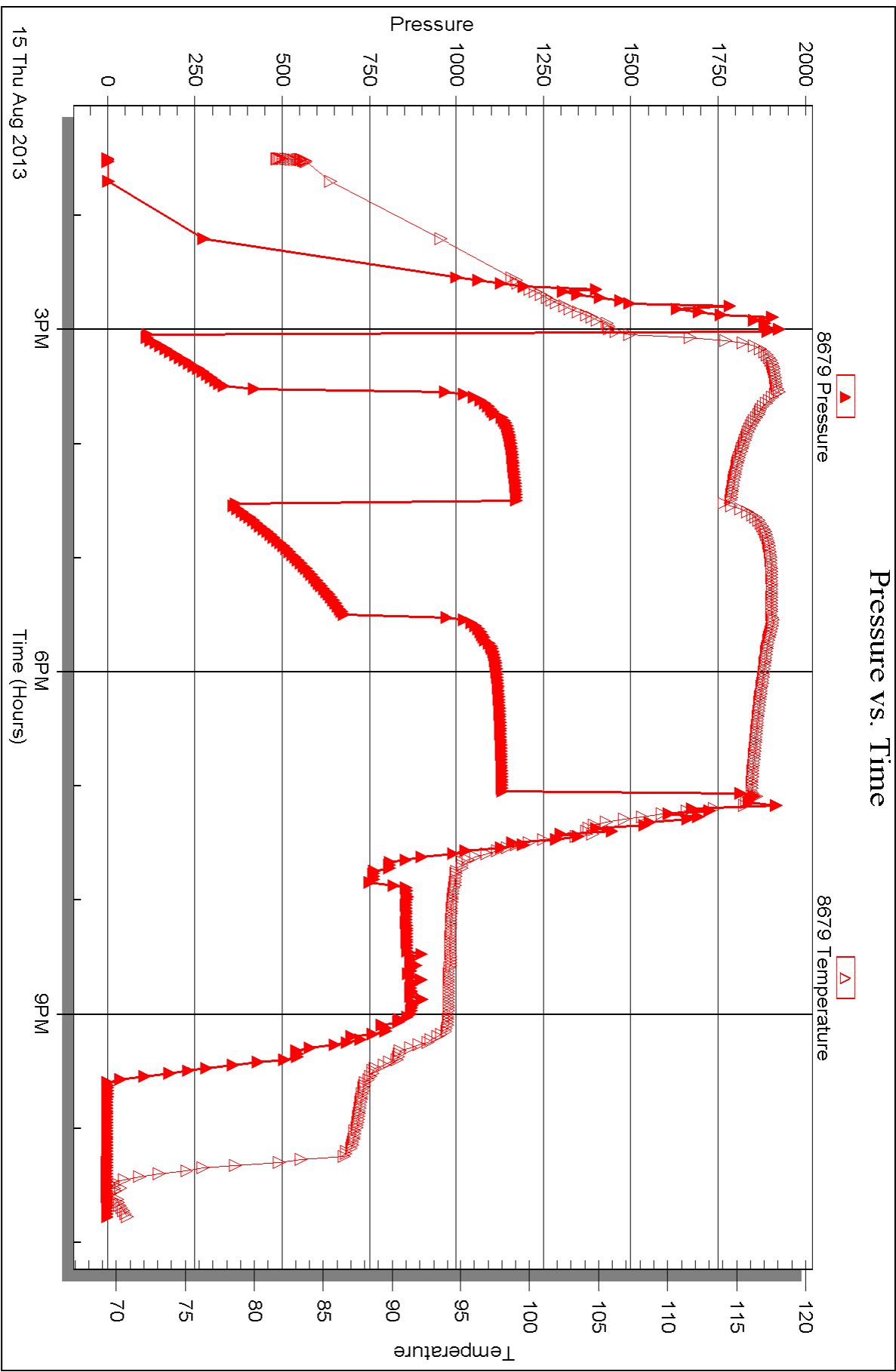
Serial #: 8679

Inside

Cobalt Energy LLC

SD Unit "A" #1-19

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita KS 67208

ATTN: Paul Gunzelman

SD Unit "A" #1-19

19-6s-25w Graham,KS

Start Date: 2013.08.16 @ 07:45:56

End Date: 2013.08.16 @ 16:02:56

Job Ticket #: 041751 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.20 @ 16:00:34



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

ATTN: Paul Gunzelman

Job Ticket: 041751

DST#: 4

Test Start: 2013.08.16 @ 07:45:56

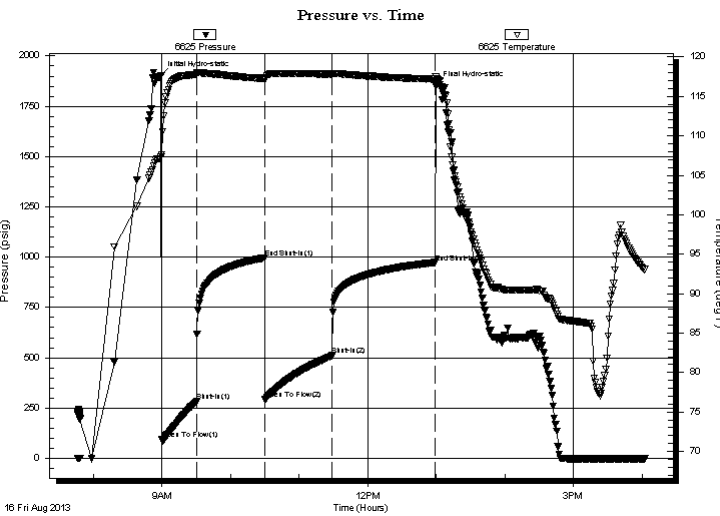
GENERAL INFORMATION:

Formation: **LKC K-L**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:59:26
 Time Test Ended: 16:02:56
 Interval: **3831.00 ft (KB) To 3864.00 ft (KB) (TVD)**
 Total Depth: 3864.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jeff Brown
 Unit No: 67
 Reference Elevations: 2602.00 ft (KB)
 2597.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 510.95 psig @ 3834.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.08.16 End Date: 2013.08.16 Last Calib.: 2013.08.16
 Start Time: 07:45:57 End Time: 16:02:56 Time On Btm: 2013.08.16 @ 08:58:56
 Time Off Btm: 2013.08.16 @ 12:59:26

TEST COMMENT: IFP=Strong blow BOB in 1 1/4 min
 ISI=Good blow back BOB in 18 min
 FFP=Strong blow BOB in 2 min
 FSI=Good blow back BOB in 11 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1901.63	107.34	Initial Hydro-static
1	94.44	107.62	Open To Flow (1)
31	282.53	117.78	Shut-In(1)
91	996.72	117.25	End Shut-In(1)
91	292.76	117.07	Open To Flow (2)
150	510.95	117.82	Shut-In(2)
240	973.66	117.19	End Shut-In(2)
241	1850.51	117.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MW with a scum of oil 15%M 85%W	0.59
63.00	SOCWM 5%O 45%W 50%M	0.88
315.00	MCWO 15%M 15%W 70%O	4.42
822.00	Gassy OIL 30%G 80%O	11.53
0.00	1502-GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041751

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.08.16 @ 07:45:56

Tool Information

Drill Pipe:	Length: 3805.00 ft	Diameter: 3.80 inches	Volume: 53.37 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 28.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 79000.00 lb
			<u>Total Volume: 53.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3831.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3809.00	
Shut In Tool	5.00			3814.00	
Hydraulic tool	5.00			3819.00	
Safety Joint	3.00			3822.00	
Packer	4.00			3826.00	23.00 Bottom Of Top Packer
Packer	5.00			3831.00	
Stubb	1.00			3832.00	
Perforations	2.00			3834.00	
Recorder	0.00	6625	Outside	3834.00	
Recorder	0.00	8679	Inside	3834.00	
Perforations	27.00			3861.00	
Bullnose	3.00			3864.00	33.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

19-6s-25w Graham,KS

PO Box 8037
Wichita KS 67208

SD Unit "A" #1-19

Job Ticket: 041751

DST#: 4

ATTN: Paul Gunzelman

Test Start: 2013.08.16 @ 07:45:56

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	MW w ith a scum of oil 15%M 85%W	0.587
63.00	SOCWM 5%O 45%W 50%M	0.884
315.00	MCWO 15%M 15%W 70%O	4.419
822.00	Gassy OIL 30%G 80%O	11.530
0.00	1502-GIP	0.000

Total Length: 1260.00 ft

Total Volume: 17.420 bbl

Num Fluid Samples: 0

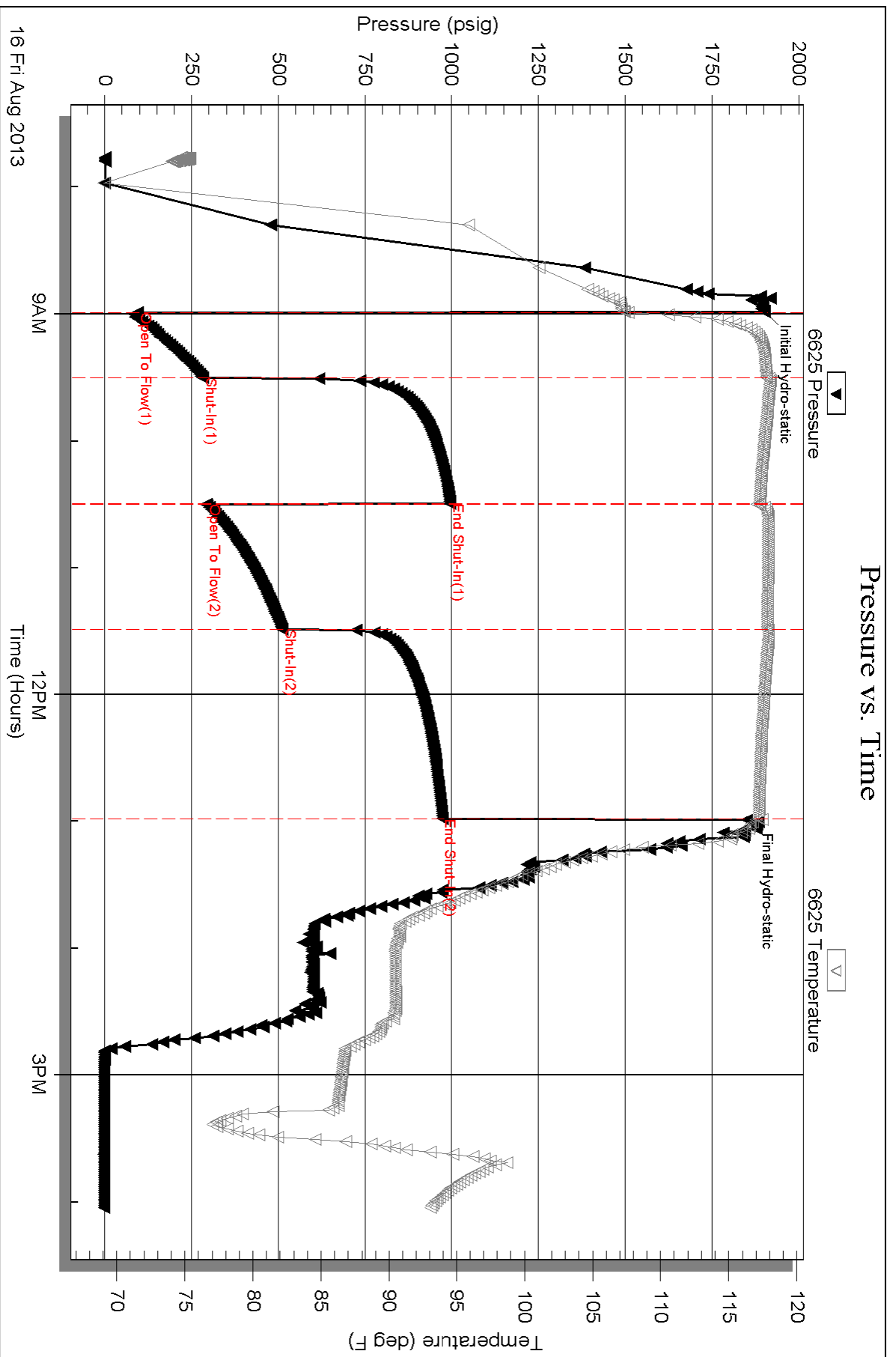
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



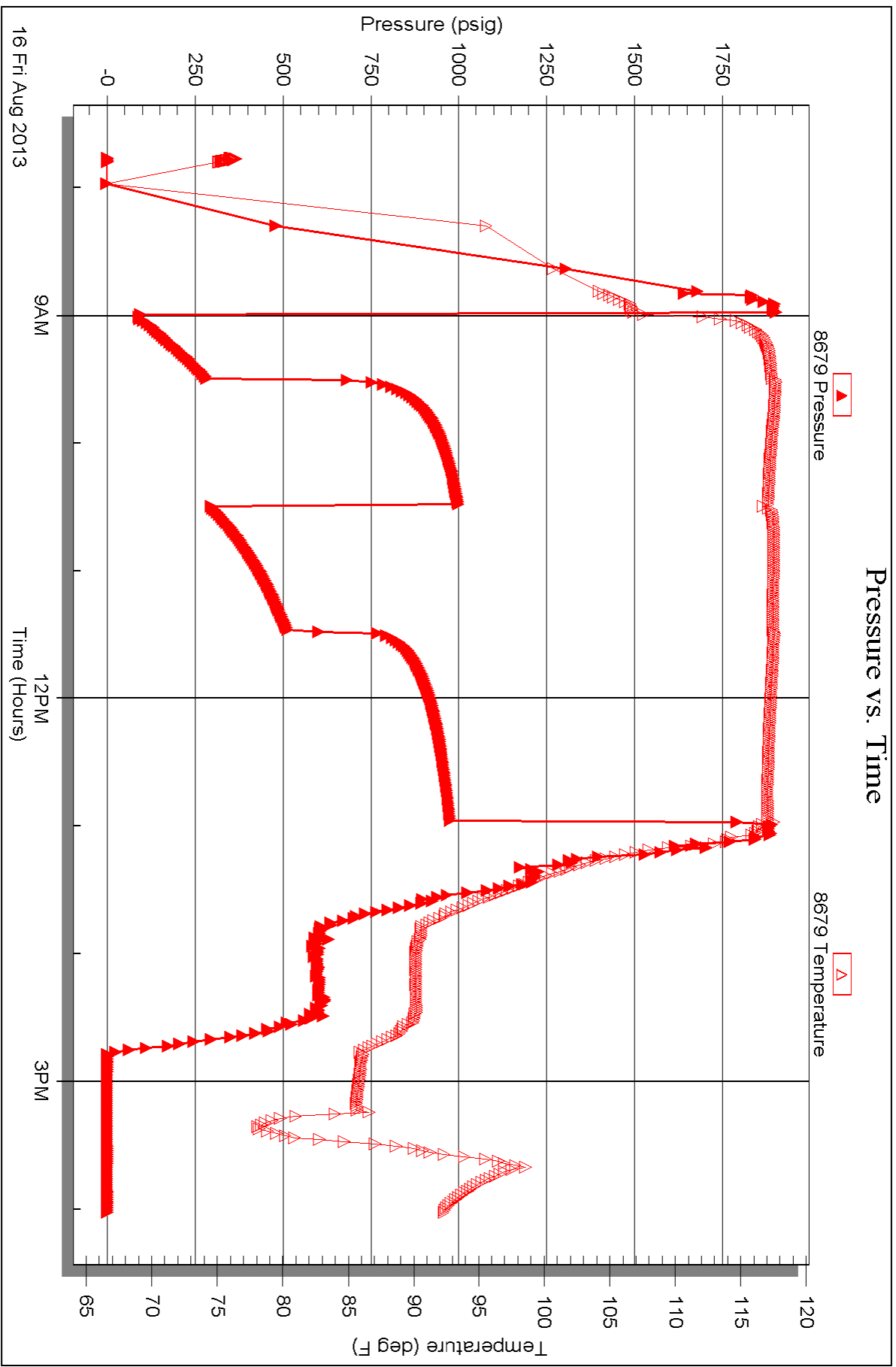
Serial #: 8679

Inside

Cobalt Energy LLC

SD Unit "A" #1-19

DST Test Number: 4





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 041073

Well Name & No. SD UNIT "A" 1-19 Test No. 1 Date 8-14-13
 Company COBALT ENERGY LLC Elevation 2602 KB 2597 GL
 Address PO Box 8037 Wichita KS 67208
 Co. Rep / Geo. Paul Gunzelman Rig Murfin #14
 Location: Sec. 19 Twp. 6S Rge. 25W Co. Gran State KS

Interval Tested 3688 - 3728 Zone Tested LKC - C + D
 Anchor Length 40 Drill Pipe Run 3646 Mud Wt. 9.0
 Top Packer Depth 3683 Drill Collars Run 28 Vis 60
 Bottom Packer Depth 3688 Wt. Pipe Run 0 WL 6.8
 Total Depth 3728 Chlorides 1100 ppm System LCM 2

Blow Description FF-GOOD Blow BOB IN 12 min
BSI-Weak Blow Back Built to 1/4 IN
FF-GOOD Blow BOB IN 17 min
BSI-Weak Blow Back Built to 1/4 IN

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>Cassy oil</u>	<u>10</u>	<u>90</u>		
<u>63</u>	<u>Gmco</u>	<u>5</u>	<u>55</u>		<u>40</u>
<u>63</u>	<u>USOC GWM</u>	<u>8</u>	<u>2</u>	<u>20</u>	<u>70</u>
<u>252</u>	<u>MN with a scum of oil</u>			<u>90</u>	<u>10</u>
	<u>283-GIP-</u>				

Rec Total 403 BHT 114 Gravity 31 API RW 178 @ 71.5 °F Chlorides 42,000 ppm

(A) Initial Hydrostatic 1824 Test 1150 T-On Location 6:30
 (B) First Initial Flow 25 Jars 250 T-Started 6:48
 (C) First Final Flow 85 Safety Joint 75 T-Open 8:27
 (D) Initial Shut-In 1024 Circ Sub T-Pulled 12:27
 (E) Second Initial Flow 94 Hourly Standby T-Out 15:02
 (F) Second Final Flow 127 Mileage 190 RT 92rt
 (G) Final Shut-In 1020 Sampler 142.60
 (H) Final Hydrostatic 1790 Straddle
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

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

Sub Total 1617.60
 Total 1617.60
 MP/DST Disc't

Approved By _____ Our Representative Jeff Brown

TriLOBite Testing Inc. shall not be liable for damaged of any kind of the property or personnel 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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 041074

Well Name & No. SD Unit "A" #1-19 Test No. 2 Date 8-14-13
 Company Cobalt Energy LLC Elevation 2402 KB 2597 GL
 Address PO Box 8037 Wichita KS 67208
 Co. Rep / Geo. Paul Gunzelman Rig Murfin #16
 Location: Sec. 19 Twp. 4S Rge. 25W Co. Colham State KS

Interval Tested 3727-3774 Zone Tested LKC "E-G"
 Anchor Length 47 Drill Pipe Run 3678 Mud Wt. 9.0
 Top Packer Depth 3722 Drill Collars Run 28 Vis 600
 Bottom Packer Depth 3727 Wt. Pipe Run 0 WL 6.8
 Total Depth 3774 Chlorides 1100 ppm System LCM 2

Blow Description FF-Weak Blow Built TO 3 1/4 IN
FSI-Dead No Blow Back
FF-Fair Blow Built TO 8 IN
FSI-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>75</u>	<u>HOCGM</u>	<u>10</u>	<u>25</u>	<u>65</u>	
	<u>79-GIP</u>				

Rec Total 75 BHT 110 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1847 Test 1150 T-On Location 22:30
 (B) First Initial Flow 18 Jars 250 T-Started 22:51
 (C) First Final Flow 41 Safety Joint 75 T-Open 00:16
 (D) Initial Shut-In 1107 Circ Sub _____ T-Pulled 4:16
 (E) Second Initial Flow 40 Hourly Standby _____ T-Out 6:01
 (F) Second Final Flow 51 Mileage 142.60 Comments _____
 (G) Final Shut-In 1094 Sampler _____
 (H) Final Hydrostatic 1764 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1617.60
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1617.60

Approved By _____ Our Representative Jeff Brown

TriLOBITE TESTING INC. shall not be liable for damaged of any kind of the property or personnel 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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 041075

Well Name & No. SD Unit "A" #1-19 Test No. 3 Date 8-15-15
 Company Cobalt Energy LLC Elevation 2602 KB 2597 GL
 Address Po Box 8037 Wichita KS 67208
 Co. Rep / Geo. Paul Gunzelman Rig Murfin #16
 Location: Sec. 19 Twp. 6 S Rge. 25 W Co. Graham State KS

Interval Tested 3776 - 3830 Zone Tested LKC-H-5
 Anchor Length 54 Drill Pipe Run 3741 Mud Wt. 9.1
 Top Packer Depth 3771 Drill Collars Run 28 Vis 53
 Bottom Packer Depth 3776 Wt. Pipe Run 0 WL 7.8
 Total Depth 3830 Chlorides 1200 ppm System LCM 2

Blow Description IR-Strong Blow Bob IN 1 1/2 min
IS-Good Blow Back Bob IN 5 min
FF-Strong Blow Bob IN 2 min
IS-Good Blow Back Bob IN 22 min. GAS TO SURFACE

Rec	Feet of	%gas	%oil	%water	%mud
<u>123</u>	<u>MCO</u>	<u>60</u>	<u>40</u>	<u>0</u>	<u>0</u>
<u>1588</u>	<u>Cassy oil</u>	<u>25</u>	<u>75</u>	<u>0</u>	<u>0</u>
<u> </u>	<u>2119-GIP</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Rec Total 1711 BHT 116 Gravity 36 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>1892</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>13:14</u>
(B) First Initial Flow <u>110</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>13:30</u>
(C) First Final Flow <u>338</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>15:02</u>
(D) Initial Shut-In <u>1172</u>	<input checked="" type="checkbox"/> Circ Sub <u>50</u>	T-Pulled <u>19:02</u>
(E) Second Initial Flow <u>368</u>	<input type="checkbox"/> Hourly Standby <u> </u>	T-Out <u>22:48</u>
(F) Second Final Flow <u>676</u>	<input checked="" type="checkbox"/> Mileage <u>142.60</u>	Comments <u> </u>
(G) Final Shut-In <u>1131 1131</u>	<input type="checkbox"/> Sampler <u> </u>	<input type="checkbox"/> Ruined Shale Packer <u> </u>
(H) Final Hydrostatic <u>1799</u>	<input type="checkbox"/> Straddle <u> </u>	<input type="checkbox"/> Ruined Packer <u> </u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u> </u>	<input type="checkbox"/> Extra Copies <u> </u>
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer <u> </u>	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder <u> </u>	Total <u>1667.60</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby <u> </u>	MP/DST Disc't <u> </u>
	<input type="checkbox"/> Accessibility <u> </u>	
	Sub Total <u>1667.60</u>	

Approved By Our Representative Jeff Brown

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 041751

Well Name & No. SD UNIT "A" #1-19 Test No. 4 Date 8-16-15
 Company Cobalt Energy LLC Elevation 2602 KB 2597 GL
 Address PO Box 8037 Wichita KS 67208
 Co. Rep / Geo. Paul Gunzelman Rig Murfin #16
 Location: Sec. 19 Twp. 4S Rge. 2S Co. Graham State KS

Interval Tested 3831-3864 Zone Tested LKC-K-L
 Anchor Length 33 Drill Pipe Run 3805 Mud Wt. 9.3
 Top Packer Depth 3826 Drill Collars Run 28 Vis 53
 Bottom Packer Depth 3831 Wt. Pipe Run 0 WL 6.8
 Total Depth 3864 Chlorides 900 ppm System LCM 1

Blow Description FF-Strong Blow BOB IN 1 1/4 min
FSI-Good Blow BOB IN 18 min
FF-Strong Blow BOB IN 2 min
FSI-Good Blow Back BOB IN 11 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>Feet of MW WITH A SCUM OF OIL</u>			<u>85</u>	<u>15</u>
<u>63</u>	<u>Feet of SOCWM</u>		<u>5</u>	<u>45</u>	<u>50</u>
<u>315</u>	<u>Feet of MCWA</u>		<u>70</u>	<u>15</u>	<u>15</u>
<u>822</u>	<u>Feet of Gassy oil</u>	<u>30</u>	<u>70</u>		
<u>0</u>	<u>Feet of 1502-GIP</u>				

Rec Total 1260 BHT 117 Gravity 35 API RW .179 @ 80.5 F Chlorides 35,000 ppm
 (A) Initial Hydrostatic 1902 Test 1150 T-On Location 7:35
 (B) First Initial Flow 94 Jars NO JARS T-Started 7:45
 (C) First Final Flow 283 Safety Joint 75 T-Open 8:59
 (D) Initial Shut-In 997 Circ Sub 50 T-Pulled 12:59
 (E) Second Initial Flow 293 Hourly Standby T-Out 16:02
 (F) Second Final Flow 511 Mileage 142.60
 (G) Final Shut-In 974 Sampler
 (H) Final Hydrostatic 1851 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90
 Sub Total 1417.60
 Total 1417.60
 MP/DST Disc't

Approved By _____ Our Representative JEFF BROWN

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel 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.



GEOLOGIST'S REPORT

OPERATOR **COBALT ENERGY, LLC**

LEASE **SD UNIT "A" # 1-19**

LOCATION **836 FSL & 2589 FEL**

SEC. **19** TWSP **6S** RGE **25W**

COUNTY **GRAHAM** STATE **KANSAS**

FIELD **ALLODIUM EAST**

CONTRACTOR **Murfin Drilling Company** RIG NO. **16**

COMMENCED **10 August 2013** COMPLETED **17 August 2013**

MUD DISPLACED **3106** MUD TYPE **Chemical**

DRILLING TIME KEPT FROM **3400** TO **3925**

SAMPLES SAVED FROM **3400** TO **3925**

SAMPLES EXAMINED FROM **3400** TO **3925**

GEOLOGICAL SUPERVISION FROM **3454** TO **3925**

GEOLOGIST ON WELL **Paul Gunzelman**

ELEVATIONS

KB **2602 Ft.**

GL **2597 Ft.**

ALL MEASUREMENTS FROM K.B.

CASING RECORD

Conductor **None**

Surface **8 5/8" @ 345'**

Production **5 1/2" @ 3919'**

ELECTRICAL SURVEYS

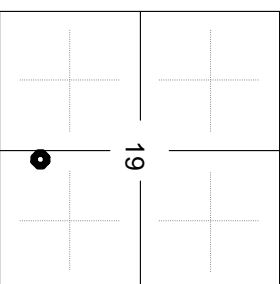
Pioneer Energy Services

Comp. Neutron Density

Dual Induction

Micro-resistivity

FORMATION NAME	LOG		SAMPLE	
	TOP	DATUM	TOP	DATUM
Stone Corral	2170	+432	2172	+430
Base/Anhydrite	2203	+399	2205	+397
Topoka	3478	-876	3478	-876
Heebner Shale	3634	-1032	3636	-1034
Toronto	3656	-1054	3658	-1056
Lansing	3672	-1070	3674	-1072
Stark Shale	3826	-1224	3828	-1226
Base/Kansas City	3862	-1260	3864	-1262
Total Depth	3925	-1323	3925	-1323



REMARKS

API 15-065-23959-00-00

Drilling Fluids: Mud-Co./Service Mud, Inc. (Gary Schmidtberger, engineer)

Drill Stem Testing: Trilobite Testing, Inc. (Jeff Brown, tester)

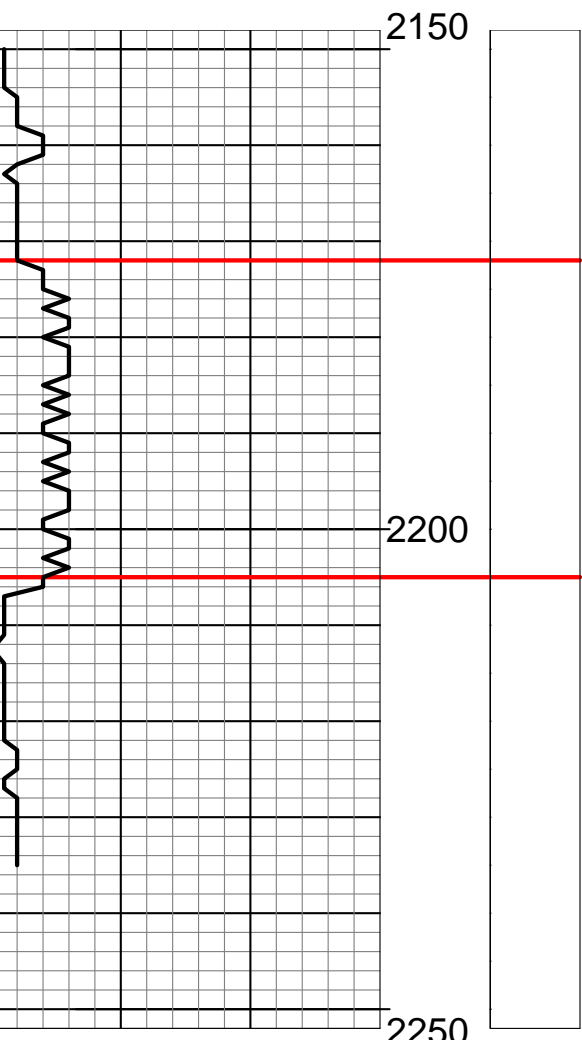
Gas Trailer: No Gas Trailer

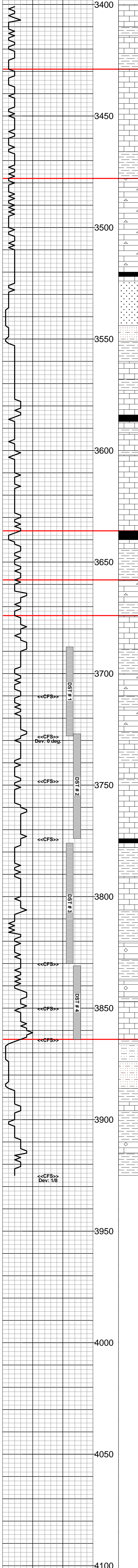
Reserve Pit Chlorides:

REMARKS	SAMPLE DESCRIPTIONS	SHOWS	LITHOLOGY	DEPTH	DRILL TIME (MIN/FT)
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STONE CORRAL
2172 (+430)

BASE/ANHYDRITE
2205 (+397)





Ls: Crm, fxln, foss, sli ool, tr sbchky, intbd gy fis occ slty sh.

Ls: Tn-gy, fn-vfxln, smwt arg, tr pyr, dns, n/s.

Sh: Rd-brn, fis-blky, ea, occ gum.

Ls: Crm-lt gy, fxln-gran, chky, sli ool, fr intgran por, n/s.

Ls: Crm-gy, fxln, sbchky, tr org rem, tr glauc, n/s.

Ls: Crm-v.lt gy, fxln-gran, v.chky, tr org rem, some arg, fr pp por, n/s.

Ls: Wh-crm, fxln-gran, tr lt yel ool, chky, occ dol, n/s.

Ls: Crm, fxln-gran, foss, some chky, intbd v.dk gy-blk fis sh, n/s.

Sh: Rd-brn, blky, ea occ gum.

Ls: Wh frag, ool, cons spr calc, n.v.p, n/s.

Ls: Crm-tn, tr v.lt gy, fxln, tr gran, sli foss, chky, cons lt gy wh & amb op vit cht, pr pp por, n/s.

Ls: Crm, fxln, foss (Fus) cons chk, some spr calc, fr pp por, n/s.

Ls: Crm, fxln, chky, tr org rem, some wh-crm op vit cht, bcm gy fn-vfxln & arg, n.v.p.

Sh: Blk, v.thn fis, carb, some tn-gy fxln ool dns Ls.

Sd: Gy & lt gy, wvfn, wlsrt sbrnd sli calc, some arg, sbfri-wlcm, occ slty, gd intgran por, n/s.

Slst: V.lt gy sli calc, arg in pt, some mica.

Sh: Lt rd-brn blky ea gum.

Ls: Crm, fxln-co gran, sbchky-chky, sli ool, tr org rem, cons amor calc, n/s.

Sh: Dk gy & gn-gy fis, some slty, tr carb mat.

Ls: Crm-gy, fxln, tr org rem, some sbchky, occ arg.

Sh: Blk fis carb.

Ls: Crm, fxln, sli chky, tr org rem, some arg-shly, n.v.p.

Ls: Crm, fxln-gran, chky, tr org rem & spr calc, some dolo, n/s.

Ls: Crm, fxln, ool, sbchky, some sec calc, pr intool por, n/s.

Ls: Crm-lt gy, fxln, sbchky, some rexld, tr foss, pr-fr pp por, n/s.

Ls: Lt gy, fn-vfxln, sli arg-shly, foss (Brach) dns.

Sh: Blk & v.dk gy, thn fis, carb.

Ls: Tn, vfxln, tr foss, dns.

Sh: Gy gy-gn & dk gy, fis, tr carb mat, some lt rd-brn blky ea gum sh.

Ls: Wh-crm, fxln, sli ool, tr sbchky, some gran & dol, tr wh-tn op vit cht, pr intgran por, n/s.

Sh: Gy-gn lt gn, fis, some calc, tr slty.

Ls: Crm-v.lt gy, fn-vfxln, sbchky, tr org rem, n.v.p, n/s.

Ls: Crm, fxln, tr ool, some lt gy vfxln dns pyr Ls, tr wh-crm op cht, n.v.p.

Sh: Rd-brn mar & brn, thk fis-blky ea, some gum bcm gy-gn fis.

Ls: Wh-crm, fxln sli ool & foss, blk gy & blu-gy mott op cht, pr-fr pp & intool por, gd odor, sli shw med brn O, med brn spty-sbsat stn.

Sh: Gy-gn & lt gn, fis, some calc, occ slty, bcm rd-brn thk fis, ea, tr gum.

Ls: Crm-gy, fn-vfxln, smwt arg, tr foss (Brach) some crm op vit cht, n.v.p, n/s.

Ls: V.lt gy, vfxln, tr wthd-sbchky, dns, some arg, n/s.

Sh: Rd-brn tr yel, thk fis-blky, ea.

Ls: Crm-lt gy, fxln-gran, tr wthd, pr-fr pp & intgran por, fr odor, v.sli shw FO, spty med brn stn.

Ls: Crm, fn-vfxln, sbchky, tr spr calc, pr intxln por, no odor, no FO, tr lt brn edge stn, cons intbd gy-gn fis pyr sh.

Ls: Wh-crm, fxln-gran, sli ool, tr sbchky, some spr calc, fr intgran por, sli odor, no shw FO, lt spty stn.

Ls: Crm, fxln, sbchky, tr chky, occ v.lt gy & v.lt gy-gn arg Ls, n.v.p, n/s.

Ls: Crm, fxln, sbchky, tr org rem & spr calc, lt or wh & crm op-tmsl frs cht, n.v.p.

Sh: Blk thn fis, carb, bcm dk gy & gn-gy fis occ slty sh, some intbd tn-brn fxln sli arg dns Ls, tr org rem.

Sh: Lt gy gum, some rd-brn & mar fis-blky ea sh.

Ls: V.lt gy tr crm, fn-vfxln, sli ool, sbchky, occ arg, scat pr-fr pp por, pr intool & vug por, fr odor, fr shw FO, spty lt stn, tr sat stn.

Ls: Crm-tn tr gy, fxln, occ sbchky, sli foss (Fus) some amor calc, n.v.p.

Sh: Blk-v.dk gy, some carb, bcm gy-gn fis calc.

Sh: Rd-brn tr purp, fis, ea, tr gum intbd tn-brn frag foss (Fus) sli ool arg Ls, n/s.

Ls: Crm-tn, frag, tr fxln, ool, tr foss (Fus) some sbchky, fr-gd intool & pp por, pr foss cast & vug por, v.sli odor, sli shw med brn FO, sbsat-sat stn, cons blk dd O res.

Sh: Dk gy-gn fis-thk fis, tr carb mat, bcm rd-brn v.lt rd-brn & mar-gy mott, blky, occ slty, some gum.

Ls: Wh-v.lt gy, fn-vfxln tr sbchky, sli ool & foss (Fus), pr pp & intxln por, tr pr-fr vug por, fr odor, sli shw lt brn O, sli shw G, med brn patchy stn, tr blk asph res.

Ls: Crm-tn, fxln, some medxln, occ sbchky, r.org rem, pr pp & foss cast por, v.sli odor, no FO, spty lt stn.

Ls: Crm, fn-vfxln, sbchky, r.pyr, n.v.p, n/s.

Sh: Gy gy-gn gn brn, tr yel, fis, tr pyr, some rd-brn ea & lt rd-brn gum sh, intbd lt gn & lt gy sli calc arg slst.

Sh: Rd-brn thk fis-blky, ea, occ gum cons gy-gn fis sli pyr sh, intbd rd-brn arg sli mica slst.

Ls: V.lt gy, fn-vfxln, smwt arg, occ wthd-sbchky, tr glauc, n.v.p, n/s.

Sh: Rd-brn lt rd-brn some mar & brn, occ mott w/gy, fis-blky tr slty, occ gum.

Ls: Wh-crm, fxln-frag, ool, occ sbchky, cons sec calc, n.v.p, n/s.

Sh: Lt rd-brn blky, ea v.gum, some v.lt gy fxln frac Ls mott w/dk rd-brn sh, n/s.

11:00 am, 13 August 2013

HOWARD
3429 (-827)

TOPEKA
3478 (-876)

Mud-Co mud check @ 3728'
Vis: 60, Wt: 9.0, WL: 6.8
Chlor: 1,100 ppm, LCM: 2#

HEEBNER SHALE
3636 (-1034)

TORONTO
3658 (-1056)

LANSING
3674 (-1072)

DST # 1 3688 - 3728
30"-60"-60"-90"
IF: 6d blow, BOB in 12 min.
FF: 6d blow, BOB in 17 min.
RECOVERY:
283 Ft. Gas In Pipe
25 Ft. Clean Oil
(31 grav. API)
63 Ft. Gas Cut Muddy Oil
(5%Gas 40%Mud 55%Oil)
63 Ft. Very Sli. Gas Oil & Wtr Cut Mud
(8%Gas 2%Oil 20%Wtr
20%Mud)Water, SO
(Chlor: 42,000 ppm)
IHP: 1824 psi. FHP: 1790 psi.
IFP: 25-85 psi. ISIP: 1024 psi.
FFP: 94-167 psi. FSIP: 1020 psi.
BHT: 114 deg. F.

Mud-Co mud check @ 3781'
Vis: 53, Wt: 9.1, WL: 7.8
Chlor: 1,200 ppm, LCM: 2#

DST # 2 3727 - 3774
30"-60"-60"-90"
IF: Weak blow bldg to 3 1/4 inches
FF: Weak blow bldg to 8 inches
RECOVERY:
79 Ft. Gas In Pipe
75 Ft. Heavy Oil Cut Mud
(10%Gas 25%Oil, 65%Mud)
IHP: 1847 psi. FHP: 1766 psi.
IFP: 18-41 psi. ISIP: 1107 psi.
FFP: 40-51 psi. FSIP: 1096 psi.
BHT: 110 deg. F.

Mud-Co mud check @ 3864'
Vis: 53, Wt: 9.3, WL: 6.8
Chlor: 900 ppm, LCM: 1 #

BASE/KANSAS CITY
3864 (-1262)

DST # 3 3776 - 3830
30"-60"-60"-90"
IF: Strong blow, BOB in 1.5 min.
ISI: Bled off, BOB blow in 5 min.
FF: Strong blow, BOB in 2 min.
FSI: Bled off, BOB in 22 min. GTS
RECOVERY:
123 Ft. Mud Cut Oil
1588 Ft. Clean Gassy Oil
(25% Gas, 75% Oil, 36 Grav. API)
IHP: 1892 psi. FHP: 1799 psi.
IFP: 110-338 psi. ISIP: 1172 psi.
FFP: 368-676 psi. FSIP: 1131 psi.
BHT: 116 deg. F.

TOTAL DEPTH
3925 (-1323)
7:40 PM, 16 August 2013

DST # 4 3831 - 3864
30"-60"-60"-90"
IF: Strong blow, BOB in 1.25 min.
ISI: Bled off, BOB return in 18 min.
FF: Strong blow, BOB in 2 min.
FSI: Bled off, BOB return in 11 min.
RECOVERY:
1502 Ft. Gas In Pipe
822 Ft. Clean Gassy Oil
(30%Gas 70%Oil, 35 Grav. API)
315 Ft. Mud & Water Cut Oil
(15%Mud, 15%Wtr, 70%Oil)
63 ft. Sli. Oil & Water Cut Mud
(5%Oil, 45%Wtr, 50%Mud)
60 Ft. Water, Show Oil
(Chlor: 35,000 ppm)
IHP: 1851 psi. FHP: 1851 psi.
IFP: 94-283 psi. ISIP: 997 psi.
FFP: 293-511 psi. FSIP: 974 psi.
BHT: 117 deg. F.

Operator: COBALT ENERGY, LLC

Lease: SD UNIT "A" # 1-19

Location: 836 FSL & 2589 FEL SEC. 19 TWSP 6S RGE 25W

County: GRAHAM State: KANSAS