

Confidentiality Requested:

Yes No

**KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
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> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

77 MH 38
FIELD SERVICE TICKET
1718 16368 A

DATE _____ TICKET NO. _____

DATE OF JOB: 2/9/18		DISTRICT		NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input checked="" type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.:	
CUSTOMER: Cobalt Energy, LLC				LEASE: Billy Gene				WELL NO. 1-3A		
ADDRESS				COUNTY: Barton				STATE: KS		
CITY				STATE				SERVICE CREW: Scott, Morgan, Jose		
AUTHORIZED BY: Nick Hess				JOB TYPE: Surface Casing 240						
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM PM	TIME	
86779	.5					ARRIVED AT JOB	2/8/18	AM	10:15	
19918	.25					START OPERATION	2/9/18	AM	3:45	
						FINISH OPERATION	2/9/18	AM	4:15	
						RELEASED	2/9/18	AM	4:30	
						MILES FROM STATION TO WELL				

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: *[Signature]*
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP103	60/40 POZ	SK	730		2760 00
CC102	Cellulose	lb	58		214 60
CC109	Calcium Chloride	lb	594		623 70
E100	Unit Mileage Pick up	MI	55		247 50
E101	Heavy Equipment Mileage	MI	110		825 00
E113	Prop + Bulk Delivery Ton Miles	TM	545		1361 25
CE200	Depth Charge 0-500'	4hr	1		1000 00
CE240	Islanding + Mixing Service	SK	230		322 00
SC03	Service Supervisor	SA	1		175 00
SUB TOTAL					7,529 05

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		4,140 98

SERVICE REPRESENTATIVE: *[Signature]*
THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: *[Signature]*
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.



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Phone 620-672-1201

TTMH = 26-39

FIELD SERVICE TICKET
1718 16273 A

DATE _____ TICKET NO. _____

DATE OF JOB <u>2-16-18</u> DISTRICT _____		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:							
CUSTOMER <u>COBALT ENERGY, LLC</u>		LEASE <u>BILLY GENE</u> WELL NO. <u>1-3A</u>							
ADDRESS _____		COUNTY <u>BARTON</u> STATE <u>Ks.</u>							
CITY _____ STATE _____		SERVICE CREW <u>LESLEY, MARQUEZ, CLYMER</u>							
AUTHORIZED BY _____		JOB TYPE: <u>242 5 1/2" L.S.</u>							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	TIME
<u>20920</u>	<u>8</u>	<u>2 hr</u>				<u>2-16-18</u>			<u>2:00</u>
<u>21010</u>	<u>8</u>	<u>2 hr</u>				ARRIVED AT JOB		AM	<u>4:00</u>
						START OPERATION		AM	<u>5:00</u>
						FINISH OPERATION		AM	<u>9:00</u>
						RELEASED		AM	<u>10:00</u>
						MILES FROM STATION TO WELL			

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SIGNED: _____
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 105	AA2 CEMENT	SK	150		2550 00
CP 103	60/40 POZ	SK	30		360 00
CC 102	CELL FLAKE	lb	388		140 60
CC 111	SALT	lb	787		393 50
CC 113	GYP SUM	lb	705		528 75
CC 200	CEMENT GEL	lb	52		13 00
CC 201	GILSONITE	lb	751		503 17
CC 148	C-17	lb	71		1,420 00
CF 1250	AUTO FILL FLOAT SHOE, 5 1/2"	EA	1		330 00
CF 607	LATCH DOWN PLUG & BAFFLE, 5 1/2"	EA	1		400 00
CF 1651	TURBOLIZER, 5 1/2"	EA	8		880 00
CC 151	MUD FLUSH	GAL	500		750 00
E 100	PICKUP MILEAGE	MI	55		247 50
E 101	HEAVY EQUIPMENT MILEAGE	MI	110		825 00
E 113	BULK DELIVERY CHARGE	TM	459		1,148 13
CE 204	DEPTH CHARGE; 3001 - 4000'	HR	1-4		2,160 00
CE 240	BLENDED SERVICE CHARGE	SK	180		252 00
CE 504	PLUG CONTAINER UTILIZATION	JOB	1		250 00
S 003	SERVICE SUPERVISOR	EA	1		175 00

SUB TOTAL 7,329 65

CHEMICAL / ACID DATA:		

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$

TOTAL 7,329 65

SERVICE REPRESENTATIVE Lesley
FIELD SERVICE ORDER NO. _____

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: _____
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

BASIC

energy services, L.P.

TREATMENT REPORT

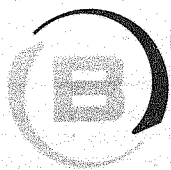
Customer COBALT ENERGY	Lease No.	Date 2-16-2018
Lease BILLY GENE	Well # 1-3A TD	
Field Order # 16273	Station PRATT, KS.	Casing 5 1/2"
Type Job 5 1/2" L.S.	Depth 3420'	County BARTON
	Formation	State KS
		Legal Description 3-195-12W

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 5.5 x 15.5	Tubing Size	Shots/Ft	CMT-	Acid 150 SK AA2		RATE	PRESS	ISIP
Depth 3418'	Depth	From	To	Pre Pad @ 1.54 CUFT³	Max			5 Min.
Volume 81.3 BBL	Volume	From	To	Pad	Min			10 Min.
Max Press 2000	Max Press	From	To	Frac	Avg			15 Min.
Well Connection P.C.	Annulus Vol.	From	To		HHP Used			Annulus Pressure
Plug Depth 3316'	Packer Depth	From	To	Flush 80 BBL	Gas Volume			Total Load <input checked="" type="checkbox"/>

Customer Representative DALTON POPP	Station Manager J. WESTERMAN	Treater K. LESLEY
---	--	-----------------------------

Service Units 8653194	20920	19889	21010					
Driver Names LESEY	MARQUEZ	—	CLYMER	—				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
4:00 AM					ON LOCATION - SAFETY MEETING
5:05 AM					RUN 5 1/2" x 15.5 CSG.
5:30 AM					TURBO - 1, 2, 3, 4, 5, 6, 7, 8
6:30 AM					CSG. ON BOTTOM
6:45 AM					HOOK UP TO CSG. / BREAK CIRC. W/RIG
8:00 AM	300		10	5	H2O AHEAD
8:07 AM	300		12	5	MUD FLUSH
8:08 AM	300		10	5	H2O SPACER
8:09 AM	250		41	5	MIX 150 SKS AA2 CMT. @ 14.8 PPG
8:17 AM					SHUTDOWN - CLEAR PUMP & LINES
8:22 AM	0		0	6	START DISPLACEMENT
8:32 AM	250		60	5	LIFT PRESSURE
8:42 AM	500		70	4	SLOW RATE
8:45 AM	1500		80.3	3	PLUG DOWN - HELD
					CIRC. THRU JOB
9:00 AM					PLUG R. H.
					JOB COMPLETE
					THANKS -
					KEVEN LESLEY



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10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

THAT
40

FIELD SERVICE TICKET
1718 16528 A

DATE _____ TICKET NO. _____

DATE OF JOB: 3-22-18 DISTRICT: Pratt		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/> PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/> CUSTOMER ORDER NO.:							
CUSTOMER: Cobalt Energy LLC		LEASE: Billy G... WELL NO. 1-34							
ADDRESS:		COUNTY: Barton STATE: Mo							
CITY: STATE:		SERVICE CREW: Mattai Hanson Clymer							
AUTHORIZED BY:		JOB TYPE: Z-42 plug to abandon							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	TIME
27463	3						3-21-18	PM	4:18
						ARRIVED AT JOB	3-22	AM	9:45
						START OPERATION		PM	12:14
19862	.5					FINISH OPERATION		AM	3:40
						RELEASED		PM	4:30
						MILES FROM STATION TO WELL			55

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

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SIGNED: _____
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP103	60/40 P02	Sq	335		4,020.00
CC200	CMT 5.1	lb	578		144.50
C2410	COTTON SEED HULLS	lb	400		300.00
E100	P.U. MILK	mi	55		247.50
E101	heavy eq milk	mi	110		82.50
E117	PROP + bulk det.	PM	795		1986.88
C0202	depth charge 100' - 2000'	44'	1		1,500.00
C0203	blend + mix	sq	335		469.00
S003	Supervisor	ea	1		175.00
SUB TOTAL					9,667.88

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$
TOTAL	
	5,317.33

SERVICE REPRESENTATIVE: Mike Hanson
THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: _____
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO. _____

ROBERT E. O'DELL

Petroleum Geologist

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY Cobalt Energy, LLC.
 LEASE Billy Jean 'A' #1-3
 FIELD Frank North
 LOCATION 2223' FSL & 1883' FWL
 SEC 3 TWSP 19S RGE 12W
 COUNTY Barton STATE Kansas
 CONTRACTOR LD Drilling Rig #1
 SPUD 2-8-2018 COMP 11-29-2008
 RTD 3420' LTD 3419'
 MUD UP 2700' TYPE MUD Chemical
 SAMPLES SAVED FROM 2800' TO RTD
 DRILLING TIME KEPT FROM 2700' TO RTD
 SAMPLES EXAMINED FROM 2700' TO RTD
 GEOLOGICAL SUPERVISION FROM 2820' TO RTD
 GEOLOGIST ON WELL Bob O'Dell

FORMATION TOPS ELECTRIC LOG SAMPLE

Anhydrite	645 (+ 1164)	658 (+ 1151)
Heebner	2982 (- 1173)	2983 (- 1174)
Brown Lime	3092 (- 1283)	3094 (- 1285)
Lansing	3110 (- 1301)	3109 (- 1300)
BKC	3357 (- 1548)	3359 (- 1550)
Arbuckle	Not logged	3415 (- 1606)
Total Depth	3519 (- 1610)	3520 (- 1611)

ELEVATIONS

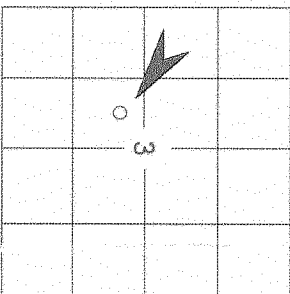
KB 1809
 DF _____
 GL 1804
 Measurements Are All
 From KB

CASING

CONDUCTOR _____
 SURFACE 8-5/8" set @ 320'
 PRODUCTION Pending

ELECTRICAL SURVEYS

DIL. CN/CD. MICRO _____



API# 15-009-26195

REMARKS Due to the drillstem tests & electric log analysis, decision was made to set 5-1/2" casing to total depth and attempt completion in the Lansing-Kansas City through perforations.

Respectfully Submitted,

Bob O'Dell

LEGEND

Anhydrite	Sandstone	Limestone	Shale	Carb Sh	Cherty LS	Chert	Dolomite

DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Decreases	DEPTH	LITHOLOGY	GAS SCALE	SAMPLE DESCRIPTION	REMARKS
5 10 15	600		10 50 100 500	Geologist on location 10:20 AM 2-12-2018 @ 2780' . 2-13-2018 Running DST #1 @ 3145' @ 7:00 a.m. 2-14-2018 TIH after DST #2 @ 3175' @ 7:00 a.m. 2-15-2018 CTCH after DST#3 @ 3290' @ 7:00 a.m. 2-16-2018 Geologist off location @ 3420' @ 9:30 p.m.	Mud Properties Depth 2740' Vis 82 Wt 8.6 WI 8.4 Chl 8,200 ppm Depth 3145' Vis 48 Wt 9.4 WI 9.4 Chl 12,500 ppm Depth 3190' Vis 53 Wt 9.1 WI 10.2 Chl 14'500 ppm Depth 3315' Vis 48

No gas detector used on this well.

3175' @ 7:00 a.m.
 2-15-2018 CTCH after DST#3 @
 3290' @ 7:00 a.m.
 2-16-2018 Geologist off location @
 3420' @ 9:30 p.m.

Vis 48
 Wt 9.4
 WI 9.4
 Chl 12,500 ppm
 Depth 3190'
 Vis 53
 Wt 9.1
 WI 10.2
 Chl 14,500 ppm
 Depth 3315'
 Vis 48
 Wt 9.1
 WI 10.4
 Chl 15,200 ppm

50

Anhydrite

658 (+1151)

Base of Anhydrite

674 (+1135)

2700

Displace mud

50

2800

Lst-lt grey, tan, f xln, granular, argillaceous, fossiliferous, no vis porosity, no show

Lst-white, tan, f xln, granular, part chalky and soft to part calcitic, fossiliferous, hard, no vis porosity, no show

Lst-as above to brown, vf-cryptoxln, cherty, dense, hard, no vis porosity, no show

Lst-white, tan, lt grey, vf-f xln, chalky, part cherty, soft to hard, no vis porosity, no show

Shale-grey, dark grey, soft

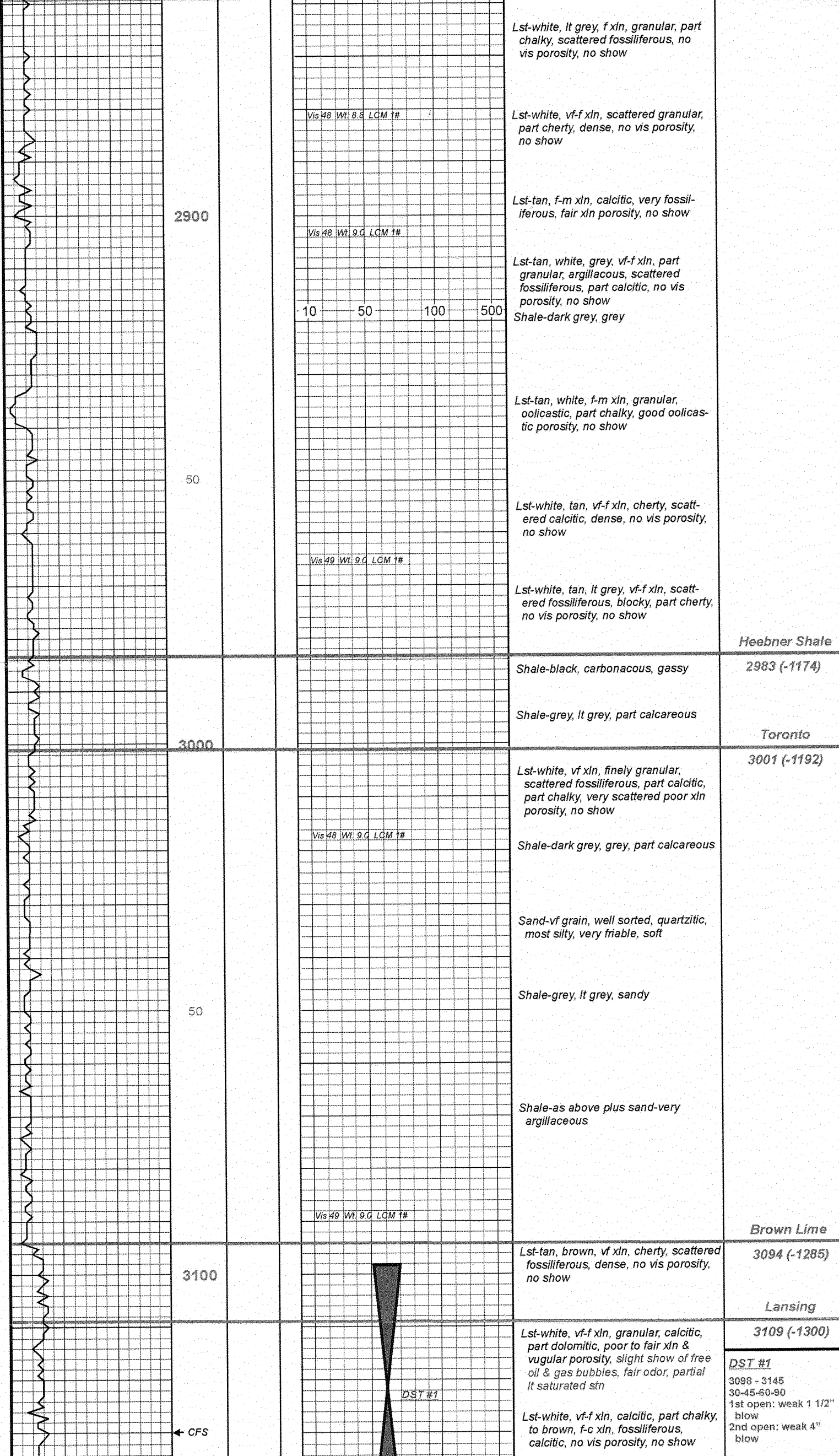
50

Lst-dark grey, tan, brown, f-c xln, fossiliferous, calcitic, scattered poor xln and vugular porosity, no show

Lst-white, lt grey, f xln, granular, part chalky, scattered fossiliferous, no vis porosity, no show

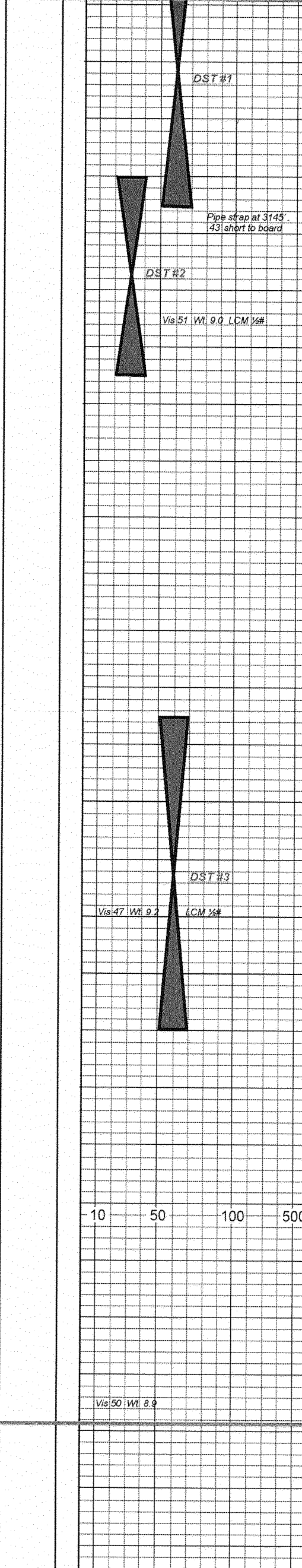
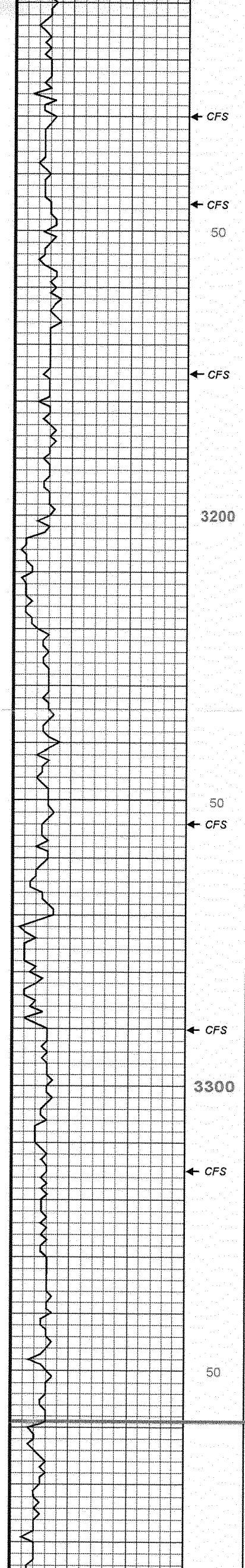
Vis 48 Wt: 8.6 LCM 1#

Lst-white, vf-f xln, scattered granular, part cherty, dense, no vis porosity,



← CFS

DST #1



Lst-white, vf-f xln, granular, calcitic, part dolomitic, poor to fair xln & vugular porosity, slight show of free oil & gas bubbles, fair odor, partial lt saturated strn

Lst-white, vf-f xln, calcitic, part chalky, to brown, f-c xln, fossiliferous, calcitic, no vis porosity, no show

Lst-white, tan, brown, f-c xln, granular, oolitic, poor to fair vugular & oolitic porosity, slight show of free oil, fair odor, lt stain & partial saturation

Lst-white, chalky, no vis porosity, no show

Lst-brown, grey, f-c xln, fossiliferous, calcitic, dense, no vis porosity, no show

Lst-tan, white, c xln, oolitic, calcitic, most dense, no vis porosity, no show

Lst-tan, white, c xln, very oolitic, scatt fossiliferous, calcitic, poor to fair interoolitic & vugular porosity, slight show of free oil, faint odor, good scatt fluor, scatt light partial strn

Lst-white, lt grey, tan, vf-f xln, part fossiliferous, part chalky, no visible porosity, no show

Lst-tan, f-m xln, part oolitic, scattered fossiliferous, calcitic, dense, no visible porosity, no show

Lst-tan, f-m xln, oolitic, fossiliferous, calcitic, good oolitic porosity, no show

Lst-tan, brown, vf-f xln, oolitic, calcitic, part cherty, dense, no vis porosity, no show

Shale-black, gassy

Lst-tan, f xln, cherty, part calcitic, poor to fair xln & vugular porosity, show of free oil, faint odor, dark edge stain to partial saturation

Lst-tan, white, f-c xln, oolitic, part fossiliferous, calcitic, fair to good interoolitic porosity, fair show of free oil, fair odor, partial stain to dark saturation

Lst-tan, f xln, calcitic, part granular, good oolitic porosity, no show

Lst-white, vf-f xln, calcitic, part cherty, scattered oolitic, poor oolitic porosity, no show

Shale-dark grey, grey

Lst-tan, lt grey, white, vf-f xln, cherty, scattered chalky, most dense, no vis porosity, no show

Lst-tan, lt grey, vf-f xln, cherty, dense, scattered calcitic, no vis porosity, no show

Shale-dark grey, fissile

Lst-white, tan, vf-f xln, cherty in part, scattered chalky, scattered calcitic, most dense, very scattered poor xln porosity, slight show of free oil, faint odor, light partial stain

3109 (-1300)

DST #1
3098 - 3145
30-45-60-90
1st open: weak 1 1/2" blow
2nd open: weak 4" blow
Rec. 50' GIP, 10' Mud
FP: 18-22/14-21#
SIP: 76-105#
HP: 1574-1554#
TMP: 95°

DST #2
3140-3175
30-45-60-90
1st open: strong blow OBB/2"
2nd open: strong blow OBB/17"
Rec. 589' GIP, 279' MW
FP: 39-76/82-144#
SIP: 577-560#
HP: 1566-1530#
TMP: 108°
Chl: 24,000 ppm
Sys Chl: 12,500 ppm

DST #3
3235-3290
30-45-60-90
1st open: strong blow OBB/3"
2nd open: strong blow OBB/4-1/2"
Rec. 2089' GIP, 30' CO,
62' M&GCWO (10% g, 65% o, 20% w, 5% m),
372' G&OCMW (5% g, 10% o, 65% w, 20% m), 310' MCGW (10% g, 85% w, 5% m)
FP: 49-201/209-381#
SIP: 683-674#
HP: 1612-1570#
TMP: 112°
GRAV: not taken
Chl: 31,000 ppm
Sys Chl: 15,200 ppm

BKC

3359 (-1550)

Shale-red, dark grey (sample washing red)

Shale-grey, red, green/grey
Chert-amber, fresh, sharp

Chert-amber, yellow



DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Bob O'Dell

Billy Gene A #1-3

3-19S-12W Barton,KS

Start Date: 2018.02.13 @ 06:17:00

End Date: 2018.02.13 @ 13:17:02

Job Ticket #: 63056 DST #: 1

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

Printed: 2018.02.16 @ 10:13:04



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cobalt Energy LLC
PO Box 8037
Wichita, KS 67208
ATTN: Bob O'Dell

3-19S-12W Barton,KS

Billy Gene A #1-3

Job Ticket: 63056

DST#: 1

Test Start: 2018.02.13 @ 06:17:00

GENERAL INFORMATION:

Formation: **LKC A - B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:06:47

Time Test Ended: 13:17:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 3098.00 ft (KB) To 3145.00 ft (KB) (TVD)

Reference Elevations: 1809.00 ft (KB)

Total Depth: 3145.00 ft (KB) (TVD)

1804.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6755

Inside

Press@RunDepth: 21.41 psig @ 3107.00 ft (KB)

Capacity: psig

Start Date: 2018.02.13

End Date:

2018.02.13

Last Calib.:

2018.02.13

Start Time: 06:17:01

End Time:

13:17:02

Time On Btm:

2018.02.13 @ 08:06:17

Time Off Btm:

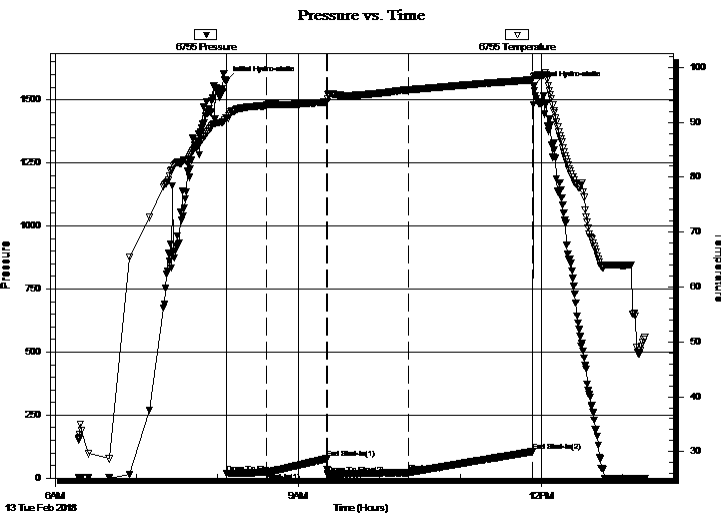
2018.02.13 @ 11:54:32

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

ISI 45 Minutes No blow back

FFP 60 Minutes Blow built to 4"

FSI 90 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1574.70	90.78	Initial Hydro-static
1	18.44	90.60	Open To Flow (1)
30	22.13	93.18	Shut-In(1)
75	76.78	93.74	End Shut-In(1)
76	14.41	94.35	Open To Flow (2)
135	21.41	95.91	Shut-In(2)
227	105.41	97.78	End Shut-In(2)
229	1554.85	98.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100%	0.14
0.00	50' GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC

3-19S-12W Barton,KS

PO Box 8037
Wichita, KS 67208

Billy Gene A #1-3

Job Ticket: 63056

DST#: 1

ATTN: Bob O'Dell

Test Start: 2018.02.13 @ 06:17:00

GENERAL INFORMATION:

Formation: **LKC A - B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:06:47

Time Test Ended: 13:17:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 3098.00 ft (KB) To 3145.00 ft (KB) (TVD)

Reference Elevations: 1809.00 ft (KB)

Total Depth: 3145.00 ft (KB) (TVD)

1804.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6752 Outside

Press@RunDepth: 106.10 psig @ 3108.00 ft (KB)

Capacity: psig

Start Date: 2018.02.13

End Date:

2018.02.13

Last Calib.:

2018.02.13

Start Time: 06:17:01

End Time:

13:17:02

Time On Btm:

2018.02.13 @ 08:06:17

Time Off Btm:

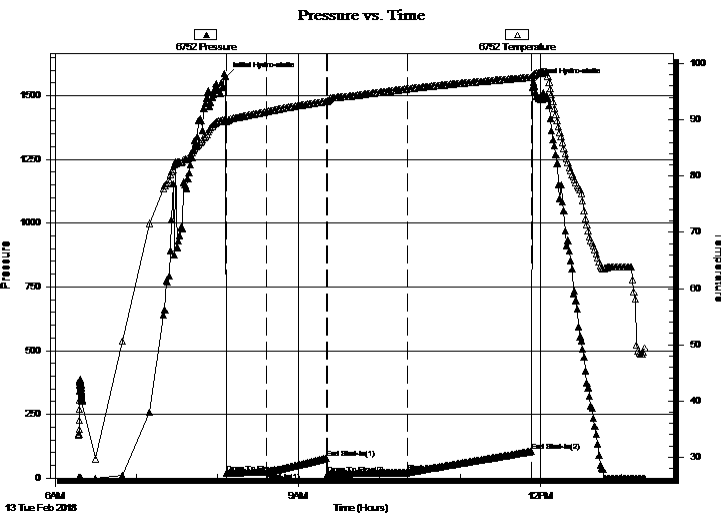
2018.02.13 @ 11:54:32

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

ISI 45 Minutes No blow back

FFP 60 Minutes Blow built to 4"

FSI 90 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1575.90	89.90	Initial Hydro-static
1	19.00	89.63	Open To Flow (1)
30	22.92	91.44	Shut-In(1)
75	77.60	93.28	End Shut-In(1)
76	14.15	93.31	Open To Flow (2)
135	21.94	95.50	Shut-In(2)
227	106.10	97.58	End Shut-In(2)
229	1552.42	98.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100%	0.14
0.00	50' 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

3-19S-12W Barton,KS

PO Box 8037
Wichita, KS 67208

Billy Gene A #1-3

Job Ticket: 63056

DST#: 1

ATTN: Bob O'Dell

Test Start: 2018.02.13 @ 06:17:00

Tool Information

Drill Pipe:	Length: 3095.00 ft	Diameter: 3.80 inches	Volume: 43.41 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 43.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3098.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.54 ft			
Tool Length:	74.54 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			3075.00	
Hydraulic tool	5.00			3080.00	
Jars	6.00			3086.00	
Safety Joint	2.00			3088.00	
Top Packer	5.00			3093.00	
Packer	5.00			3098.00	28.00 Bottom Of Top Packer
Anchor	8.00			3106.00	
Recorder	1.00	6755	Inside	3107.00	
Recorder	1.00	6752	Outside	3108.00	
Change Over Sub	1.00			3109.00	
Drill Pipe	31.54			3140.54	
Change Over Sub	1.00			3141.54	
Bullnose	3.00			3144.54	46.54 Anchor Tool

Total Tool Length: 74.54



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC
PO Box 8037
Wichita, KS 67208
ATTN: Bob O'Dell

3-19S-12W Barton,KS
Billy Gene A #1-3
Job Ticket: 63056 **DST#: 1**
Test Start: 2018.02.13 @ 06:17:00

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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.38 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 12500.00 ppm			
Filter Cake: 1.00 inches			

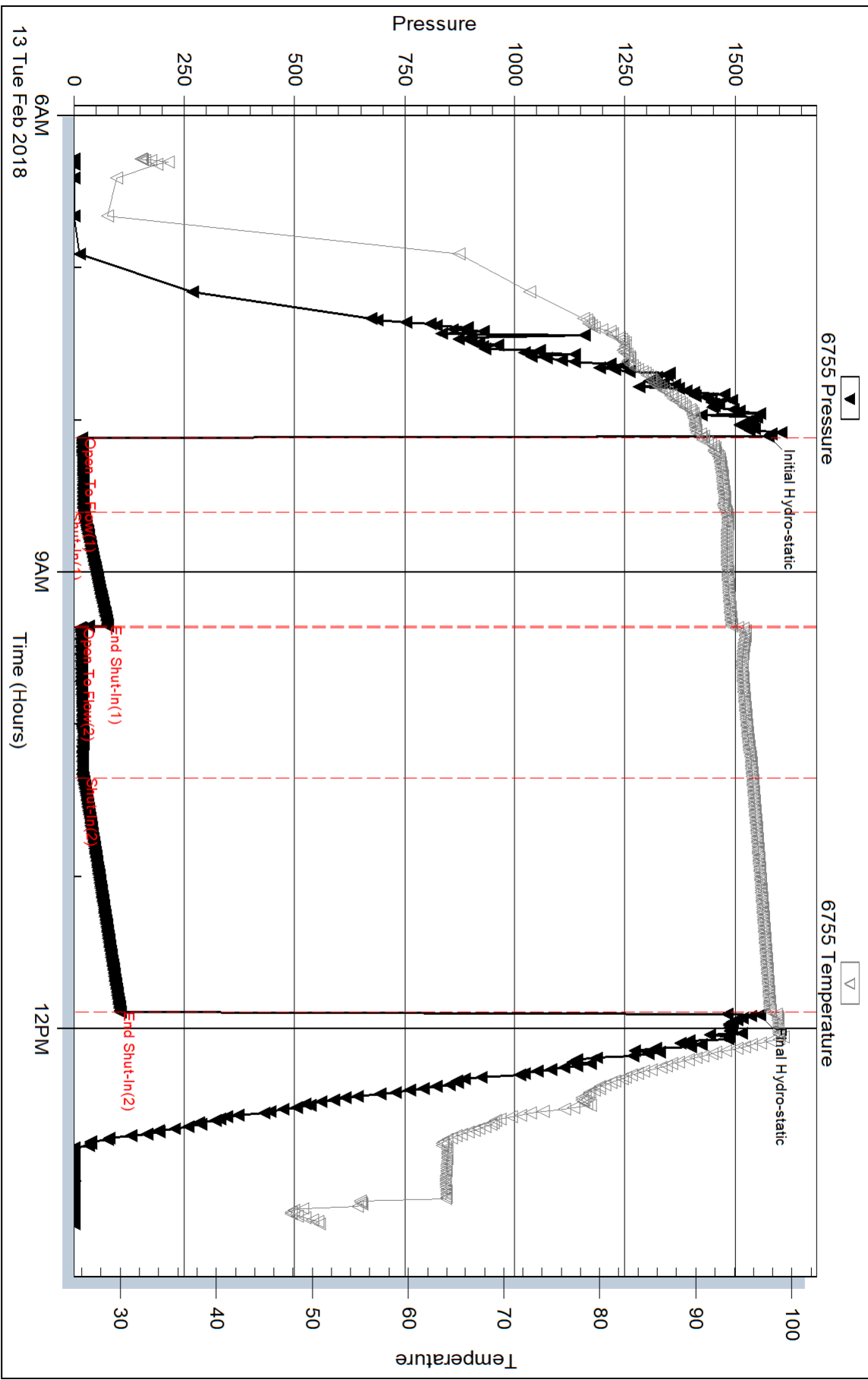
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100%	0.140
0.00	50' GIP	0.000

Total Length: 10.00 ft Total Volume: 0.140 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Bob O'Dell

Billy Gene A #1-3

3-19S-12W Barton,KS

Start Date: 2018.02.13 @ 21:59:00

End Date: 2018.02.14 @ 05:21:02

Job Ticket #: 63057 DST #: 2

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

Printed: 2018.02.16 @ 10:12:08



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cobalt Energy LLC

3-19S-12W Barton,KS

PO Box 8037
Wichita, KS 67208

Billy Gene A #1-3

Job Ticket: 63057

DST#: 2

ATTN: Bob O'Dell

Test Start: 2018.02.13 @ 21:59:00

GENERAL INFORMATION:

Formation: **LKC C - D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:56:32

Time Test Ended: 05:21:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 3140.00 ft (KB) To 3175.00 ft (KB) (TVD)

Reference Elevations: 1809.00 ft (KB)

Total Depth: 3175.00 ft (KB) (TVD)

1804.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6755

Inside

Press@RunDepth: 144.74 psig @ 3141.00 ft (KB)

Capacity: psig

Start Date: 2018.02.13

End Date:

2018.02.14

Last Calib.:

2018.02.14

Start Time: 21:59:01

End Time:

05:21:02

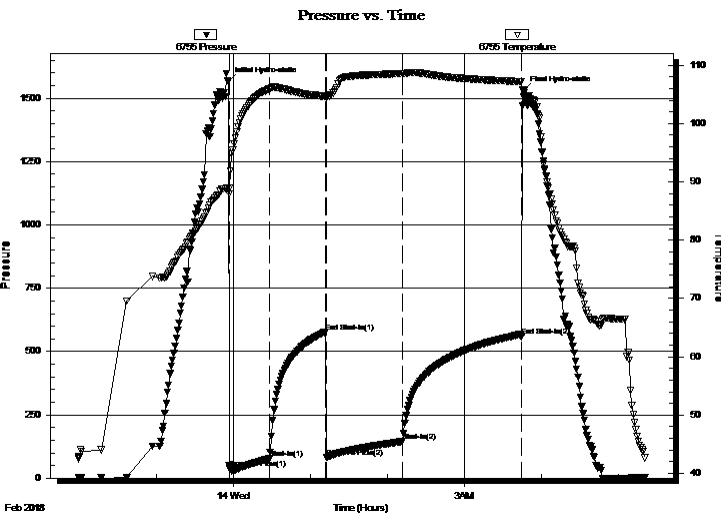
Time On Btm:

2018.02.13 @ 23:55:32

Time Off Btm:

2018.02.14 @ 03:46:02

TEST COMMENT: IFP 30 Minutes Strong blow built to 55"
ISI 45 Minutes No blow back
FFP 60 Minutes Blow built to 27"
FSI 90 Minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1566.91	88.81	Initial Hydro-static
1	39.23	88.89	Open To Flow (1)
33	76.64	105.94	Shut-In(1)
76	577.53	104.58	End Shut-In(1)
77	82.46	104.53	Open To Flow (2)
136	144.74	108.54	Shut-In(2)
229	560.03	107.16	End Shut-In(2)
231	1530.48	104.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
279.00	MW w/skim of oil Mud 10% Water 90%	3.91
0.00	589' GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC
 PO Box 8037
 Wichita, KS 67208
 ATTN: Bob O'Dell

3-19S-12W Barton,KS

Billy Gene A #1-3

Job Ticket: 63057 **DST#: 2**
 Test Start: 2018.02.13 @ 21:59:00

GENERAL INFORMATION:

Formation: **LKC C - D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:56:32
 Time Test Ended: 05:21:02
 Interval: **3140.00 ft (KB) To 3175.00 ft (KB) (TVD)**
 Total Depth: 3175.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ken Swinney
 Unit No: 72
 Reference Elevations: 1809.00 ft (KB)
 1804.00 ft (CF)
 KB to GR/CF: 5.00 ft

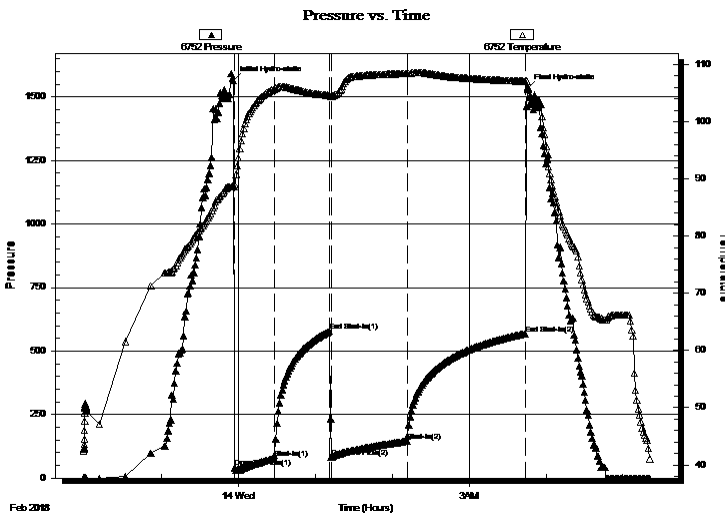
Serial #: 6752

Outside

Press@RunDepth: 567.22 psig @ 3142.00 ft (KB) Capacity: psig
 Start Date: 2018.02.13 End Date: 2018.02.14 Last Calib.: 2018.02.14
 Start Time: 21:59:01 End Time: 05:21:02 Time On Btm: 2018.02.13 @ 23:56:02
 Time Off Btm: 2018.02.14 @ 03:45:47

TEST COMMENT: IFP 30 Minutes Strong blow built to 55"
 ISI 45 Minutes No blow back
 FFP 60 Minutes Blow built to 27"
 FSI 90 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1563.96	88.89	Initial Hydro-static
1	40.75	88.64	Open To Flow (1)
32	77.54	105.71	Shut-In(1)
76	578.00	104.53	End Shut-In(1)
77	83.25	104.45	Open To Flow (2)
136	145.63	108.40	Shut-In(2)
228	567.22	107.06	End Shut-In(2)
230	1534.04	106.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
279.00	MW w/skim of oil Mud 10% Water 90%	3.91
0.00	589' 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

3-19S-12W Barton,KS

PO Box 8037
Wichita, KS 67208

Billy Gene A #1-3

Job Ticket: 63057

DST#: 2

ATTN: Bob O'Dell

Test Start: 2018.02.13 @ 21:59:00

Tool Information

Drill Pipe:	Length: 3123.00 ft	Diameter: 3.80 inches	Volume: 43.81 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 46000.00 lb
			<u>Total Volume: 43.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3140.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3118.00	
Hydraulic tool	5.00			3123.00	
Jars	5.00			3128.00	
Safety Joint	2.00			3130.00	
Top Packer	5.00			3135.00	
Packer	5.00			3140.00	27.00 Bottom Of Top Packer
Recorder	1.00	6755	Inside	3141.00	
Recorder	1.00	6752	Outside	3142.00	
Anchor	30.00			3172.00	
Bullnose	3.00			3175.00	35.00 Anchor Tool
Total Tool Length:	62.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

3-19S-12W Barton,KS

PO Box 8037
Wichita, KS 67208

Billy Gene A #1-3

Job Ticket: 63057

DST#: 2

ATTN: Bob O'Dell

Test Start: 2018.02.13 @ 21:59:00

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 125000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
279.00	MW w /skim of oil Mud 10% Water 90%	3.914
0.00	589' GIP	0.000

Total Length: 279.00 ft Total Volume: 3.914 bbl

Num Fluid Samples: 0

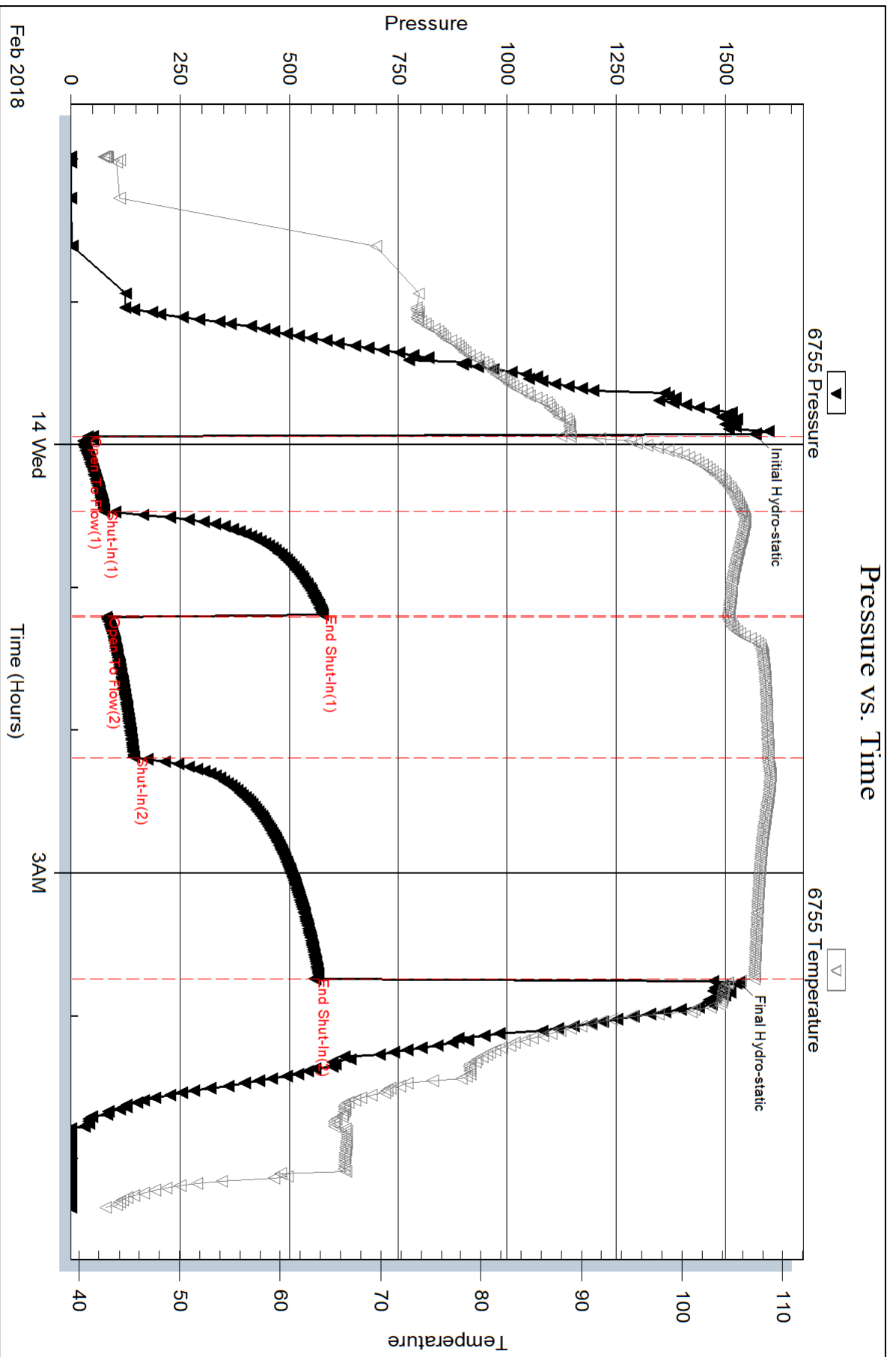
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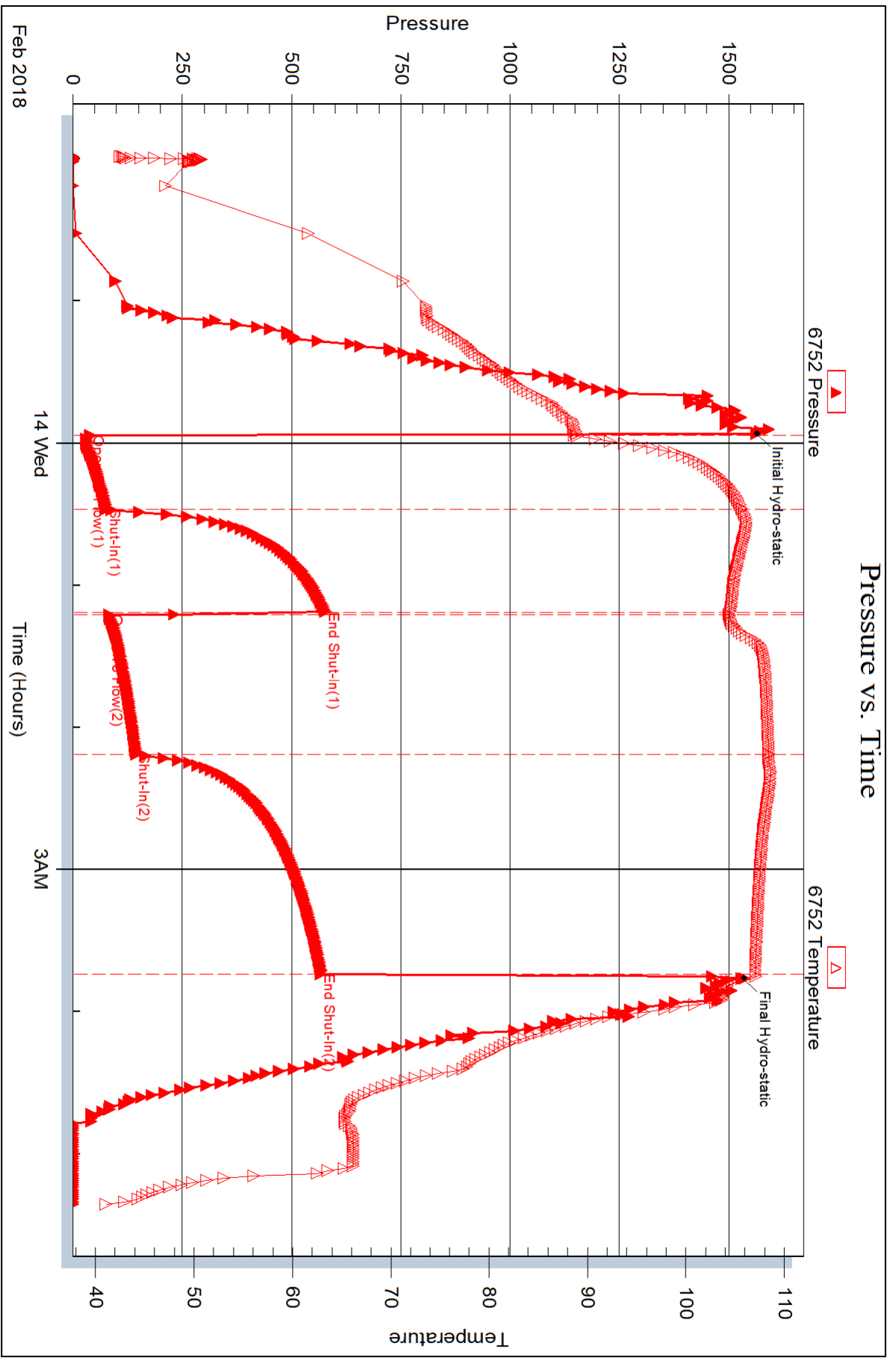
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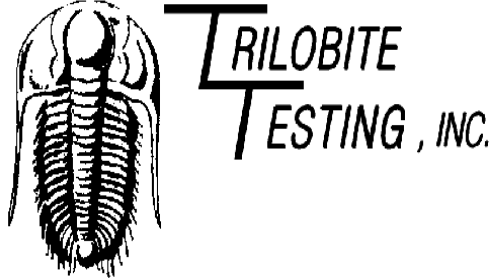
Laboratory Name:

Laboratory Location:

Recovery Comments: Recovery Resistivity .470 ohms @ 41 deg







DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Bob O'Dell

Billy Gene A #1-3

3-19S-12W Barton,KS

Start Date: 2018.02.14 @ 18:54:00

End Date: 2018.02.15 @ 03:00:02

Job Ticket #: 63058 DST #: 3

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

Printed: 2018.02.16 @ 10:11:44

Cobalt Energy LLC
3-19S-12W Barton,KS
Billy Gene A #1-3
DST # 3
LKC H - J
2018.02.14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC
 PO Box 8037
 Wichita, KS 67208
 ATTN: Bob O'Dell

3-19S-12W Barton,KS

Billy Gene A #1-3

Job Ticket: 63058 **DST#: 3**
 Test Start: 2018.02.14 @ 18:54:00

GENERAL INFORMATION:

Formation: **LKC H - J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:01:47
 Time Test Ended: 03:00:02
 Interval: **3235.00 ft (KB) To 3290.00 ft (KB) (TVD)**
 Total Depth: 3290.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ken Swinney
 Unit No: 72
 Reference Elevations: 1809.00 ft (KB)
 1804.00 ft (CF)
 KB to GR/CF: 5.00 ft

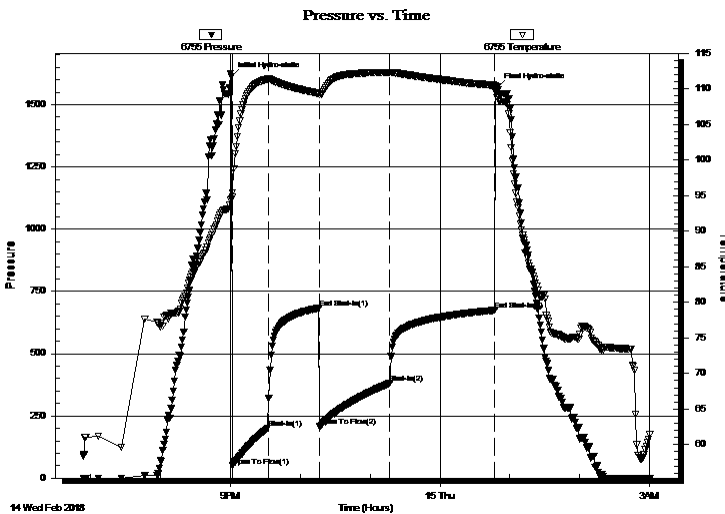
Serial #: 6755

Inside

Press@RunDepth: 381.18 psig @ 3236.00 ft (KB) Capacity: psig
 Start Date: 2018.02.14 End Date: 2018.02.15 Last Calib.: 2018.02.15
 Start Time: 18:54:01 End Time: 03:00:02 Time On Btm: 2018.02.14 @ 21:01:17
 Time Off Btm: 2018.02.15 @ 00:49:02

TEST COMMENT: IFP 30 Minutes Blow built to 58"
 ISI 45 Minutes Blow back built 7"
 FFP 60 Minutes Blow built to 102"
 FSI 90 Minutes Blow back built 11"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1612.00	94.53	Initial Hydro-static
1	49.01	94.73	Open To Flow (1)
31	201.70	111.37	Shut-In(1)
75	683.24	109.28	End Shut-In(1)
76	209.68	109.17	Open To Flow (2)
136	381.18	112.30	Shut-In(2)
226	674.67	110.47	End Shut-In(2)
228	1570.38	108.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Clean oil 100%	0.42
62.00	GMWCO Mud 5% Gas 10% Water 20%	0.87
372.00	GOMCW Gas 5% Oil 10% Mud 20% Water 65%	5.22
310.00	GMCW Mud 5% Gas 10% Water 85%	4.35
0.00	2089' GIP	0.00

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC
 PO Box 8037
 Wichita, KS 67208
 ATTN: Bob O'Dell

3-19S-12W Barton,KS

Billy Gene A #1-3

Job Ticket: 63058 **DST#: 3**
 Test Start: 2018.02.14 @ 18:54:00

GENERAL INFORMATION:

Formation: **LKC H - J**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 21:01:47 Tester: Ken Swinney
 Time Test Ended: 03:00:02 Unit No: 72
 Interval: **3235.00 ft (KB) To 3290.00 ft (KB) (TVD)** Reference Elevations: 1809.00 ft (KB)
 Total Depth: 3290.00 ft (KB) (TVD) 1804.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

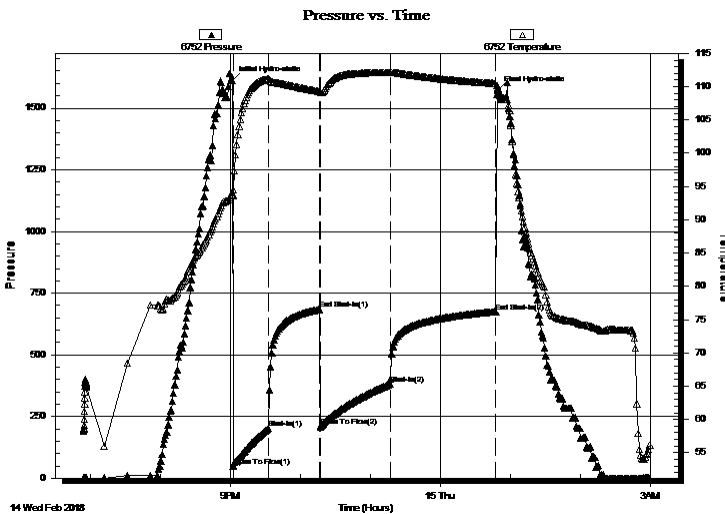
Serial #: 6752

Outside

Press@RunDepth: 675.45 psig @ 3237.00 ft (KB) Capacity: psig
 Start Date: 2018.02.14 End Date: 2018.02.15 Last Calib.: 2018.02.15
 Start Time: 18:54:01 End Time: 03:00:02 Time On Btm: 2018.02.14 @ 21:01:17
 Time Off Btm: 2018.02.15 @ 00:49:02

TEST COMMENT: IFP 30 Minutes Blow built to 58"
 ISI 45 Minutes Blow back built 7"
 FFP 60 Minutes Blow built to 102"
 FSI 90 Minutes Blow back built 11"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1612.51	93.80	Initial Hydro-static
1	49.11	93.69	Open To Flow (1)
31	202.50	111.20	Shut-In(1)
75	684.12	109.23	End Shut-In(1)
76	208.74	109.09	Open To Flow (2)
136	381.94	112.14	Shut-In(2)
226	675.45	110.49	End Shut-In(2)
228	1572.58	109.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Clean oil 100%	0.42
62.00	GMWCO Mud 5% Gas 10% Water 20%	0.87
372.00	GOMCW Gas 5% Oil 10% Mud 20% Water 65%	5.22
310.00	GMCW Mud 5% Gas 10% Water 85%	4.35
0.00	2089' 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

3-19S-12W Barton,KS

PO Box 8037
Wichita, KS 67208

Billy Gene A #1-3

Job Ticket: 63058

DST#: 3

ATTN: Bob O'Dell

Test Start: 2018.02.14 @ 18:54:00

Tool Information

Drill Pipe:	Length: 3215.00 ft	Diameter: 3.80 inches	Volume: 45.10 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 48000.00 lb
			<u>Total Volume: 45.10 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3235.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.50 ft			
Tool Length:	82.50 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3212.00	
Hydraulic tool	5.00			3217.00	
Jars	6.00			3223.00	
Safety Joint	2.00			3225.00	
Top Packer	5.00			3230.00	
Packer	5.00			3235.00	28.00 Bottom Of Top Packer
Recorder	1.00	6755	Inside	3236.00	
Recorder	1.00	6752	Outside	3237.00	
Anchor	16.00			3253.00	
Change Over Sub	1.00			3254.00	
Drill Pipe	31.50			3285.50	
Change Over Sub	1.00			3286.50	
Bullnose	3.00			3289.50	54.50 Anchor Tool

Total Tool Length: 82.50



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

3-19S-12W Barton,KS

PO Box 8037
Wichita, KS 67208

Billy Gene A #1-3

Job Ticket: 63058

DST#: 3

ATTN: Bob O'Dell

Test Start: 2018.02.14 @ 18:54:00

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:

31000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 14500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Clean oil 100%	0.421
62.00	GMWCO Mud 5% Gas 10% Water 20% Oil 65%	0.870
372.00	GOMCW Gas 5% Oil 10% Mud 20% Water 65%	5.218
310.00	GMCW Mud 5% Gas 10% Water 85%	4.348
0.00	2089' GIP	0.000

Total Length: 774.00 ft Total Volume: 10.857 bbl

Num Fluid Samples: 0

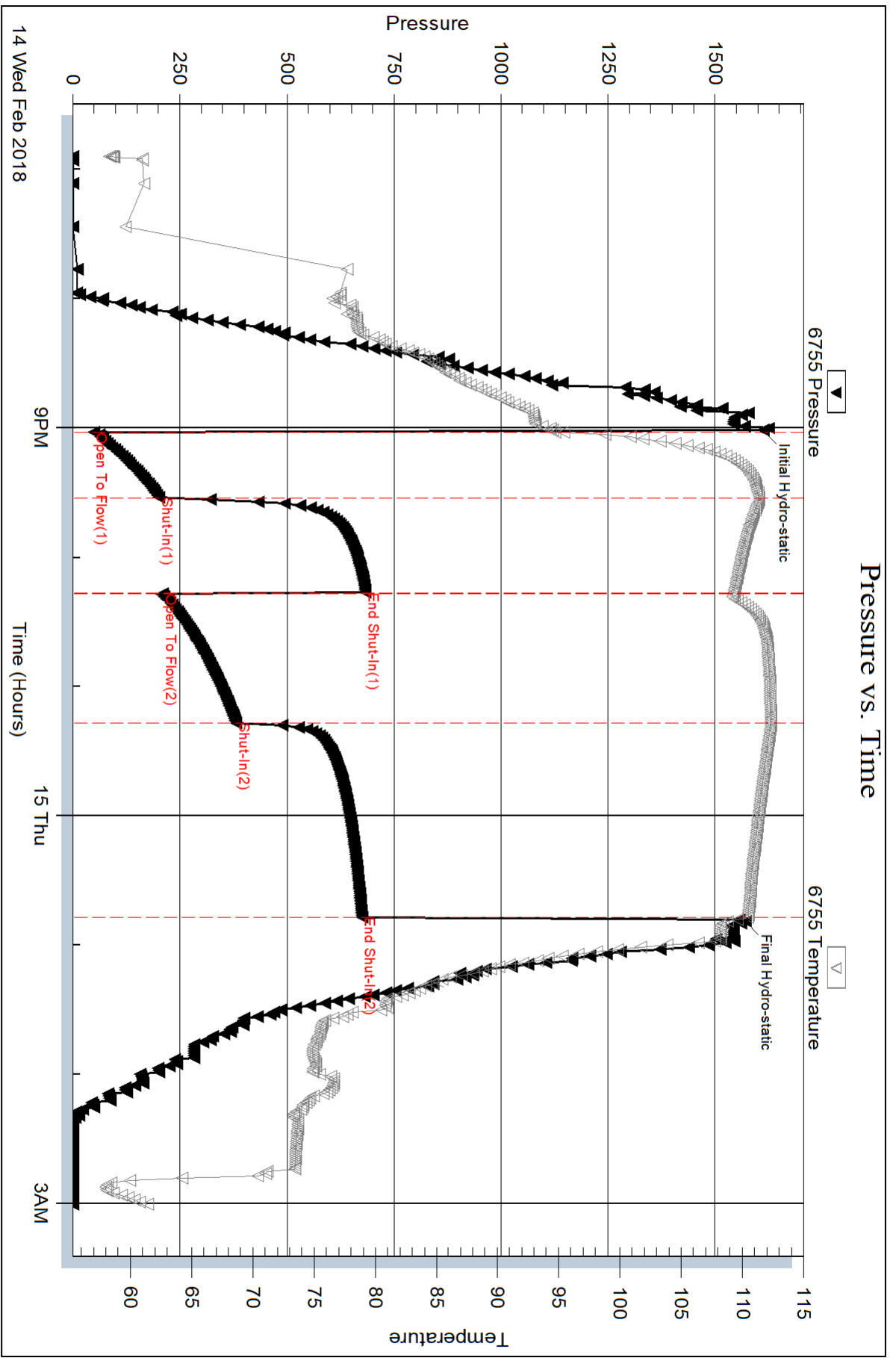
Num Gas Bombs: 0

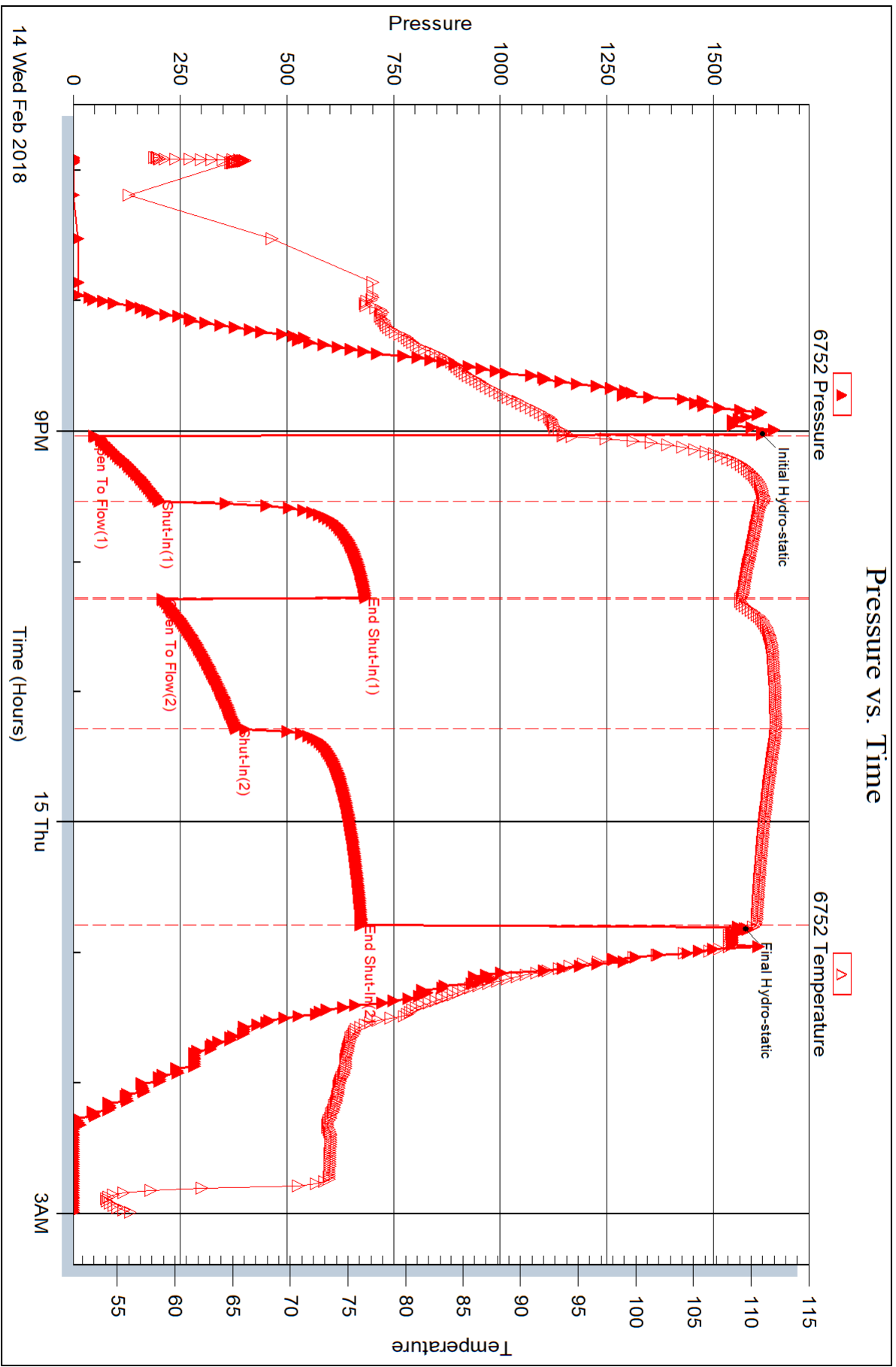
Serial #:

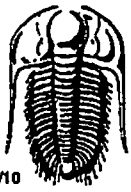
Laboratory Name:

Laboratory Location:

Recovery Comments: Recovery Resistivity .228 ohms @ 64 deg







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63056

Well Name & No. Billy Gene A 1-3 Test No. 1 Date 13 Feb 18
 Company Cobalt Energy LLC Elevation 1809 KB 1804 GL
 Address 115 S Belmont #12 PO Box 8037 Wichita Kansas 67208
 Co. Rep/Geo. Bob Ooell Rig LD Rig 1
 Location: Sec. 3 Twp. 19S Rge. 12W Co. Barton State KS

Interval Tested 3098-3145 Zone Tested Lansing/Kansas City zones A, B
 Anchor Length 47 Drill Pipe Run 3095 Mud Wt. 9.4
 Top Packer Depth 3093 Drill Collars Run — Vis 48
 Bottom Packer Depth 3098 Wt. Pipe Run — WL 9.4
 Total Depth 3145 Chlorides 12,500 ppm System LCM 1/2 #

Blow Description I.F. Blow built to 1 1/2 inches
I.S.F. No blow back
F.F. Blow built to 4 inches
F.S.I.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud</u>				<u>100%</u>
<u>50</u>	<u>Gas</u>	<u>100%</u>			

Rec Total 60 BHT 75 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 1574
- (B) First Initial Flow 18
- (C) First Final Flow 22
- (D) Initial Shut-In 76
- (E) Second Initial Flow 14
- (F) Second Final Flow 21
- (G) Final Shut-In 105
- (H) Final Hydrostatic 1554

- Test 1050
- Jars 250
- Safety Joint 75
- Circ Sub _____
- Hourly Standby _____
- Mileage 20 20
- Sampler _____
- Straddle _____
- Shale Packer _____
- Extra Packer _____
- Extra Recorder _____
- Day Standby _____
- Accessibility _____
- Sub Total 1395

T-On Location 6:17 am
 T-Started 7:21 am
 T-Open 9:10 am
 T-Pulled 12:55 pm
 T-Out 2:22 pm

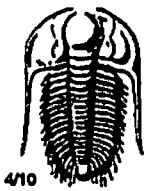
Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1395
 MP/DST Disc't _____

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

Approved By Bob Ooell

Our Representative

[Signature]



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63057

Well Name & No. Billy Gene A 1-3 Test No. 2 Date 13 Feb 18
 Company Cobalt Energy LLC Elevation 1809 KB 1804 GL
 Address 115 S Belmont #12 PO Box 8037 Wichita Kansas 67208
 Co. Rep / Geo. Bob O'Dell Rig LD Rig 1
 Location: Sec. 3 Twp. 19S Rge. 12W Co. Barton State KS

Interval Tested 3140-3175 Zone Tested Lansing/Kansas City zones C,D
 Anchor Length 35 Drill Pipe Run 3123 Mud Wt. 9.4
 Top Packer Depth 3135 Drill Collars Run — Vis 48
 Bottom Packer Depth 3140 Wt. Pipe Run — WL 9.4
 Total Depth 3175 Chlorides 12,500 ppm System LCM 1/2 #

Blow Description I.F. Blow built to B.O.B in 2 min./ Total blow 55 inches of H₂O
E.S.E. No blow back
F.F. Blow built to BOB in 17 min./ Total blow 27 inches of H₂O
F.S.I. No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>279</u>	<u>Muddy water</u>			<u>90%</u>	<u>10%</u>
<u>589</u>	<u>Gas in pipe</u>	<u>100%</u>			
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 108 BHT 108 Gravity API RW .470 @ 41 °F Chlorides 24,000 ppm

(A) Initial Hydrostatic	<u>1566</u>
(B) First Initial Flow	<u>39</u>
(C) First Final Flow	<u>76</u>
(D) Initial Shut-In	<u>577</u>
(E) Second Initial Flow	<u>82</u>
(F) Second Final Flow	<u>144</u>
(G) Final Shut-In	<u>560</u>
(H) Final Hydrostatic	<u>1530</u>

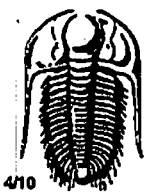
- Test 1050
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 20 20
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1395

T-On Location 8:56 pm
 T-Started 9:59 pm
 T-Open 11:57 pm
 T-Pulled 3:42 am
 T-Out 5:23 am
 Comments _____
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1395
 MP/DST Disc't _____

Initial Open	<u>30</u>
Initial Shut-In	<u>45</u>
Final Flow	<u>60</u>
Final Shut-In	<u>90</u>

Approved By Bob O'Dell

Our Representative



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63058

Well Name & No. Billy Gene A 1-3 Test No. 3 Date 14 Feb 18
 Company Cobalt Energy LLC Elevation 1809 KB 18041 GL
 Address 115 S Belmont #12 PO Box 8037 Wichita Kansas 67208
 Co. Rep / Geo. Bob O'Dell Rig LD Rig 2
 Location: Sec. 3 Twp. 19S Rge. 12W Co. Barton State KS

Interval Tested 3235-3290 Zone Tested Lansing/Kansas City zones H-J
 Anchor Length 55 Drill Pipe Run 3215 Mud Wt. 9.1
 Top Packer Depth 3230 Drill Collars Run — Vis 53
 Bottom Packer Depth 3235 Wt. Pipe Run — WL 10.2
 Total Depth 3290 Chlorides 14500 ppm System LCM 1/2

Blow Description I.F. Blow built to B.O.B. in 3 minutes / Total bkw 58 inches H₂O
I.S.I. Blow back built an additional 2 inches
F.F. Blow built to B.O.B. in 4 1/2 minutes / Total bkw 102 inches H₂O
F.S.I. Blow back built an additional 11 inches

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Clean Oil</u>	<u>100</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>62</u>	<u>Mud & Gas cut Watery Oil</u>	<u>10</u>	<u>65</u>	<u>20</u>	<u>5</u>
<u>372</u>	<u>Gas & Oil cut Muddy Water</u>	<u>5</u>	<u>10</u>	<u>65</u>	<u>20</u>
<u>310</u>	<u>Mud cut Gassy Water</u>	<u>10</u>	<u>0</u>	<u>85</u>	<u>5</u>
<u>2089</u>	<u>GIP</u>	<u>100</u>	<u>0</u>	<u>0</u>	<u>0</u>

Rec Total _____ BHT 112 Gravity _____ API RW 1228@ 64 °F Chlorides 31,000 ppm

- (A) Initial Hydrostatic 1612
- (B) First Initial Flow 49
- (C) First Final Flow 201
- (D) Initial Shut-In 683
- (E) Second Initial Flow 209
- (F) Second Final Flow 381
- (G) Final Shut-In 674
- (H) Final Hydrostatic 1570

- Test 1050
- Jars 250
- Safety Joint 75
- Circ Sub _____
- Hourly Standby _____
- Mileage 20 40
- Sampler _____
- Straddle _____
- Shale Packer _____
- Extra Packer _____
- Extra Recorder _____
- Day Standby _____
- Accessibility _____
- Sub Total 1415

- T-On Location 5:43 pm
- T-Started 6:54 pm
- T-Open 9:01 pm
- T-Pulled 12:46 am
- T-Out 3:00 am

- Comments loaded tools 2/15 22:30
- Ruined Shale Packer _____
 - Ruined Packer _____
 - Extra Copies _____
 - Sub Total 0
 - Total 1415
 - MP/DST Disc't _____

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

Approved By Bob O'Dell

Our Representative

[Signature]