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 # 34434
Name: Edison Operating Company LLC
Address 1: 8100 E. 22ND ST. N., BLDG 1900
Address 2:
City: WICHITA State: KS Zip: 67226 + 2319
Contact Person: David Withrow
Phone: (316) 201-1744
CONTRACTOR: License # 33350
Name: Southwind Drilling, Inc.
Wellsite Geologist: Derek W. Patterson
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 #:

7/19/2019	8/3/2019	8/4/2019
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-033-21787-00-00
Spot Description:
SE - NW - SW - SW Sec. 26 Twp. 32 S. R. 19 ☐ East ☑ West
843 Feet from ☐ North / ☑ South Line of Section
485 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW
GPS Location: Lat: *(e.g. xx.xxxxx)*, Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Comanche
Lease Name: RED RAIDER Well #: 1-26
Field Name: BIRD EAST
Producing Formation: n/a
Elevation: Ground: 1952 Kelly Bushing: 1962
Total Vertical Depth: 5982 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 737 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: 9000 ppm Fluid volume: 936 bbls
Dewatering method used: Evaporated
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: 08/13/2019
☐ **Confidential Release Date:** 08/12/2021
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 08/14/2019

Page Two

Operator Name: Edison Operating Company LLC Lease Name: RED RAIDER Well #: 1-26

Sec. 26 Twp. 32 S. R. 19 ☐ East ☑ West County: Comanche

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Geologist Report / Mud Logs ☑ Yes ☐ No

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
HEEBNER	4212	-2250
LANSING	4404	-2442
LTD	5982	-4020

CASING RECORD ☑ New ☐ 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
Conductor		20		84	GROUT TYPE 12	8	
Surface	12.25	8.625	24	737	A-CON	350	3% CC, 1/4# FLOCELL

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
____ Perforate ____ Protect Casing ____ Plug Back TD ____ 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: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

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

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Edison Operating Company LLC
Well Name	RED RAIDER 1-26
Doc ID	1468407

All Electric Logs Run

DUCP
MICRO
DUAL INDUCTION
SONIC

Form	ACO1 - Well Completion
Operator	Edison Operating Company LLC
Well Name	RED RAIDER 1-26
Doc ID	1468407

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Conductor		20		84	GROUT TYPE 12	8	
Surface	12.25	8.625	24	737	A-CON	350	3% CC, 1/4# FLOCELL

BASIC ENERGY SERVICES

PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007020	1711	07/22/2019

INVOICE NUMBER
93014145

Knox City (940) 658-1366

BILL TO
EDISON OPERATING COMPANY LLC
8100 E 22ND ST N
WICHITA
KS US 67226
ATTN: DAVID WITHROW

JOB SITE
LEASE NAME: RED RAIDER 26-1
LOCATION:
COUNTY: COMANCHE
STATE: KS
JOB DESCRIPTION: Cement-New Well Casing/Pi
JOB CONTACT:

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41184093	14982-0		Net - 30 days	08/21/2019

For Service Dates: 07/20/2019 to 07/20/2019

0041184093

171109204A Cement-New Well Casing/Pi 07/20/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
A-Con Blend	200.00	EA	7.50	1,500.00
60/40 Poz	1.00	SK	871.88	871.88
Celloflake	87.00	LB	1.00	87.00
Calcium Chloride	951.00	LB	0.25	237.75
Light Vehicle Mileage	80.00	MI	1.25	100.00
Heavy Equipment Mileage	160.00	MI	2.00	320.00
Plug Container Utilization Charge	1.00	EA	75.00	75.00
Depth Charge, 0'-1000'	1.00	HR	360.00	360.00
Blending & Mixing Service Charge	350.00	SK	0.42	147.00
Proppant and Bulk Delivery Charges	1,268.00	MI	3.00	3,804.00
Top Rubber Cement Plug, 8 5/8"	1.00	EA	114.75	114.75
Baffle Plate Aluminum, 8 5/8" (Blue)	1.00	EA	32.64	32.64
Centralizer, 8 5/8" (Blue)	2.00	EA	32.64	65.28
Service Supervisor	1.00	HR	75.00	75.00
Equipment Operator	3.00	HR	35.00	105.00

PLEASE REMIT TO:
BASIC ENERGY SERVICES,LP
PO BOX 841903
DALLAS,TX 75284-1903

SEND OTHER CORRESPONDENCE TO:
BASIC ENERGY SERVICES,LP
801 CHERRY ST, STE 2100
FORT WORTH, TX 76102

SUB TOTAL	7,895.30
TAX	0.00
INVOICE TOTAL	7,895.30

P.O. Box 115
211 West Main Street
Knox City, TX 79529
Tel 940.658.1366
Fax 940.658.1367
www.basicenergyservices.com

BASIC ENERGY SERVICES

PRESSURE PUMPING

Knox City #1711
P.O. Box 115
KNOX City Tx 79529
Office: 940.658.1366

4 | 184093

Field Receipt

Customer:	Edison Operating Co	Pump No.:	14982	Cementer:	Justin Trussell
Address:		Ticket #:	1711-09204A	Bulk TRK No.:	83042
City, State, Zip:		Job Type:	Surface		
Service District:	1711	Well Type:	Oil	Total Man Hrs	70
Lease Name.:	Red Raider	Well No:	26-Jan	County: Comanche	State: Kansas

Product Code	Description	Unit of Measure	Quantity	List Price/Unit	Gross Amount	Item Discount	Net Amount
bc118	A-Con Blend	EA	200	$50.00	$10,000.00	85.00%	$1,500.00
bc132	60/40 Poz	SK	150	$23.25	$3,487.50	75.00%	$871.88
cc102	Celloflake	LB	87	$4.00	$348.00	75.00%	$87.00
cc109	Calcium Chloride	LB	951	$1.00	$951.00	75.00%	$237.75
me101	Light Vehicle Mileage	MI	80	$5.00	$400.00	75.00%	$100.00
me102	Heavy Equipment Mileage	MI	160	$8.00	$1,280.00	75.00%	$320.00
ce504	Plug Container Utilization Charge	EA	1	$250.00	$250.00	70.00%	$75.00
cc1	Depth Charge, 0'-1000'	HR	1	$1,200.00	$1,200.00	70.00%	$360.00
ce240	Blending & Mixing Service Charge	SK	350	$1.40	$490.00	70.00%	$147.00
dc104	Proppant and Bulk Delivery Charges	Tn/Mi	1268	$3.00	$3,804.00	0.00%	$3,804.00
cf105	Top Rubber Cement Plug, 8 5/8"	Ea	1	$225.00	$225.00	49.00%	$114.75
cf753	Baffle Plate Aluminum, 8 5/8" (Blue)	Ea	1	$64.00	$64.00	49.00%	$32.64
cf1753	Centralizer, 8 5/8" (Blue)	Ea	2	$64.00	$128.00	49.00%	$65.28
be129	Service Supervisor	hr	1	$75.00	$75.00	0.00%	$75.00
be130	Equipment Operator	hr	3	$35.00	$105.00	0.00%	$105.00
				Gross	$22,807.50	Net	$7,895.30
						Total	$7,895.30

TERMS: Cash in advance unless Basic Energy Services has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts may pay interest on the balance past due at the rate of 1 ½% per month or the maximum allowable by applicable state or federal laws if such laws limit interest to a lesser amount. In the event it is necessary to employ an agency and/or attorney to affect the collection of said account, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with BES becomes delinquent, BES has the right to revoke any and all discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice [illegible] account will become immediately due and owing and subject to collection.

X

CUSTOMER AUTHORIZED AGENT

Customer Representative: Dalton Popp

Basic Representative: Justin Trussell

Date of Service: July 20, 2019

SERVICE ORDER: I AUTHORIZE WORK TO BEGIN PER SERVICE INSTRUCTIONS IN ACCORDANCE WITH TERMS AND CONDITIONS (INCLUDING INDEMNIFICATION OBLIGATIONS) LISTED HERE OR IN THE CUSTOMER CONTRACT FORM AND REPRESENT THAT I HAVE AUTHORITY TO ACCEPT AND SIGN THIS ORDER.

Customer Comments or Concerns:

Basic Energy Services appreciates any Comments, Concerns or Criticism's from our valuable customers as Safety and Customer Satisfaction are our Number 1 goal. All Comments are confidential and will be used in a constructive manner to improve our Safety and Job Performance. We welcome them as a useful tool to improve upon our service.....

BASIC ENERGY SERVICES

PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007020	1718	08/05/2019

INVOICE NUMBER
93023444

Pratt (620) 672-1201

BILL TO
EDISON OPERATING COMPANY LLC
8100 E 22ND ST N
WICHITA
KS US 67226
ATTN: DAVID WITHROW

JOB SITE

LEASE NAME	RED RIDER 1-26
LOCATION	
COUNTY	COMANCHE
STATE	KS
JOB DESCRIPTION	Cement-New Well Casing/Pi
JOB CONTACT	

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
41185979	19843		Net - 30 days	09/04/2019

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
For Service Dates: 08/04/2019 to 08/04/2019				
0041185979				
171818001A Cement-New Well Casing/Pi 08/04/2019				
PLUG TO ABANDON				
60/40 Poz	170.00	SK	10.23	1,739.10
Cement Gel	294.00	LB	0.22	64.68
Light Vehicle Mileage	80.00	MI	2.20	176.00
Heavy Equipment Mileage	160.00	MI	3.52	563.20
Depth Charge, 1001'-2000'	1.00	HR	660.00	660.00
Blending & Mixing Service Charge	1.00	SK	104.72	104.72
Ton Mileage	588.00	MI	1.32	776.16
Service Supervisor Charge	1.00	EA	75.00	75.00
Driver Charge	3.00	EA	35.00	105.00

PLEASE REMIT TO:
BASIC ENERGY SERVICES,LP
PO BOX 841903
DALLAS,TX 75284-1903

SEND OTHER CORRESPONDENCE TO:
BASIC ENERGY SERVICES,LP
801 CHERRY ST, STE 2100
FORT WORTH, TX 76102

SUB TOTAL	4,263.86
TAX	0.00
INVOICE TOTAL	4,263.86

(Tim) 30

BASIC ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET

1718 18001 A

DATE TICKET NO.

DATE OF JOB 8/4/2015 DISTRICT Pratt, KS	NEW WELL X OLD WELL ☐ PROD ☐ INJ ☐ WDW ☐ CUSTOMER ORDER NO.:
CUSTOMER Edison Operating	LEASE Red Rider WELL NO. 1-26
ADDRESS	COUNTY Comanche STATE KS
CITY STATE	SERVICE CREW Darin, Brett, Diego
AUTHORIZED BY	JOB TYPE: 242 / PTA

EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS
19843	1 3/4				
19918	1/2				

	DATE	AM PM	TIME
TRUCK CALLED	8/4	AM	4:00
ARRIVED AT JOB	8/4	AM	7:00
START OPERATION	8/4	AM	8:30
FINISH OPERATION	8/4	AM	10:[illegible]
RELEASED	8/4	AM	10:30
MILES FROM STATION TO WELL	65		

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: Cecil G. Farmer
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	$ AMOUNT
PC132	60/40 Poz	Sk	170		3,952 50
CC200	Cement Gel	LB	294		147 00
ME101	Light Vehicle Mileage	MI	80		400 00
ME102	Heavy Equipment Mileage	MI	160		1280 00
CG2	Depth Charge, 1001-2,000	HR	1		1500 00
CE240	Blending & Mixing Service Charge	Sk	170		238 00
TM	Ton Mileage	MI	588		1,764 00
BE143	Service Supervisor Charge	Ea	1		75 00
BE144	Driver Charge	Ea	3		105 00
				SUB TOTAL	9,461 50

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON $	
MATERIALS	%TAX ON $	
Discount	TOTAL	4,263 86

SERVICE REPRESENTATIVE [illegible]

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: Cecil G. Farmer
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

FIELD SERVICE ORDER NO.

(1 mil 30)

BASIC ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

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

FIELD SERVICE TICKET

1718 18001 A

DATE TICKET NO.

NEW WELL ☒ OLD WELL ☐ PROD ☐ INJ ☐ WDW ☐ CUSTOMER ORDER NO.:

DATE OF JOB 8/4/2015 DISTRICT Pratt

CUSTOMER Eason Operating

ADDRESS

CITY STATE

AUTHORIZED BY

LEASE Rae Ridge WELL NO. 1-2

COUNTY Comanche STATE KS

SERVICE CREW Dean, Brian, Diaz

JOB TYPE: 242/PTA

EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS
19843	1				
19918	1/2				

	DATE	AM/PM	TIME
TRUCK CALLED	8/4	AM	4:00
ARRIVED AT JOB	8/4	AM	7:00
START OPERATION	8/4	AM	8:30
FINISH OPERATION	8/4	AM	10:1
RELEASED	8/4	AM	10:30
MILES FROM STATION TO WELL	65		

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: [illegible]
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	$ AMOUNT
		SK	170		3,952 50
BC132	Lolite Poz	LB	294		147 00
CC200	Cement Gel	MI	80		400 00
MF101	Light Vehicle Mileage	MI	110		1,250 00
MF102	Heavy Equipment Mileage	HR	1		1,500 00
CC2	Depth Charge, 1001-2,000	SK	170		238 00
CF240	Blending & Mixing Service Charge	MI	588		1,764 00
TM	Ton Mileage	EA	1		75 00
BF143	Service Supervisor Charge	EA	3		105 00
BF144	Driver Charge				
				SUB TOTAL	9,461

CHEMICAL / ACID DATA:

SERVICE & EQUIPMENT	%TAX ON $	
MATERIALS	%TAX ON $	
	Discount TOTAL	4,263

SERVICE REPRESENTATIVE [illegible]

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

FIELD SERVICE ORDER NO.

BASiC energy services, L.P.

TREATMENT REPORT

Customer: Eaton Operating	Lease No.			Date: 8/4/2019	
Lease: Rez Ryan	Well #: 1-26				
Field Order #: 18001	Station: Pratt	Casing	Depth	County: Comanche	State: KS
Type Job: 2+2/PTA		Formation		Legal Description	

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth	Depth	From	To	Pre Pad	Max		5 Min.
Volume	Volume	From	To	Pad	Min		10 Min.
Max Press	Max Press	From	To	Frac	Avg		15 Min.
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush: water	Gas Volume		Total Load

Customer Representative: Cecil Farmer			Station Manager: Justin Wesselman		Treater: Devin Franklin					
Service Units	92511	78982	19843	98690	19918					
Driver Names	Devin	Brett	Brett	D.92	D.92					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
7:00am					On Location/Safety meeting
					170 sk 60/40 Poz 4% Gel
					13.78ppg, 1.43 yield, 6.92 water
					1200'
					Loss hole
8:30am	100		8	4	Pump 8 bbls water
	100		13	4	mix 50 sk
	100		10	4	Displace 10 bbls
					780
					Loss hole
	100		15	4	Pump 15 bbls water
	100		13	4	mix 50 sk cement
	100		5	4	Displace 5 bbls water
					60'
	0		5	3	mix 20 sk circulate to surface
	0		7	3	RH - 30 sk
	0		5	3	MH 20 sk
10:15am					Job complete/Devin & Crew
					Thank you!!

10244 NE Hiway 61 • P.O. Box 8613 • Pratt, KS 67124-8613 • (620) 672-1201 • Fax (620) 672-5383

PRODUCTION ENHANCEMENT COMPANY

Well: Hill #1-H
Field: Bakken
Sec. 1 T-154-N R-101-W
Williams County, ND

Surface Location: 250' FNL & 250' FEL
Lat: 48° 04' 00.24"
Long: -103° 36' 11.64"
Elevation: KB: 2,000' GL: 1,975'

Spud: 11-21-09
Comp: 12-23-09
TD: 10,800' (MD)

Casing Point: 9-5/8" @ 2,150' (MD)

Directional Co.: Baker Hughes INTEQ
Directional Rig: 3
Mud Type: Fresh Water / Brine
Surface Hole: Fresh Water
Intermediate Hole: Fresh Water
Production Hole: Brine
Bit Type: PDC / Tri-cone
Drilling Time: 24 Days
Total Footage: 8,800'
Average ROP: 367.0 FPH

DIRECTIONAL CO.

Company: Baker Hughes INTEQ
Engineer: Jason Craig
Phone: 701-572-7511
Fax: 701-572-7511
Email: Jason.Craig@bakerhughes.com

Name: Derek R. Thomas

REMARKS

Well was spud on November 21, 2009 at 2:00 hrs CST by Patterson-UTI Drilling Company Rig #324. At 2,150' (MD) (2,149' TVD) 9-5/8" 36# J-55 casing was set and cemented. Drilling ahead with fresh water to 5,000' (MD) (4,999' TVD) where brine was added to the system. Drilling ahead with brine to 10,800' (MD) (10,500' TVD) where the decision was made to run 7" casing for a production hole. Well was logged by Baker Hughes INTEQ using a gas chromatograph and a full complement of sensors. Well was logged from 4,000' (MD) to TD. Bit was dropped at 10,800' (MD) (10,500' TVD) for a total of 8,800' (MD) (8,500' TVD) of lateral. Well was left shut in for 24 hours for pressure build up. Well was released from Patterson-UTI Drilling Company Rig #324 at 0:00 hrs CST on December 1, 2009.

Respectfully Submitted,

Derek R. Thomas

SPUDDING INFORMATION

Patterson-UTI Drilling Company

Rig #: 324
Spud Date: 11-21-09
Spud Time: 2:00 hrs CST
Rotary Hours to Spud: 0.0
Rotary Hours to 9-5/8" Casing Point: 24.0
Rig Release Date: 12-1-09
Rig Release Time: 0:00 hrs CST

Baker Hughes INTEQ

Surface Hole Completed: 11-23-09
Surface Hole Footage: 2,150'
Surface Hole Average ROP: 89.6 FPH
Intermediate Hole Completed: 11-30-09
Intermediate Hole Footage: 2,850'
Intermediate Hole Average ROP: 407.1 FPH
Production Hole Completed: 12-1-09
Production Hole Footage: 8,800'
Production Hole Average ROP: 367.0 FPH
Total Rotary Hours: 216.0
Total Drilling Days: 10
Total Circulating Hours: 48.0
Total Footage: 8,800'
Average ROP: 367.0 FPH

CASING

Type	Date	Time	Size	Weight	Grade	Thread	Collar	Depth (MD)	Depth (TVD)
Surface	11-23-09	18:00	9-5/8"	36#	J-55	8 Rnd	ST&C	2,150'	2,149'
Intermediate	11-30-09	18:00	7"	29#	HCP-110	LT&C	LT&C	5,000'	4,999'
Production	12-1-09	0:00	4-1/2"	11.6#	P-110	LT&C	LT&C	10,800'	10,500'

CEMENT

Type	Date	Time	Amount	Type	Weight	Yield	Water	Bump Plug
Surface	11-23-09	20:00	500 sx	Class "G" + 2% CaCl2	15.8 ppg	1.16 cf/sk	5.0 gal/sk	Yes
Intermediate	11-30-09	20:00	500 sx	50/50 Poz Class "G" + 2% CaCl2	13.5 ppg	1.75 cf/sk	9.0 gal/sk	Yes
Production	12-1-09	0:00	500 sx	50/50 Poz Class "G" + 2% CaCl2	13.5 ppg	1.75 cf/sk	9.0 gal/sk	Yes

FLOAT EQUIPMENT

Surface: Float Shoe, 1 Joint, Float Collar
Intermediate: Float Shoe, 1 Joint, Float Collar
Production: Float Shoe, 1 Joint, Float Collar, 30 Centralizers, 1 Marker Joint, 1 Stage Tool, 2 Cement Baskets

WELL TERMINATION

Surface: 9-5/8" Cut 3' Below Ground Level, Welded Steel Plate
Intermediate: 7" Cut 3' Below Ground Level, Welded Steel Plate
Production: 4-1/2" Cut 3' Below Ground Level, Welded Steel Plate

PERFORATIONS

Intermediate: 11-30-09 Perforated 7" Casing at 5,000' (MD) (4,999' TVD) with 4 Shots Per Foot, 0.34" Diameter, 120° Phasing, 17.0 Gram Charges, 0.34" Entrance Hole, 23.0" Penetration, 0 Psi Underbalance, Schlumberger Perforating Company.

Production: 12-1-09 Perforated 4-1/2" Casing at 10,800' (MD) (10,500' TVD) with 4 Shots Per Foot, 0.34" Diameter, 120° Phasing, 17.0 Gram Charges, 0.34" Entrance Hole, 23.0" Penetration, 0 Psi Underbalance, Schlumberger Perforating Company.

STIMULATION

Intermediate: 11-30-09 Stimulated 7" Casing at 5,000' (MD) (4,999' TVD) with 1,000 Gallons 15% HCL Acid, 1,000 Gallons Fresh Water, 1,000 Gallons Brine Water

DRILL STEM TEST REPORT

Prepared For: **Edison Operating Company LLC**

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

Red Raider #1-26

26-32s-19w Commanche

Start Date: 2019.07.27 @ 05:31:00

End Date: 2019.07.27 @ 12:56:00

Job Ticket #: 1 DST #: 1

Eagle Testers

1309 Patton Road Great Bend, Kansas 67530

620-791-7394

Printed: 2019.07.28 @ 01:17:20

DRILL STEM TEST REPORT

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 1 **DST#: 1**

Test Start: 2019.07.27 @ 05:31:00

GENERAL INFORMATION:

Formation: **Altamonmt**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:48:00
Time Test Ended: 12:56:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Gene Budig
Unit No: 1

Interval: 4935.00 ft (KB) To 4965.00 ft (KB) (TVD)
Total Depth: 4965.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

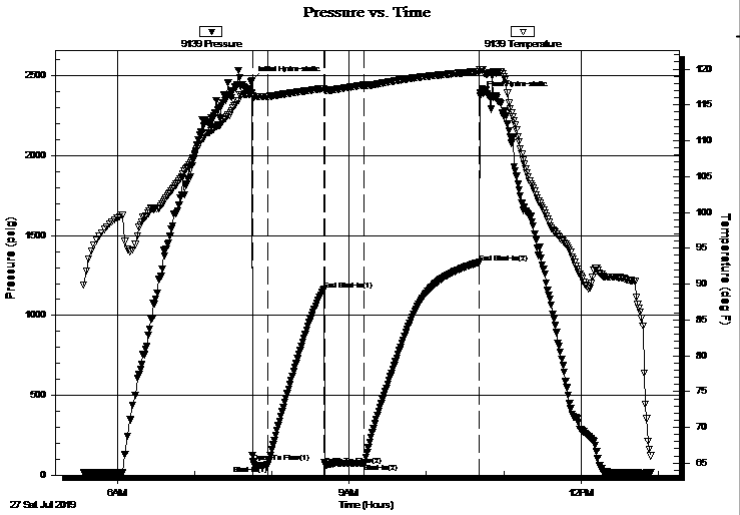
Reference Elevations: 1962.00 ft (KB)
1952.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 9139 **Outside**

Press@RunDepth:	1332.21 psig @	4960.00 ft (KB)		Capacity:	5000.00 psig
Start Date:	2019.07.27	End Date:	2019.07.27	Last Calib.:	2019.07.28
Start Time:	05:31:00	End Time:	12:54:00	Time On Btm:	2019.07.27 @ 07:44:30
				Time Off Btm:	2019.07.27 @ 10:41:30

TEST COMMENT:

1st Openiong	10 Minutes strong blow built to the bottom of the bucket in 1 minute
1st Shut-In	45 Minutes no blow back
2nd Opening	30 Minutes strong blow built to the bottom of the bucket in 1 minute
2nd Shut-In	9i0 Minutes good blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2472.90	116.66	Initial Hydro-static
1	83.48	116.12	Open To Flow (1)
13	63.73	116.19	Shut-In(1)
56	1162.34	117.30	End Shut-In(1)
57	63.75	117.04	Open To Flow (2)
87	75.32	117.76	Shut-In(2)
177	1332.21	119.66	End Shut-In(2)
177	2374.27	119.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3750 Gas in the pipe	0.00
30.00	Drilling Mud	0.42
60.00	slighlty oil and gas cut mud	0.84
0.00	22% Gas 20% Oil 48% Mud 20% Water	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 1 **DST#: 1**

Test Start: 2019.07.27 @ 05:31:00

GENERAL INFORMATION:

Formation: **Altamonmt**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:48:00
Time Test Ended: 12:56:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Gene Budig
Unit No: 1

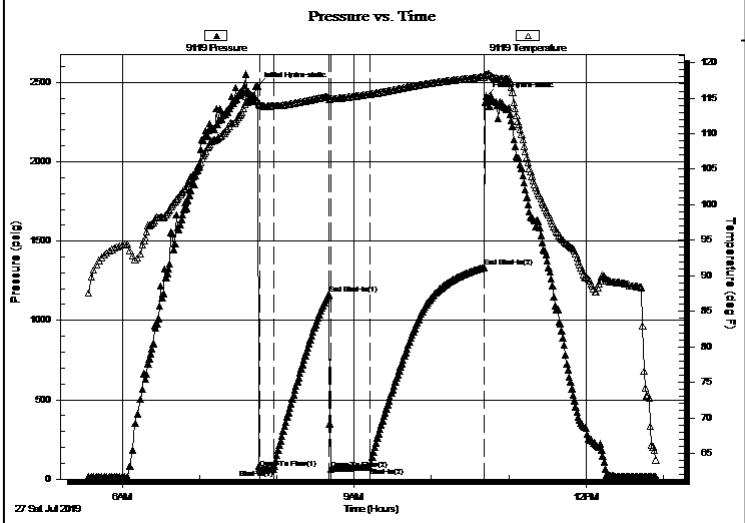
Interval: 4935.00 ft (KB) To 4965.00 ft (KB) (TVD)
Total Depth: 4965.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1962.00 ft (KB)
1952.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 9119 **Inside**

Press@RunDepth:	1334.85 psig @	4960.00 ft (KB)		Capacity:	5000.00 psig
Start Date:	2019.07.27	End Date:	2019.07.27	Last Calib.:	2019.07.28
Start Time:	05:31:00	End Time:	12:54:30	Time On Btm:	2019.07.27 @ 07:45:00
				Time Off Btm:	2019.07.27 @ 10:42:30

TEST COMMENT:
1st Openiong 10 Minutes strong blow built to the bottom of the bucket in 1 minute
1st Shut-In 45 Minutes no blow back
2nd Opening 30 Minutes strong blow built to the bottom of the bucket in 1 minute
2nd Shut-In 9i0 Minutes good blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2476.43	114.69	Initial Hydro-static
2	66.06	114.17	Open To Flow (1)
13	62.76	113.93	Shut-In(1)
56	1165.45	115.27	End Shut-In(1)
57	64.94	114.94	Open To Flow (2)
87	76.15	115.56	Shut-In(2)
176	1334.85	118.00	End Shut-In(2)
178	2412.76	118.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3750 Gas in the pipe	0.00
30.00	Drilling Mud	0.42
60.00	slighlty oil and gas cut mud	0.84
0.00	22% Gas 20% Oil 48% Mud 20% Water	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 1 **DST#: 1**

Test Start: 2019.07.27 @ 05:31:00

Tool Information

Drill Pipe:	Length:	4920.00 ft	Diameter:	3.80 inches	Volume:	69.01 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:		84000.00 lb
					Total Volume:	69.01 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		15.00 ft					String Weight:	Initial	50000.00 lb
Depth to Top Packer:		4935.00 ft						Final	lb
Depth to Bottom Packer:		ft							
Interval between Packers:		30.00 ft							
Tool Length:		60.00 ft							
Number of Packers:		1	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			4910.00		
Hydraulic tool	5.00			4915.00		
Jars	5.00			4920.00		
Safety Joint	5.00			4925.00		
Packer	5.00			4930.00	30.00	Bottom Of Top Packer
Packer	5.00		Fluid	4935.00		
Anchor	25.00			4960.00		
Recorder	0.00	9119	Inside	4960.00		
Recorder	0.00	9139	Outside	4960.00		
Bullnose	5.00			4965.00	30.00	Bottom Packers & Anchor
Total Tool Length:	**60.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 1 **DST#: 1**

Test Start: 2019.07.27 @ 05:31:00

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:	10.40 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5500.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

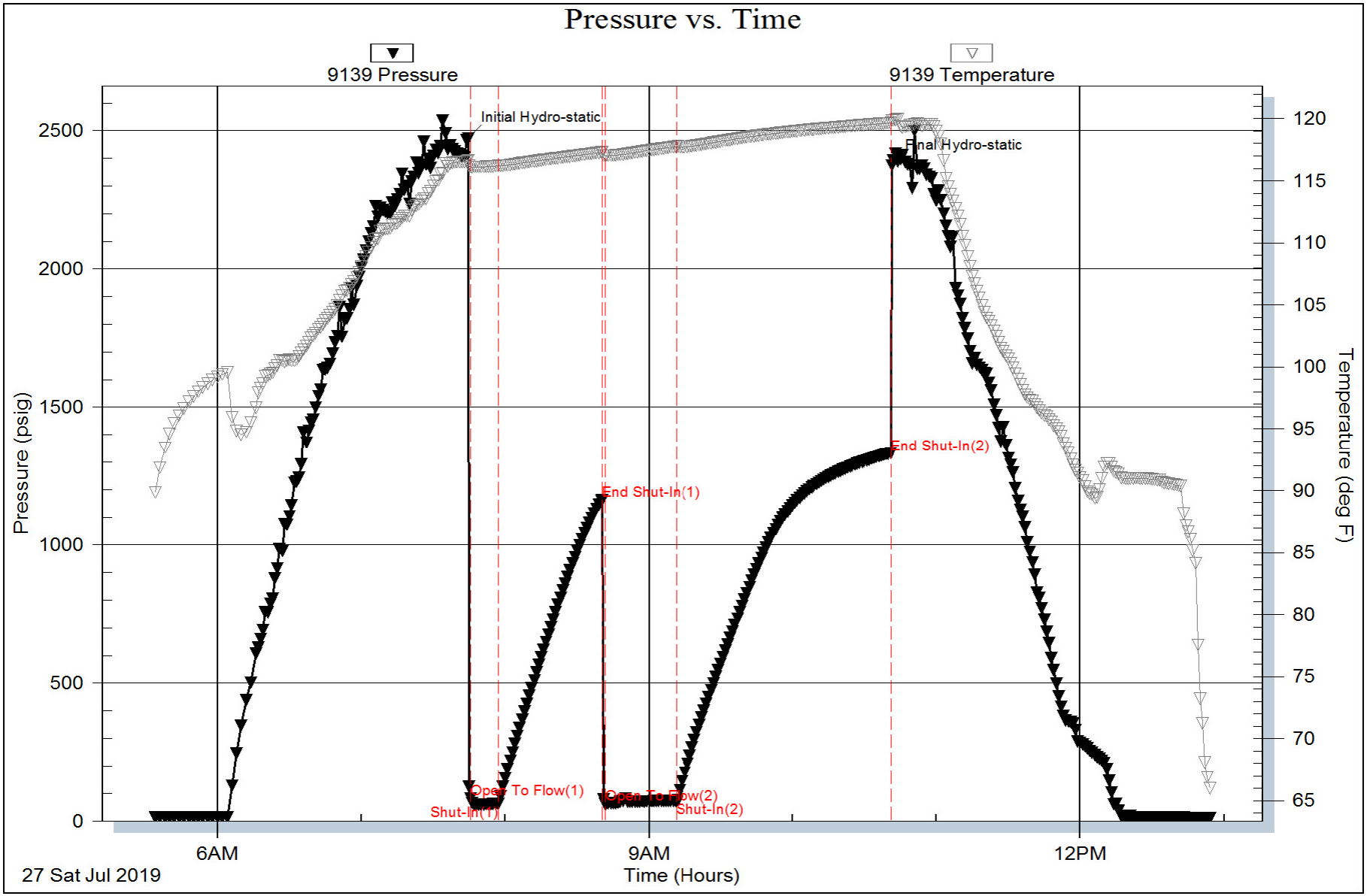
Length ft	Description	Volume bbl
0.00	3750 Gas in the pipe	0.000
30.00	Drilling Mud	0.421
60.00	slighlty oil and gas cut mud	0.842
0.00	22% Gas 20% Oil 48% Mud 20% Water	0.000

Total Length: 90.00 ft Total Volume: 1.263 bbl

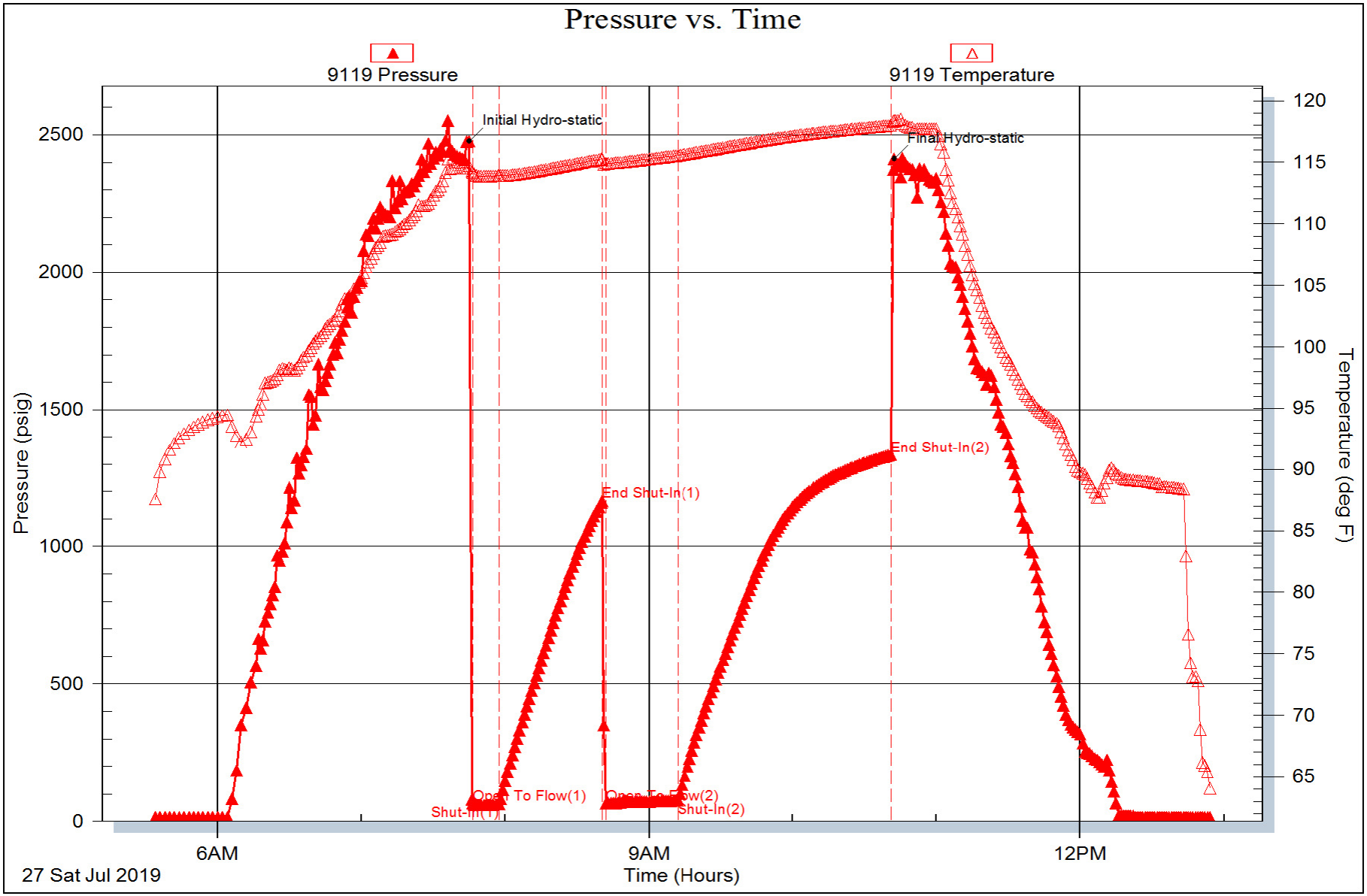
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
9139 Pressure
9139 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
2500
2000
1500
1000
500
0
120
115
110
105
100
95
90
85
80
75
70
65
6AM
9AM
12PM
27 Sat Jul 2019
Time (Hours)

Serial #: 9119 **Inside** Edison Operating Company LLC Red Raider #1-26 DST Test Number: 1



Eagle Testers Ref. No: 1 Printed: 2019.07.28 @ 01:17:22

DRILL STEM TEST REPORT

Prepared For: **Edison Operating Company LLC**

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

Red Raider #1-26

26-32s-19w Commanche

Start Date: 2019.07.29 @ 14:59:00

End Date: 2019.07.29 @ 23:33:00

Job Ticket #: 01370 DST #: 2

Eagle Testers

1309 Patton Road Great Bend, Kansas 67530

620-791-7394

Printed: 2019.07.29 @ 23:54:12

DRILL STEM TEST REPORT

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01370 **DST#: 2**

Test Start: 2019.07.29 @ 14:59:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:13:00
Time Test Ended: 23:33:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Gene Budig
Unit No: 1

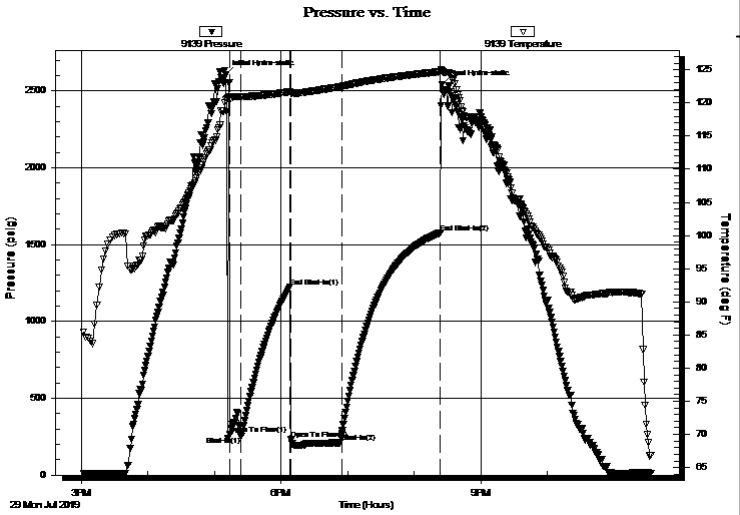
Interval: 5132.00 ft (KB) To 5200.00 ft (KB) (TVD)
Total Depth: 5200.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1962.00 ft (KB)
1952.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 9139 **Outside**

Press@RunDepth:	1577.98 psig @	5194.76 ft (KB)		Capacity:	5000.00 psig
Start Date:	2019.07.29	End Date:	2019.07.29	Last Calib.:	2019.07.29
Start Time:	14:59:00	End Time:	23:33:30	Time On Btm:	2019.07.29 @ 17:10:00
				Time Off Btm:	2019.07.29 @ 20:25:00

TEST COMMENT:
1st Opening 10 Minutes fair blow built to the bottom of a five gallon bucket in 9 minutes
1st Shut-In 45 Minutes fair blow back
2nd Opening 45 Minutes strong blow gas to surface in 8 minutes see gas flow report
2nd Shut-In 90 Minutes good blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2604.49	120.43	Initial Hydro-static
4	267.87	120.60	Open To Flow (1)
14	252.21	120.95	Shut-In(1)
58	1222.72	121.69	End Shut-In(1)
59	230.54	121.45	Open To Flow (2)
105	269.88	122.47	Shut-In(2)
194	1577.98	124.71	End Shut-In(2)
195	2540.83	124.82	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
230.00	Drilling Mud 100 % Mud	3.23
120.00	Drilling Mud 98%Mud 2%Water	1.68

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	64.20	29.42
Last Gas Rate			
Max. Gas Rate	0.13	94.50	40.76

DRILL STEM TEST REPORT

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01370 **DST#: 2**

Test Start: 2019.07.29 @ 14:59:00

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:13:00
Time Test Ended: 23:33:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Gene Budig
Unit No: 1

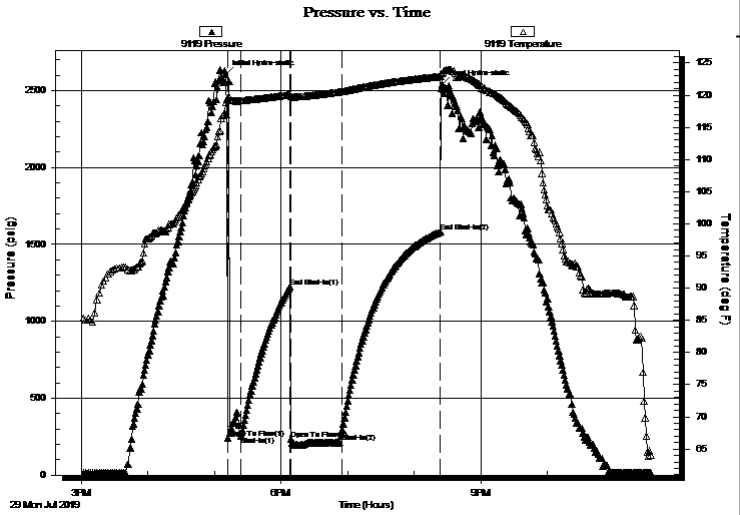
Interval: 5132.00 ft (KB) To 5200.00 ft (KB) (TVD)
Total Depth: 5200.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1962.00 ft (KB)
1952.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 9119 **Inside**

Press@RunDepth:	1581.21 psig @	5194.76 ft (KB)		Capacity:	5000.00 psig
Start Date:	2019.07.29	End Date:	2019.07.29	Last Calib.:	2019.07.29
Start Time:	14:59:00	End Time:	23:33:30	Time On Btm:	2019.07.29 @ 17:10:00
				Time Off Btm:	2019.07.29 @ 20:25:00

TEST COMMENT:
1st Opening 10 Minutes fair blow built to the bottom of a five gallon bucket in 9 minutes
1st Shut-In 45 Minutes fair blow back
2nd Opening 45 Minutes strong blow gas to surface in 8 minutes see gas flow report
2nd Shut-In 90 Minutes good blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2607.07	118.86	Initial Hydro-static
3	242.23	119.33	Open To Flow (1)
14	255.85	119.15	Shut-In(1)
58	1226.21	120.07	End Shut-In(1)
59	232.18	119.76	Open To Flow (2)
105	273.84	120.55	Shut-In(2)
194	1581.21	122.91	End Shut-In(2)
195	2542.22	123.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
230.00	Drilling Mud 100 % Mud	3.23
120.00	Drilling Mud 98%Mud 2%Water	1.68

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	64.20	29.42
Last Gas Rate			
Max. Gas Rate	0.13	94.50	40.76

DRILL STEM TEST REPORT

TOOL DIAGRAM

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01370 **DST#: 2**

Test Start: 2019.07.29 @ 14:59:00

Tool Information

Drill Pipe:	Length:	5107.00 ft	Diameter:	3.80 inches	Volume:	71.64 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:		84000.00 lb
					Total Volume:	71.64 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		5.00 ft					String Weight:	Initial	50000.00 lb
Depth to Top Packer:		5132.00 ft						Final	52000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		67.76 ft							
Tool Length:		97.76 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			5107.00		
Hydraulic tool	5.00			5112.00		
Jars	5.00			5117.00		
Safety Joint	5.00			5122.00		
Packer	5.00			5127.00	30.00	Bottom Of Top Packer
Packer	5.00		Fluid	5132.00		
Anchor	5.00			5137.00		
Change Over Sub	0.75			5137.75		
Drill Pipe	31.26			5169.01		
Change Over Sub	0.75		Inside	5169.76		
Anchor	25.00			5194.76		
Recorder	0.00	9119	Inside	5194.76		
Recorder	0.00	9139	Outside	5194.76		
Bullnose	5.00			5199.76	67.76	Bottom Packers & Anchor

Total Tool Length: 97.76

DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01370 **DST#: 2**

Test Start: 2019.07.29 @ 14:59:00

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:	ppm
Viscosity:	52.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.40 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
230.00	Drilling Mud 100 % Mud	3.226
120.00	Drilling Mud 98%Mud 2%Water	1.683

Total Length: 350.00 ft Total Volume: 4.909 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gas sample was taken

DRILL STEM TEST REPORT

GAS RATES

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01370 **DST#: 2**

Test Start: 2019.07.29 @ 14:59:00

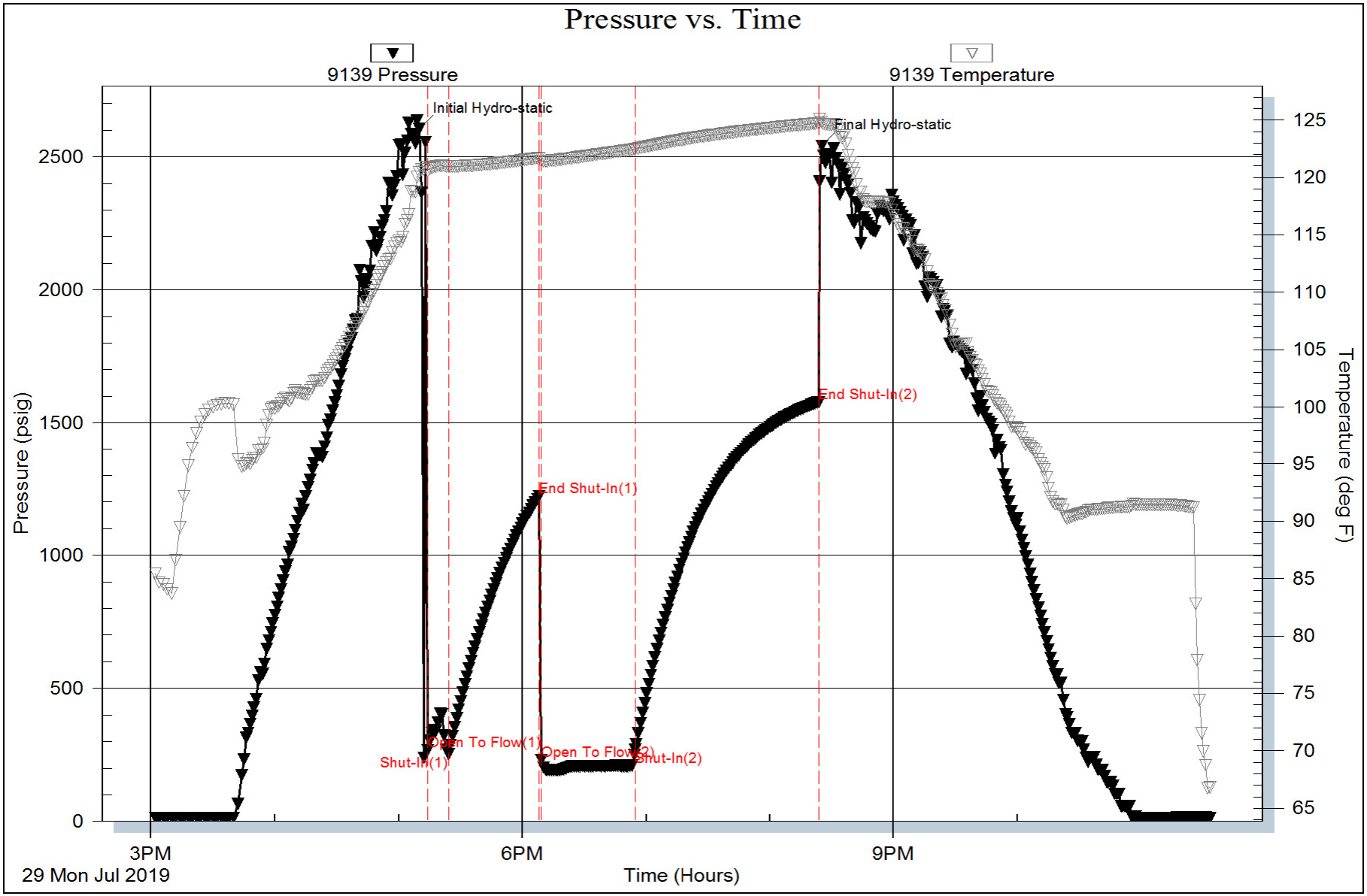
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

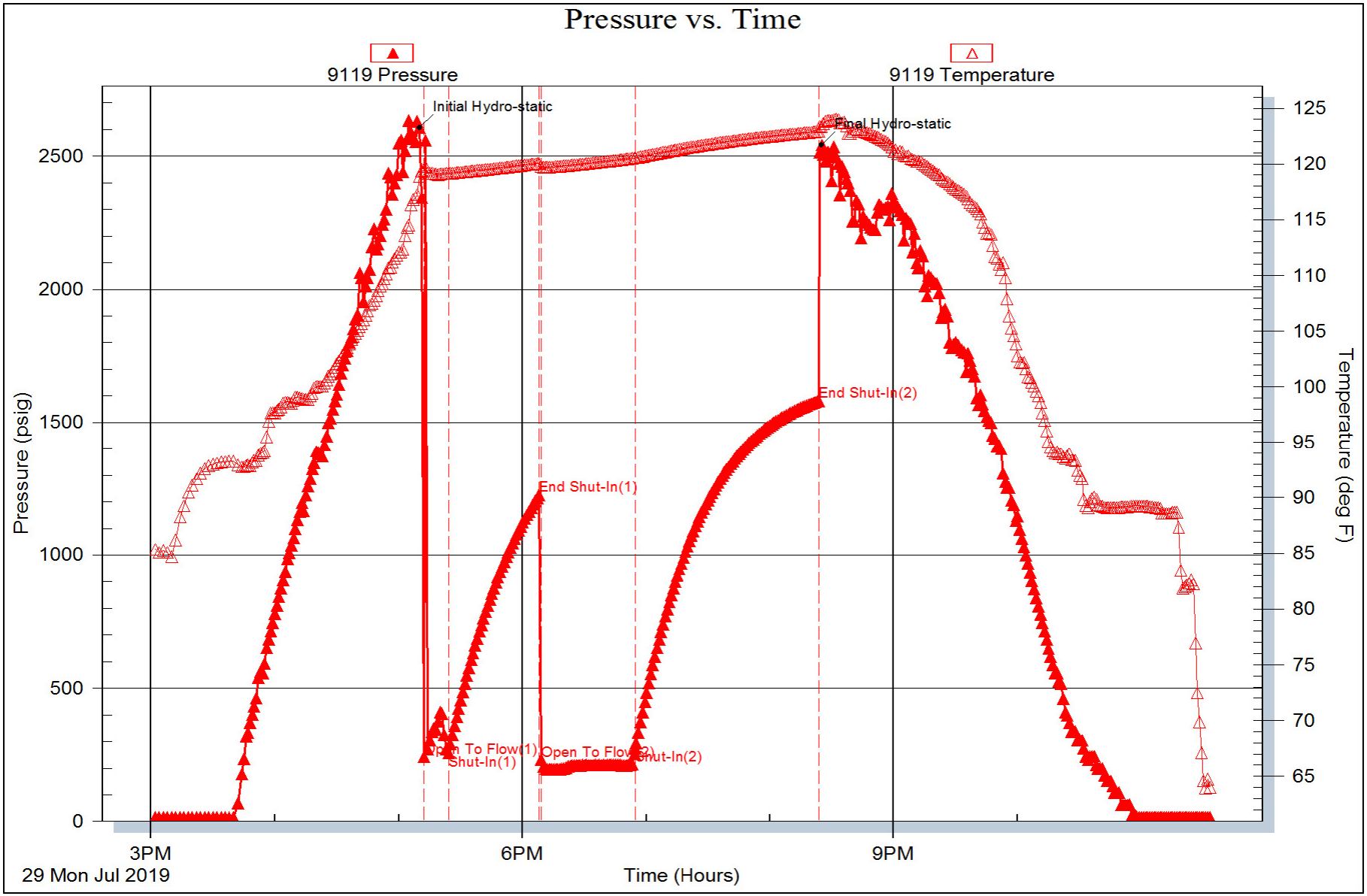
Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.13	64.20	29.42
2	20	0.13	80.50	35.52
2	30	0.13	88.50	38.51
2	40	0.13	94.50	40.76
0	-	-999999.00	-999999.00	-999999.00

Serial #: 9139 **Outside** Edison Operating Company LLC Red Raider #1-26 DST Test Number: 2



Eagle Testers Ref. No: 01370 Printed: 2019.07.29 @ 23:54:14

Serial #: 9119 **Inside** Edison Operating Company LLC Red Raider #1-26 DST Test Number: 2



Eagle Testers Ref. No: 01370 Printed: 2019.07.29 @ 23:54:14

DRILL STEM TEST REPORT

Prepared For: **Edison Operating Company LLC**

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

Red Raider #1-26

26-32s-19w Commanche

Start Date: 2019.08.02 @ 11:25:00

End Date: 2019.08.02 @ 20:51:00

Job Ticket #: 01371 DST #: 3

Eagle Testers

1309 Patton Road Great Bend, Kansas 67530

620-791-7394

Printed: 2019.08.02 @ 21:11:37

DRILL STEM TEST REPORT

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01371 **DST#: 3**

Test Start: 2019.08.02 @ 11:25:00

GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:20:00
Time Test Ended: 20:51:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Gene Budig
Unit No: 1

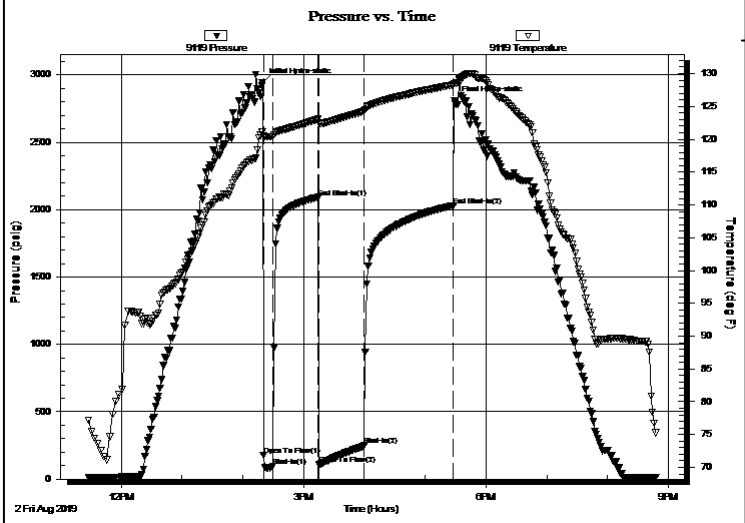
Interval: 5860.00 ft (KB) To 5887.00 ft (KB) (TVD)
Total Depth: 5887.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1962.00 ft (KB)
1952.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 9119 **Inside**

Press@RunDepth:	2031.58 psig @	5882.00 ft (KB)		Capacity:	5000.00 psig
Start Date:	2019.08.02	End Date:	2019.08.02	Last Calib.:	2019.08.02
Start Time:	11:25:00	End Time:	20:48:00	Time On Btm:	2019.08.02 @ 14:19:30
				Time Off Btm:	2019.08.02 @ 17:29:00

TEST COMMENT:
1st Opening 10 Minutes fair building blow built to the bottom of a 5 gallon bucket in 2 minutes
1st Shut-In 45 Minutes fair blow back
2nd Opening 45 Minutes weak building blow built to the bottom of a 5 gallon bucket in10 minutes
2nd Shut-In 90 Minutes fair blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2942.32	121.15	Initial Hydro-static
1	176.75	120.46	Open To Flow (1)
10	94.30	120.38	Shut-In(1)
55	2091.45	123.07	End Shut-In(1)
56	108.10	122.42	Open To Flow (2)
101	248.92	124.28	Shut-In(2)
189	2031.58	128.30	End Shut-In(2)
190	2806.63	128.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	oil cut muddy water	1.68
0.00	10% Gas 20%Oil 30%Mud 40%Water	0.00
270.00	Water Chlorides 98,000	3.79

Gas Rates

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

DRILL STEM TEST REPORT

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01371 **DST#: 3**

Test Start: 2019.08.02 @ 11:25:00

GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:20:00
Time Test Ended: 20:51:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Gene Budig
Unit No: 1

Interval: 5860.00 ft (KB) To 5887.00 ft (KB) (TVD)
Total Depth: 5887.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

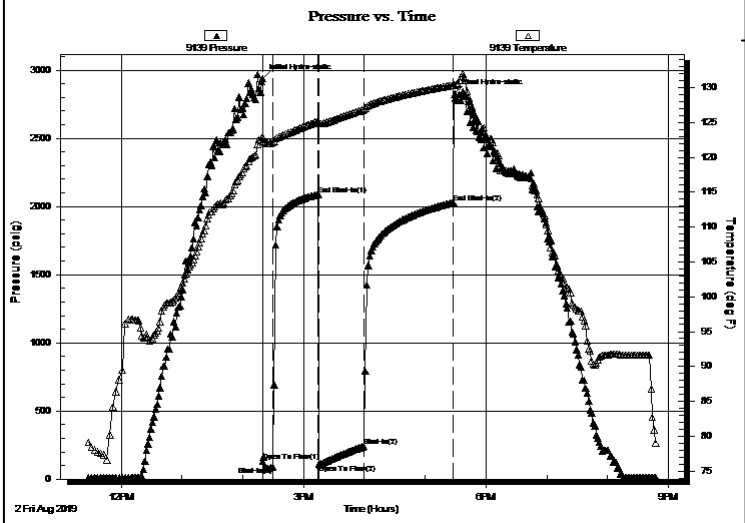
Reference Elevations: 1962.00 ft (KB)
1952.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 9139 **Outside**

Press@RunDepth: 2028.62 psig @ 5882.00 ft (KB)
Start Date: 2019.08.02 End Date: 2019.08.02
Start Time: 11:25:00 End Time: 20:48:00

Capacity: 5000.00 psig
Last Calib.: 2019.08.02
Time On Btm: 2019.08.02 @ 14:19:30
Time Off Btm: 2019.08.02 @ 17:29:00

TEST COMMENT:
1st Opening 10 Minutes fair building blow built to the bottom of a 5 gallon bucket in 2 minutes
1st Shut-In 45 Minutes fair blow back
2nd Opening 45 Minutes weak building blow built to the bottom of a 5 gallon bucket in10 minutes
2nd Shut-In 90 Minutes fair blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2940.20	122.89	Initial Hydro-static
1	130.13	122.30	Open To Flow (1)
10	91.08	122.05	Shut-In(1)
55	2088.60	125.18	End Shut-In(1)
56	106.74	124.77	Open To Flow (2)
101	242.86	126.86	Shut-In(2)
189	2028.62	130.35	End Shut-In(2)
190	2824.25	130.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	oil cut muddy water	1.68
0.00	10% Gas 20%Oil 30%Mud 40%Water	0.00
270.00	Water Chlorides 98,000	3.79

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01371 **DST#: 3**

Test Start: 2019.08.02 @ 11:25:00

Tool Information

Drill Pipe:	Length:	5853.00 ft	Diameter:	3.80 inches	Volume:	82.10 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:		86000.00 lb
					Total Volume:	82.10 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		23.00 ft					String Weight:	Initial	62000.00 lb
Depth to Top Packer:		5860.00 ft						Final	63000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		27.00 ft							
Tool Length:		57.00 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			5835.00		
Hydraulic tool	5.00			5840.00		
Jars	5.00			5845.00		
Safety Joint	5.00			5850.00		
Packer	5.00			5855.00	30.00	Bottom Of Top Packer
Packer	5.00		Fluid	5860.00		
Anchor	22.00			5882.00		
Recorder	0.00	9119	Inside	5882.00		
Recorder	0.00	9139	Outside	5882.00		
Bullnose	5.00			5887.00	27.00	Bottom Packers & Anchor
Total Tool Length:	**57.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Edison Operating Company LLC

8100 E.22nd Str.N.Bldg 1800
Wichita, Kansas 67226-2316

ATTN: Adam Kennedy

26-32s-19w Commanche

Red Raider #1-26

Job Ticket: 01371 **DST#: 3**

Test Start: 2019.08.02 @ 11:25:00

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:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	7000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

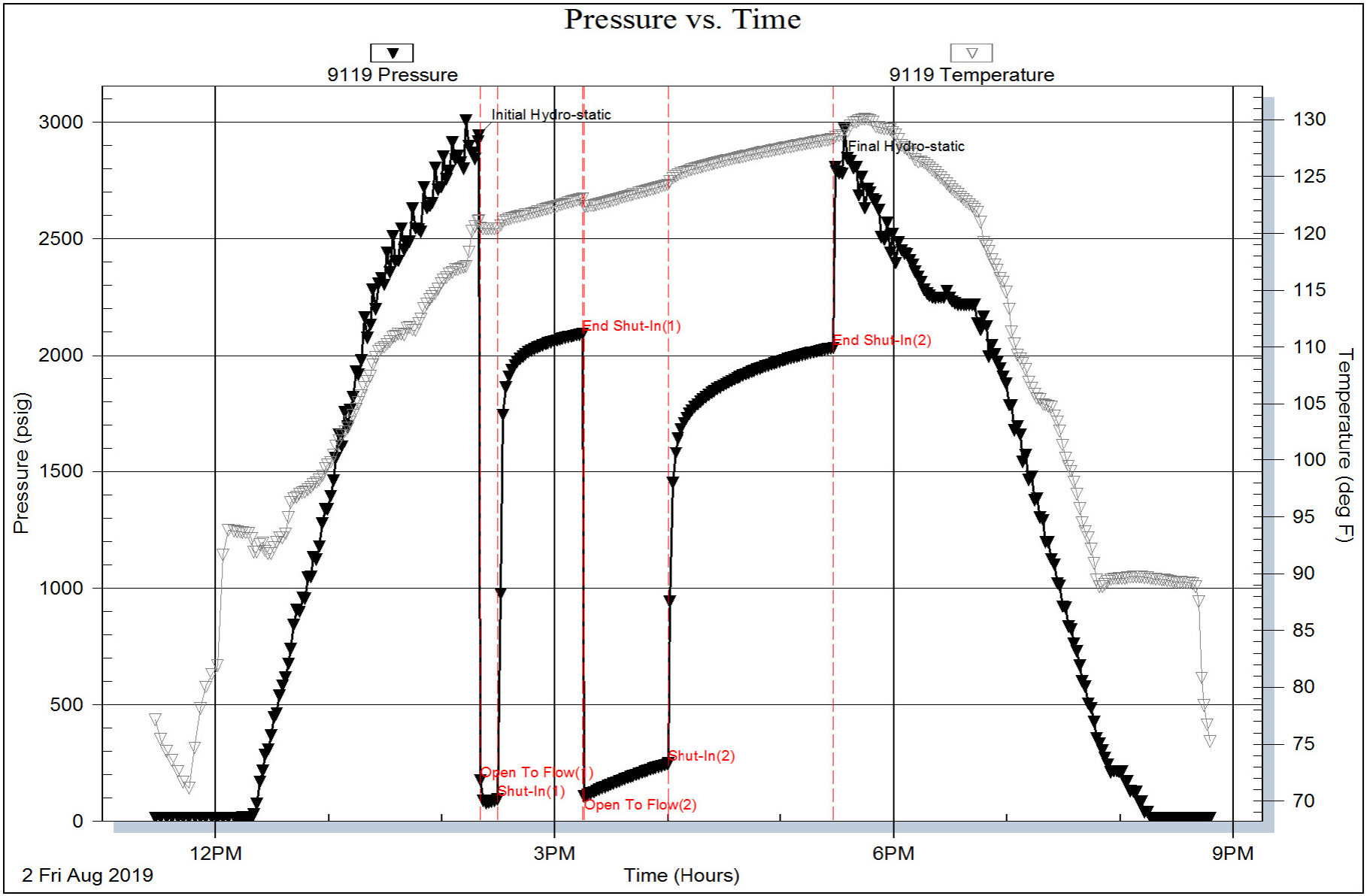
Length ft	Description	Volume bbl
120.00	oil cut muddy w ater	1.683
0.00	10% Gas 20%Oil 30%Mud 40%Water	0.000
270.00	Water Chlorides 98,000	3.787

Total Length: 390.00 ft Total Volume: 5.470 bbl

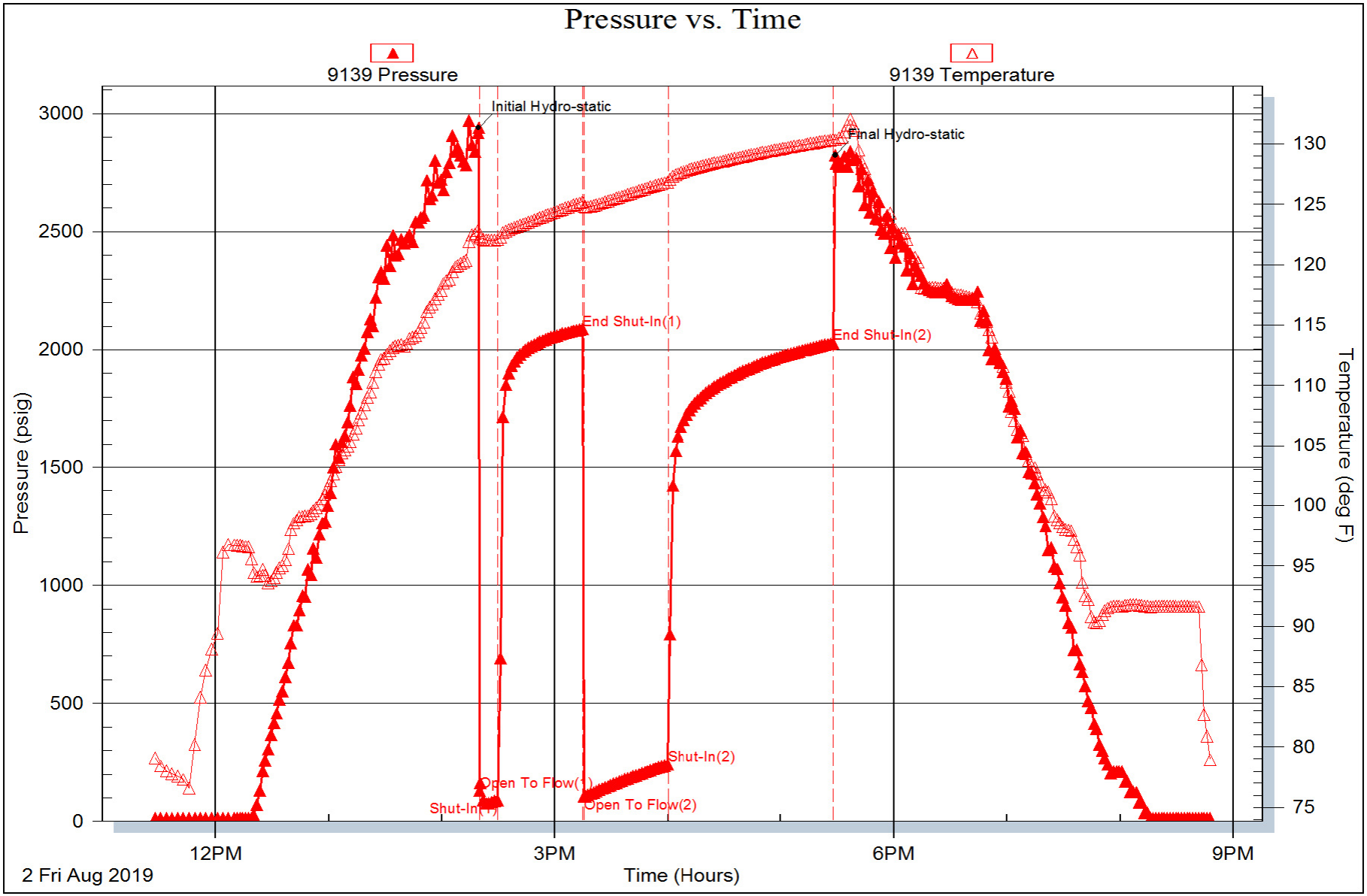
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
9119 Pressure
9119 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
Time (Hours)
12PM
3PM
6PM
9PM
2 Fri Aug 2019
0
500
1000
1500
2000
2500
3000
70
75
80
85
90
95
100
105
110
115
120
125
130

Serial #: 9139 **Outside** Edison Operating Company LLC Red Raider #1-26 DST Test Number: 3



Eagle Testers Ref. No: 01371 Printed: 2019.08.02 @ 21:11:39

Koda Services, Inc.

INVOICE

Conductor and Rat Hole Drilling, Landfill Gas Drilling and Well Construction Nationwide

Date	Invoice #
7/23/2019	13128

Bill To
Edison Operating Company, LLC 8100 E 22nd St. N, Bldg 1900 Wichita KS 67206-2319

Legal Description	Ordered By	Terms	Field Ticket	Lease Name	Drill Rig
SW of Coldwater, ...	Rick Popp	Net 30	9549	Red Raider 1-26	

Item	Quantity	Description	Rate	Amount
Conductor	84	Drilled 84' of 30" hole for conductor	35.00	2,940.00
20" Pipe	84	Furnished 84' of 20" conductor pipe	30.00	2,520.00T
Ream Hole		Ream Hole	450.00	450.00
72" X 6'	1	Furnished 6' X 6' tinhorn	544.50	544.50T
Dirt Removal		Provided Labor and Equipment for dirt removal and cleanup	425.00	425.00
Grout	9	Furnished grout	175.00	1,575.00T
Deliver Grout		Deliver grout to location	500.00	500.00
Placement	1	Equipment and Labor to install pipe in holes	300.00	300.00
Cover Plate	1	Cover Plate	30.00	30.00T
Barrier Fence	1	Provided and Set Barrier Fence	75.00	75.00T

8/3mg

9243

Thank you for your business.

Subtotal	$9,359.50
Sales Tax (6.5%)	$308.39
Total	$9,667.89

P.O. Box 66 · Woodward, OK 73802-0066 · Phone: (580) 254-5019 · Fax: (580) 254-5908

EDISON OPERATING COMPANY, LLC
Red Raider #1-26
843' FSL & 485' FWL Sec 26-32S-19W
Comanche Co., Kansas

1952' GL
1962' KB

Report – Set 20" conductor

07-19-19 7:00 am, MIRU Southwind Drilling Rig #1. MI Koda Svc 7/18/19, drilled & set 84' of 20" .281 wall thickness conductor, cemented w/ 9 yards of 8 sx grout type 12. Plug down @ 5:00 pm 7/18/19. Southwind started MI Rig #1.

07-20-19 7:00 am, MIRU Southwind Drilling Rig #1, start spudding @ 6:00 pm 7-19-19. Cut 737' of 12 ¼" hole w/ survey @ 737' – ¾ °. Run 17 jts of new 8-5/8" 24# csg, tallied 724.25', set @ 737'. RU Basic Energy, LLC, cement w/ 200 sx A-Con 3% cc ¼#/sx flocell, then 150 sx 60/40 poz 3% cc & ¼ #/sx flocell. Cement did circulate w/ 22 sx to pit, plug down @ 11:00 am 7-20-19. WOC 12 hrs, Will drill plug @ 11:00 pm 7-20-19 then drill ahead.