

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) (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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	Heritage Oil L.L.C.
Well Name	SCHUSTER 1-30
Doc ID	1590257

All Electric Logs Run

DIL
MEL
DCUP
Sonic

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 2309

Date	6-30-21	Sec.		Twsp.		Range		County	Ellis	State	KS	On Location		Finish	
------	---------	------	--	-------	--	-------	--	--------	-------	-------	----	-------------	--	--------	--

Location Ellis 55 2 1/2 W

Lease	Schuster	Well No.	1-30	Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Contractor	Utgami + e			Charge To	Heritage Oil
Type Job	Top Stage				
Hole Size	7 3/8	T.D.			
Csg.	5 1/2	Depth		Street	
Tbg. Size	2 3/8	Depth	1291	City	State
Tool		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.		Shoe Joint		Cement Amount Ordered	330# QMDC
Meas Line		Displace			4 1/2 gal 4 # P10 3MCC

EQUIPMENT

Pumptrk	16	No.	Cementor	Bill
			Helper	Exeig
Bulktrk		No.	Driver	
			Driver	
Bulktrk	19	No.	Driver	Tony
			Driver	

Common	200 QMDC
Poz. Mix	
Gel.	4
Calcium	3

JOB SERVICES & REMARKS

Remarks:
Rat Hole
Mouse Hole
Centralizers
Baskets
D/V or Port Collar
pressured up below peets 1250' oil
peets c 1400 Est. Circ.
mix 4.4 called good returns
Cement 1.50# QMDC Follow w/
ser QMDC 39.00
Squeezed to
wash clean
Cement did Circ.
State plugger Pat STAAB

Hulls	
Salt	
Flowseal	85#
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	330
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Used 200# QMDC 4 1/2 #
3cc
4 1/2 gal

Pumptrk Charge	Squeeze
Mileage	24

X Signature Eugene C. Perkins

Thanks

Tax	
Discount	
Total Charge	

FRANKS Oilfield Service

◆ 815 Main Street Victoria, KS 67671 ◆ 24 Hour Phone (785) 639-7269
 ◆ Office Phone (785) 639-3949 ◆ Email: franksoilfield@yahoo.com

TICKET NUMBER 0324
 LOCATION Victoria
 FOREMAN Preston Deiling

FIELD TICKET & TREATMENT REPORT CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
5-22-21		Shuster #1-30	30	13	20	Ellis

CUSTOMER	TRUCK #	DRIVER	TRUCK #	DRIVER
Heritage Oil LLC	101	Sch T		

CUSTOMER	MAILING ADDRESS	CITY	STATE	ZIP CODE
Heritage Oil LLC	111 W 34th Street	Heys	KS	67601

JOB TYPE Surface HOLE SIZE 12.25 HOLE DEPTH _____ CASING SIZE & WEIGHT 8 3/8" 20"
 CASING DEPTH _____ DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14.8 SLURRY VOL 1.41 WATER gal/sk _____ CEMENT LEFT in CASING _____
 DISPLACEMENT 13 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting + Rig up on White Knight drilling. Circulate casing mix 150 sacks common 3+2 displacer w/ 13 Bbls water. Start in cement did circulate.

Thank you!
[Signature] + Crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
FL002	1	PUMP CHARGE	1150.00	1150.00
M001	35	MILEAGE	6.50	227.50
M003	7.42 ton	Ton mileage delivery	600.00	460.00
CB004	150 sx	Common 3+2	24.50	3,675.00
			sub total	5,652.50
			less 30% disc.	1,695.75
			sub total	3,956.75
			SALES TAX	180.08
			ESTIMATED TOTAL	4,136.83

AUTHORIZATION Terry Austin TITLE _____ DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

CONTRACTOR <i>White Knight Drilling</i>				DATE <i>6-3-21</i>	
HERITAGE OIL LLC		LEASE <i>SCHUSTER</i>		WELL NO. <i>1-30</i>	RIG NO. <i>1</i>
DISTRICT <i>4</i>	COUNTY <i>Ellis</i>	STATE <i>KS</i>		D. P. STRING NO. <i>3</i>	SIZE <i>4 1/2 x 14</i>

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HF
						DM	
						EM	
						H	
SLOPE TEST		ACCIDENT: - (GIVE NAME)				H	
@	FT.						
	DEG. OFF					DRLR	

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.		WEIGHT		DRILLING		SIZE D. P.	
SIZE		VISC.		CORING		SIZE COLL.	
MAKE		WTR. LOSS-C.C.		OTHER		JTS. D. P.	FT.
SERIAL NO.		FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN		PH.		TRIP		COLLARS	FT.
HOURS RUN		MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS:

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS
<i>RUN 81</i>	<i>1st</i>	<i>NEW 15[#] 5 1/2 csg</i>	<i>Talky</i>	<i>3935'</i>		<i>Riley Voss</i>	<i>150 min</i>
<i>SET</i>	<i>-3930</i>	<i>w/150 SKS on Bottom</i>	<i>130 SKS in</i>			<i>MARVIN PETZ</i>	<i>8</i>
<i>RAT HOLE</i>	<i>OV Tool</i>	<i>1605</i>				<i>Jeff Hord</i>	<i>8</i>
SLOPE TEST		ACCIDENT: - (GIVE NAME)				H	
@	FT.	<i>By Franks Oil Field SSR. 14 x 15</i>					
	DEG. OFF	<i>Plug Down - 2:30 P.M 6-3-21</i>				<i>DERCK PETZ</i>	<i>190 min</i>

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.		WEIGHT		DRILLING		SIZE D. P.	
SIZE		VISC.		CORING		SIZE COLL.	
MAKE		WTR. LOSS-C.C.		OTHER		JTS. D. P.	FT.
SERIAL NO.		FILTER CAKE		REPAIRS		KELLY DOWN	FT.
DEPTH IN		PH.		TRIP		COLLARS	FT.
HOURS RUN		MTL. ADDED (REMARKS)				TOTAL	FT.

REMARKS: *SET slip in 5 1/2 csg & CEMENT TOP STAGE*
CUT OFF 5 1/2 csg SET SLIPS

FROM	TO	FORMATION	ROTARY SPEED	WEIGHT ON BIT	PUMP PRES.	NAME	HRS.
						DM	
						EM	
						H	
SLOPE TEST		ACCIDENT: - (GIVE NAME)				H	
@	FT.						
	DEG. OFF					DRLR	

BIT AND COREHEAD RECORD		MUD RECORD		TIME RECORD		DRILL STEM RECORD	
RUN NO.		WEIGHT		DRILLING		SIZE D. P.	
SIZE		VISC.		CORING		SIZE COLL.	



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Heritage Oil LLC

30-13s-20w Ellis KS

111 W 36th Street
Hays KS 67601

Schuster #1-30

Job Ticket: 66889

DST#: 1

ATTN: Lyle Herrman

Test Start: 2021.05.27 @ 06:11:01

GENERAL INFORMATION:

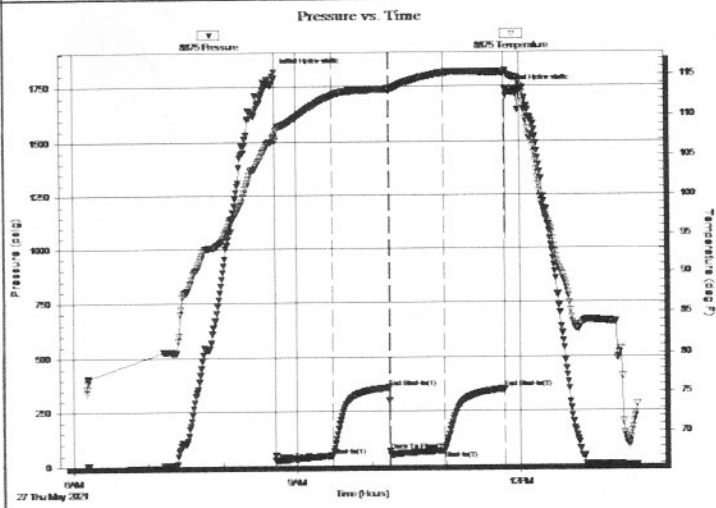
Formation: LKC E
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:42:57
 Time Test Ended: 13:34:07
 Interval: 3633.00 ft (KB) To 3650.00 ft (KB) (TVD)
 Total Depth: 3650.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Initial)
 Tester: SJ Staab/ Kevin Webs
 Unit No: 84
 Reference Elevations: 2294.00 ft (KB)
 2289.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8875

Outside

Press@RunDepth: 67.99 psig @ 3634.00 ft (KB) Capacity: psig
 Start Date: 2021.05.27 End Date: 2021.05.27 Last Calib.: 2021.05.27
 Start Time: 06:11:01 End Time: 13:34:07 Time On Btm: 2021.05.27 @ 08:42:47
 Time Off Btm: 2021.05.27 @ 11:48:07

TEST COMMENT: 45-IF-Surface to 6 1/2"
 45-ISI-Very Weak Surface
 45-FF-Surface to 5 3/4"
 45-FSI-Weak Surface



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1814.67	107.56	Initial Hydro-static
1	25.65	107.12	Open To Flow (1)
46	46.14	112.52	Shut-In(1)
92	360.24	113.29	End Shut-In(1)
92	64.94	113.28	Open To Flow (2)
137	67.99	115.24	Shut-In(2)
185	352.91	115.29	End Shut-In(2)
186	1734.92	115.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	gvsocmw 4% g 1% o 25% m 70% w	0.85
60.00	gom 10% g 40% o 50% M	0.85
0.00	315 GIP 100% GAS	0.00

Gas Rates

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

DST Test Number: 1

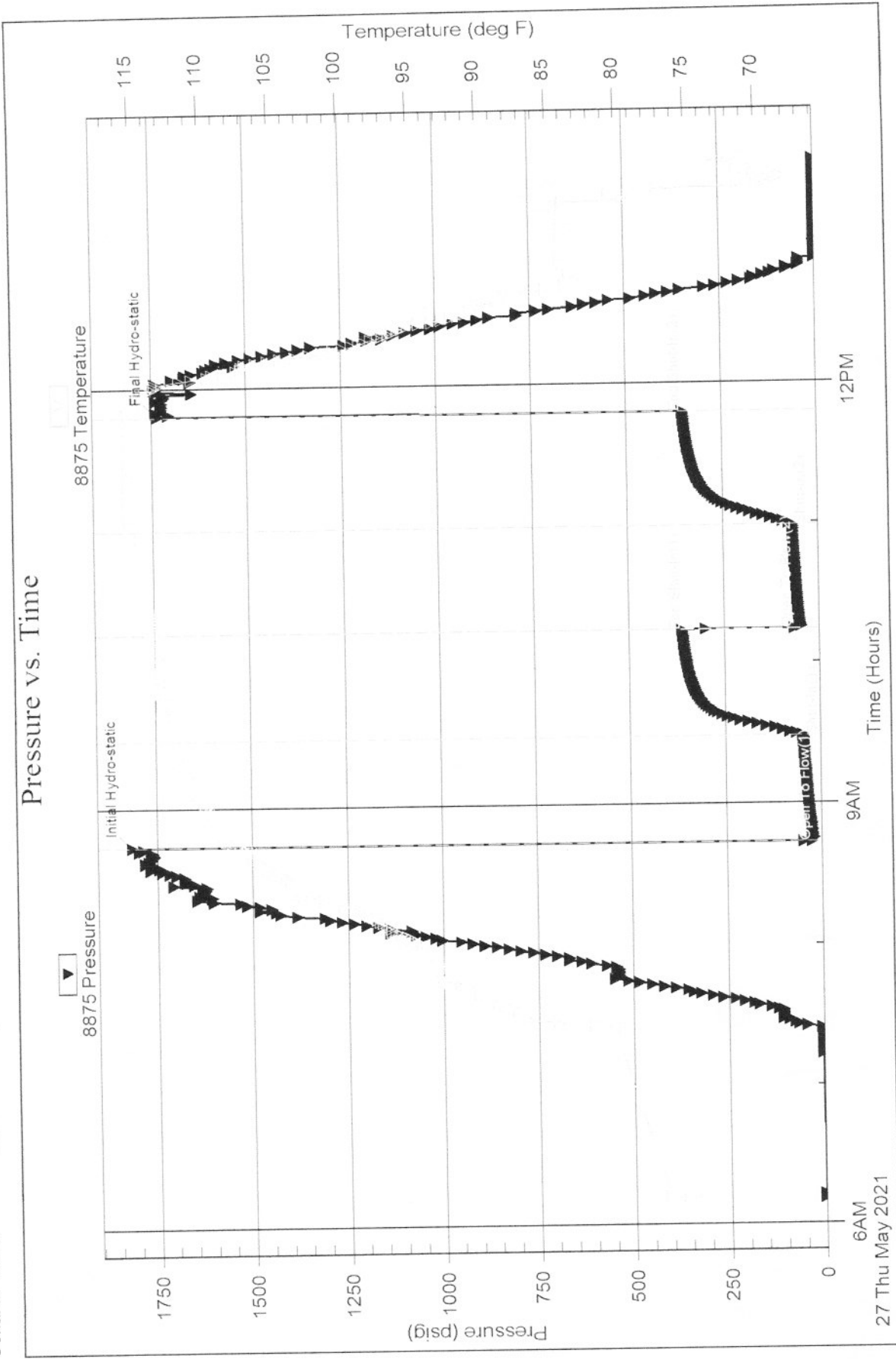
Schuster #1-30

Heritage Oil LLC

Outside

Serial #: 8875

Pressure vs. Time



Printed: 2021.05.27 @ 13:59:59

Ref. No: 66889

Trilobite Testing, Inc



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 66889

Well Name & No. Schuster #1-30 Test No. 1 Date 5/27/21
 Company Heritage Elevation 2289 KB 2294 GL
 Address 111 W. 36th Street Hays, KS 67601
 Co. Rep / Geo. Lyle Herriman Rig White Knight
 Location: Sec. 30 Twp 13S Rge. 20W Co. F1127 State KS

Interval Tested 3633 - 3650 Zone Tested U-K C-E
 Anchor Length 17 Drill Pipe Run 3614 Mud Wt. 9.0
 Top Packer Depth 3628 Drill Collars Run NO Vis 50
 Bottom Packer Depth 3633 Wt. Pipe Run NO WL 6.0
 Total Depth 3650 Chlorides 7700 ppm System LCM 11

Blow Description IF - surface to 6.5' to 36'
IST - Very weak surface blow
EF - surface to 5.75'
FSE - weak surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>67 VS OCMW</u>	<u>4</u>	<u>7</u>	<u>70</u>	<u>25</u>
<u>6389</u>	<u>GOM</u>	<u>10</u>	<u>40</u>	<u></u>	<u>50</u>
<u>315</u>	<u>GIP</u>	<u>100</u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
<u></u>	<u></u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>

Rec Total 115 BHT 115 Gravity 40 API RW 0.148 @ 70 °F Chlorides 76,000 ppm

(A) Initial Hydrostatic 18.14 Test 2315 T-On Location 2315
 (B) First Initial Flow 2.5 Jars 08:13 T-Started 08:13
 (C) First Final Flow 4.6 Safety Joint T-Open 08:41
 (D) Initial Shut-In 3.60 Circ Sub T-Pulled 11:41
 (E) Second Initial Flow 6.4 Hourly Standby lx T-Out 13:36
 (F) Second Final Flow 6.7 Mileage Comments had to wait
 (G) Final Shut-In 3.52 Sampler on cat
 (H) Final Hydrostatic 17.34 Straddle EM Tool

Initial Open 45 Shale Packer Ruined Shale Packer
 Initial Shut-In 45 Extra Packer Ruined Packer
 Final Flow 45 Extra Recorder Extra Copies
 Final Shut-In 45 Day Standby Sub Total
 Accessibility Total
 Sub Total MP/DST Disc't

Approved By _____ Our Representative Spencer Steinhilber

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

785-259-0056

GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

OPERATOR Heritage Oil LLC
 LEASE Schwoter WELL NO. 1-30
 FIELD Kaiser
 LOCATION 610' FSL ; 2000 FEL
 SEC. 30 TWP. 13s RGE. 20w
 COUNTY Ellis STATE Kansas

ELEVATION
 KB 2294'
 DF 2291'
 GL 2289'
 Measurements Are All
 From KB

CONTRACTOR White Knight
 COMM. 5/22/21 COMP. 5/30/21
 RTD 3935' LOG TO 3935'
 SAMPLES SAVED FROM 3250 TO TD
 DRILLING TIME KEPT FROM 3250 TO TD
 SAMPLES EXAMINED FROM 3250 TO TD
 GEOLOGICAL SUPERVISION FROM 3250 TO TD
 MUD UP 3300 TYPE MUD Chem Mud

CASING RECORD
 SURFACE 8 7/8 ool @ 218'
w/ 150sx common
 PRODUCTION 3935'
5 1/2 @ 3930' K3 150sx
Common 30sx rat-hole

ELECTRICAL SURVEYS
 CNDL DIL Micro
 RAG BHVC
Michael W. Winkler

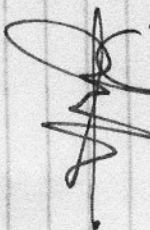
FORMATION	LOG		SAMPLE		STRUCT. COMP.
	TOP	DATUM	TOP	DATUM	
Anhydrite Base	1620'	+674	1614'	+680	+7
	1658'	+636	1660'	+634	+6
Topeka	3301'	-1007	3300'	-1006	+7
Hecobner	3533'	-1239	3533'	-1239	+5
Toronto					
LKC	3571'	-1277	3572'	-1278	+4
BVC	3821'	-1527	3821'	-1527	-1
Marmaton			3880'	-1586	-2
Cherokee Shale	3918'	-1624	3925'	-1631	-10
Arbuckle	NA		NA		NA
RTD	3935'	-1641	3935'	-1641	

REFERENCE WELL FOR STRUCTURAL COMPARISON Kreger - Lucca # 1-31
150' FNL ; 2030' FWL 31-13s-20w Downy Nelson

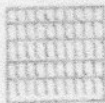


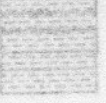


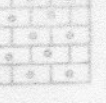
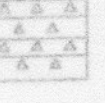

DN @ 1605'

Due to DST #1 Sample Shows, and Structural position it was decided by all parties to set production casing ~~due to~~ to further test the well for production.

Respectfully



LEGEND

- 
Anhydrite
- 
Salt
- 
Sandstone
- 
Shale
- 
Carb sh
- 
Limestone
- 
Oct. Lime
- 
Chert
- 
Dolomite

DRILLING TIME IN MINUTES
PER FOOT
Rate of Penetration Decreases

5" 10" 15" 20" 25"

DEPTH

1600

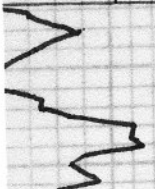
LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

Anhydrite Top 1614' + 1680'



Anhydrite Top 1614' +680

50

Base +634

3250

Topeka 3300'

3300

Sh. Gray

L.S. White Anhydrite
NS

L.S. A/A
tan chlk NS

Sh. gray

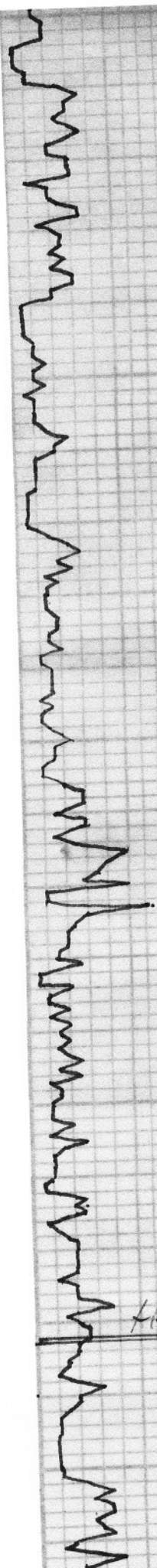
L.S. Tan silt chlk pr-A or
vshl whr 1-2 pcs pp silt edge str

Sh gray blk

50

L.S. Whit-tan Anhydrite
Vry mineralized NS

Sh whit-gray



50
3400
CFS
50
3500
Fiederer 3533-1239
CFS 50

L.S. Whit-tan fluxlyn
Very mineralized NS

Sh Whit-gry

L.S. Whit v fluxlyn v dms
Low PL chky NS

L.S. Whit-tan chky
Low PC foss NS

Low PL Δ tan

SH BKC CARB

L.S. Gray-tan fluxlyn v dms
NS

L.S. A/A pr. in xlyn @ NS

50

SH BKC CARB

L.S. tan-gry fluxlyn
Low PC foss some chky
NS

3500

L.S. Whit crs xlyn foss fr-gol in xlyn
intool or fr actor silt sfd vry oolitic
fr vlg or silt patchy - sub salt str. in cr

L.S. Tan-gry-brn
NS

Low PL brn Δ

SH BKC CARB

Sh. gry blk

L.S. tan msky fluxlyn
NS

L.S. wht-gry fincln
few PCS fr Jng of vssfo
no odr

3800

Sh. gym

L.S. wht mostly sh/ky
NS

BKC 3821-1527

50

Sh. blk gym

few PC L.S. wht-gry fincln
NS

Marathon 3880-1586

3900

L.S. wht-gry fincln
pncr VONS NS

L.S. wht-tan fr-oxcln
few PC fr-gd incln &
subsat-sat str silt odr
fr SFO

L.S. Trn DWS fr frce of fincln
pr-fr incln & silt sfo on BKC
Clark yellow wht few PC edge str

Charlotte Shale 3925-1631

Conglomerat Sand 3930-1636

RTD 3935-1641

Sh. BKC CRB

SS. fr-mo gan subrad
present silt abn SFO
very friable going in &

50

4000

5" 10" 15" 20" 25"
 DRILLING TIME Minutes/Foot
 Rate of Penetration Decreases

DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

CONTRACTOR White Knight Drilling
 LEASE Schwester IP —
 ELEVATION 2294 KB RTD 3935'

LOCATION 610' FSL 3 2000' FEL
 SEC 30 TWP 13s RNG 2000
 COUNTY Ellis STATE Kansas