

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 Recompletion Date _____ 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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OPERATOR

Company: ARROWHEAD EXPLORATION, LLC
 Address: 2919 HALL
 HAYS, KANSAS 67601-1818

Contact Geologist: MATT MORRIS/DUB STUART
 Contact Phone Nbr: 785-259-6738
 Well Name: WITT # 35-1
 Location: W2 SE SW SW, SEC.35-T5S-R20W
 API: 15-147-20,758-00-00
 Pool: WILDCAT
 State: KANSAS
 Field: UNNAMED
 Country: USA

Scale 1:240 Imperial

Well Name: WITT # 35-1
 Surface Location: W2 SE SW SW, SEC.35-T5S-R20W
 Bottom Location:
 API: 15-147-20,758-00-00
 License Number: 35439
 Spud Date: 10/21/2021 Time: 8:30 AM
 Region: PHILLIPS COUNTY
 Drilling Completed: 10/25/2021 Time: 1:00 AM
 Surface Coordinates: 330' FSL & 850' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2065.00ft
 K.B. Elevation: 2073.00ft
 Logged Interval: 2950.00ft To: 3611.00ft
 Total Depth: 3611.00ft
 Formation: LANSING-KANSAS CITY
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: -99.54961
 Latitude: 39.56835
 N/S Co-ord: 330' FSL
 E/W Co-ord: 850' FWL

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
 Address: 108 W 35TH
 HAYS, KS 67601

Phone Nbr: (785) 639-1337
 Logged By: GEOLOGIST Name: HERB DEINES

CONTRACTOR

Contractor: DISCOVERY DRILLING CO INC
 Rig #: 4
 Rig Type: MUD ROTARY
 Spud Date: 10/21/2021 Time: 8:30 AM
 TD Date: 10/25/2021 Time: 1:00 AM
 Rig Release: 10/25/2021 Time: 4:15 PM

ELEVATIONS

K.B. Elevation: 2073.00ft Ground Elevation: 2065.00ft
 K.B. to Ground: 8.00ft

NOTES

WELL RAN HIGH TO DRY HOLE LOCATED SW SW SW/4 35-5-20W THROUGH TOPEKA AND LKC BUT THICKENED THROUGH THE REAGAN SAND SECTION. ALTHOUGH A SHOW OF HEAVY OIL WAS NOTED IN THE TOP OF THE REAGAN SAND, THE OIL COLUMN WAS THIN AND UNDERLAIN BY A VERY POROUS, THICK SANDSTONE SECTION WITH A STRONG WATER DRIVE. THERE WERE SHOW ZONES IN THE TORONTO AND LKC BUT LACKED SUFFICIENT DEVELOPMENT AND PERMEABILITY TO BE PRODUCTIVE. AFTER LOG ANALYSIS AND CONSULTATION WITH OPERATOR, DECISION MADE TO PLUG AND ABANDON WELL.

OPEN HOLE LOGGING BY GEMINI WIRELINE: DUAL INDUCTION LOG, COMPENSATED DENSITY NEUTRON LOG, AND MICRORESISTIVITY LOG.

NO DRILL STEM TESTS WERE RAN ON THIS WELL.

FORMATION TOPS COMPARISON

	WITT # 35-1 W2 SE SW SW SEC.35-5S-20W KB 2073'	A.H. WITT # 1 SW SW SW SEC. 35-5S-20W KB 2066'	WITT # 4 E2 SW SE NW SEC.3-6S-20W KB 2168'
	LOG TOPS		
Anhydrite-top	1677 +396	+383	+395
Anhydrite-base	1706 +367		+367
Topeka	3078-1005		-996
Heebner Shale	3276-1203		-1196
Toronto	3296-1223		-1217
LKC	3314-1241	-1248	-1234
BKC	3509-1436	-1442	-1429
Reagan Sand	3560-1487	-1486	-1476
Granite Wash	3595-1522	Not Reached	-1507
RTD	3611-1538	-1497	-1508

10-21-21 Spud 8:30 AM, set 8 5/8" surface casing to 223.6' w/ 170 sxs Common 2%gel 3%cc, slope ¾ degree @224', WOC 8 hrs, drill plug with PDC bit @11:00 PM











10-22-21 1464', drilling

10-23-21 2910', bit trip 2908' to run button bit, slope ½ degree, displaced 2988'

10-24-21 3380', drilling, CFS 3520', short trip 20 stands, CFS 3560', drilling

10-25-21 3611', RTD @1:00 AM, CCH, TOWB, logs, plug and abandon well, released rig 4:15 PM

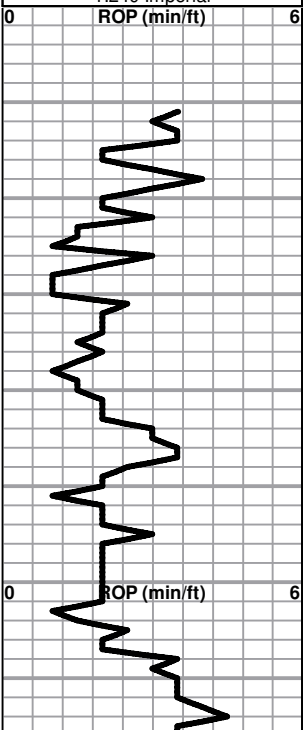
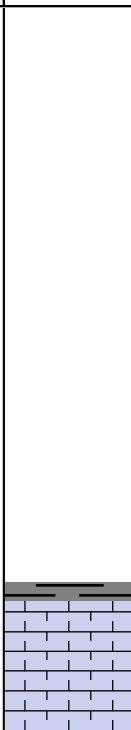
ROCK TYPES

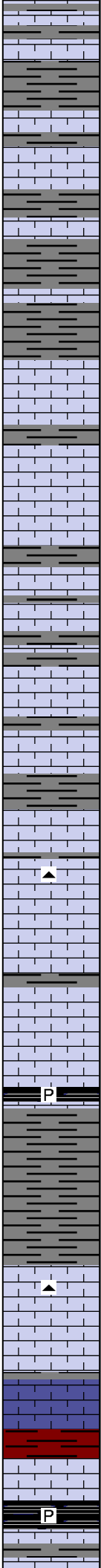
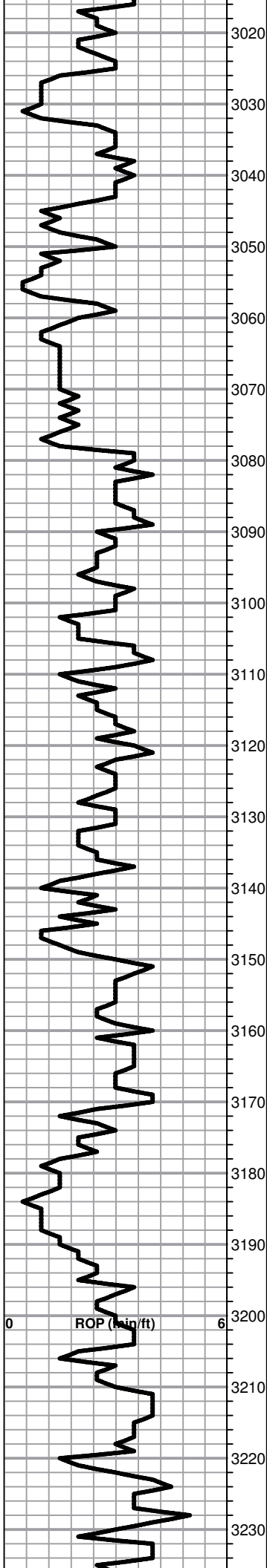
 Dolsec	 Lscongl	 Carbon Sh	 Igne
 Lmst fw<7	 shale, grn	 shale, red	
 Lmst fw7>	 shale, gry	 Ss	

ACCESSORIES

MINERAL

- ▲ Chert, dark
- P Pyrite

Curve Track #1 ROP (min/ft)	Depth Intervals DST	Lithology	Oil Show	Geological Descriptions	Curve Track #3
<p>1:240 Imperial</p> 	<p>Cored Interval DST Interval</p>			<p>BEGIN 1' DRILL TIME FROM 2950' TO RTD BEGIN 10' WET AND DRY SAMPLES FROM 3050' TO RTD</p> <p>ANHYDRITE TOP 1677+396 ANHYDRITE BASE 1706+367</p>	<p>1:240 Imperial</p> <p>8 5/8" SURFACE CASING SET TO 223.6' W/ 170 SXS COMMON 2%GEL 3%CC. PLUG DOWN 2:45PM 10/21/2021</p> <p>SLOPE SURVEY 3/4 DEGREE @ 224'</p> <p>Drilled to 2908' with PDC bit, slope 1/2 degree @ 2908'</p>



TOPEKA 3078-1005

Lime, crm-lt brn,fnxln-granular in part, NS

Lime, lt brn-lt gray, fnxln

Lime, lt-med brn, fn-micro xln
Shale, lt gray, soft

Lime, lt-med brn, fn-vfxln, bedded chalk sticky in part

Lime, lt-med brn, fn-vfxln, slightly chalky

Lime, lt brn, fn-vfxln, slightly chalky

Lime, crm-lt brn, fnxln, chalky and sticky, white chalk wash
Chert tan, fresh, sharp, NS

Lime, lt-med brn, fn-vfxln

Lime, lt brn, fn-vfxln

Lime, lt brn, fn-vfxln,

Shale, black carbonaceous, blocky, fissile, pyrite clusters

Shale, dove gray, soft sticky

Shale, gray-red with lt red wash

Lime, crm-lt brn, fn-vfxln, soft bedded chalk

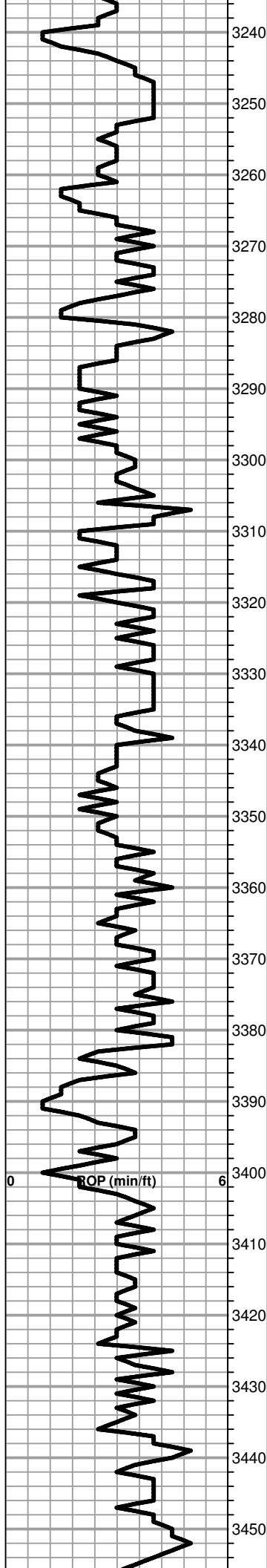
Lime, lt brn, fn-vfxln

Lime, lt brn-lt gray, fn-micro xln

Lime, lt brn-lt gray, fn-vfxln

Shale, black carbonaceous, pyrite clusters

Lime, gray, vfxln, pyrite inclusions



Lime, white-crm, fnxln-granular in part, NS

Lime, crm-lt brn, fn-micro xln, slightly fossiliferous

Lime, crm-lt brn, fn-micro xln with med brn microxln chips

Lime, crm-lt brn, fn-micro xln

Lime, crm-lt brn, trashy gray lime near shale boundary

HEEBNER SHALE 3276-1203

Shale, black carbonaceous, fissile, blocky, pyrite clusters
Lime, med brn, micro xln

Shale, dove gray to lt green, soft sticky

TORONTO 3296-1223

○ Lime, lt brn, fnxln, bed of fossil fragments with cementing and scattered pinpoint vugs, lt-saturated staining, good wet cut indicating lt hydrocarbon, NFO or odor

LKC 3314-1241

Lime white-crm, fn-vfxln, brittle on crush

Lime, white-crm,fn-micro xln, hard bedded chalk

Lime, white-lt brn, fn-micro xln

Shale, red-reddish brn, soft blocky

○ Lime, white-crm, fnxln, thin fossil fragment bed cemented with scattered fine vugs with spotty staining, NFO with very lt odor

Shale, soft with red wash

Lime, crm, fn-vfxln

Shale, black carbonaceous

Lime, lt dove gray, vfxln

Lime, crm, fn-micro xln, hard bedded chalk, NS

Lime, white, fn-vfxln

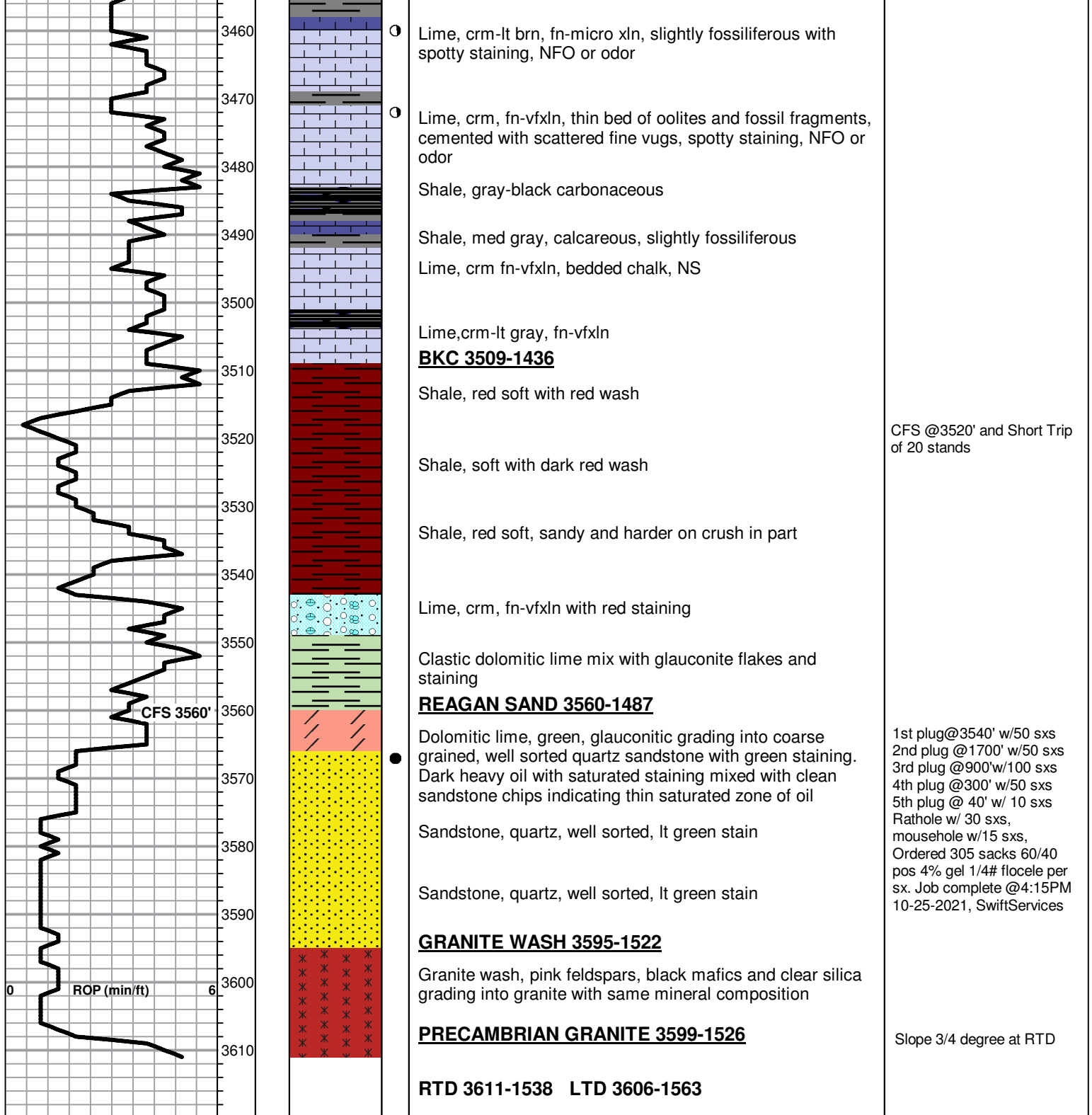
Lime, crm-lt brn, fn-vfxln, hard bedded chalk

Lime, crm, fn-micro xln

Lime, lt-dark gray with dark mottling

○ Lime, white-crm, fnxln, thin zone of cemented fossil fragments with scattered fine vugs and pinpoint porosity, scattered to saturated staining, NFO or odor

Lime, crm-lt gray, fn-vfxln



SWIFT



Services, Inc.

P. O. Box 466
Ness City, KS 67560
Off: 785-798-2300



Invoice

DATE	INVOICE #
10/21/2021	33951

BILL TO
Arrowhead Exploration LLC 2919 Hall Street Hays, KS 67601

- Acidizing
- Cement
- Tool Rental

TERMS	Well No.	Lease	County	Contractor	Well Type	Well Category	Job Purpose	Operator
Net 30	#35-1	Witt	Phillips	Discovery Rig #4	Oil	Development	8 5/8 Surface	Wayne
PRICE REF.	DESCRIPTION				QTY	UM	UNIT PRICE	AMOUNT
575D	Mileage - 1 Way				60	Miles	6.00	360.00
576D-S	Pump Charge - Shallow Surface (< 500 Ft.)				1	Job	1,000.00	1,000.00
325	Standard Cement				170	Sacks	14.50	2,465.00T
278	Calcium Chloride				8	Sack(s)	40.00	320.00T
279	Bentonite Gel				3	Sack(s)	30.00	90.00T
290	D-Air				2	Gallon(s)	42.00	84.00T
581D	Service Charge Cement				170	Sacks	2.00	340.00
583D	Drayage				500.4	Ton Miles	1.00	500.40
	Subtotal							5,159.40
	Sales Tax Phillips County						7.00%	207.13
We Appreciate Your Business!							Total	\$5,366.53



CHARGE TO: **Arrowhead Exploration, LLC**
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET

33951

PAGE 1 OF 1

SERVICE LOCATIONS
 1. **Ness City, KS**
 2.
 3.
 4. REFERRAL LOCATION

WELL/PROJECT NO. **35-1**
 LEASE **WIT**
 COUNTY/PARISH **PHILLIPS**
 STATE **KS**
 CITY **LOGAN**
 DATE **10-21-2021**
 OWNER **SAME**

TICKET TYPE
 SERVICE
 SALES

CONTRACTOR **Discovery Drilling, #4**
 RIG NAME/NO.
 SHIPPED VIA **CT**

WELL TYPE **Oil**
 WELL CATEGORY **Development**
 JOB PURPOSE **8 5/8 SURFACE**
 DELIVERED TO **LOCATION**
 WELL PERMIT NO.
 WELL LOCATION **S/ Logan, KS**

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.			UNIT PRICE	AMOUNT
		LOC	ACCT	DF		QTY.	UM	QTY.		
575					MILEAGE # 113	60	mi		6.00	360.00
576S					PUMP CHARGE - SPALLS SURFACE	1	job	224	ft	1000.00
32S					STANDARD CEMENT	170	sys		14.50	2465.00
278					CALCIUM CHLORIDE	8	sys		40.00	320.00
279					BENTONITE GEL	3	sys		30.00	90.00
290					D-ATR	2	gal		42.00	84.00
581					SEWAGE CHARGE CEMENT	170	sys		2.00	340.00
583					DEBRIS	16680	lbs	500.47	1.00	500.47

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

MUST BE SIGNED BY CUSTOMER OR CUSTOMERS AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.
X

DATE SIGNED **10-21-2021** TIME SIGNED **1:33D** **5:41 P.M.**

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?

WE UNDERSTOOD AND MET YOUR NEEDS?

OUR SERVICE WAS PERFORMED WITHOUT DELAY?

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?

ARE YOU SATISFIED WITH OUR SERVICE? YES NO

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL **5159.40**

TOTAL **5346.53**

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

SWIFT OPERATOR **Marye Watson** APPROVAL **Pym Daniels**

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE PAGE NO.

10-21-2021 1

CUSTOMER: **Arrowhead Expl., LLC** WELL NO.: **35-1** LEASE: **WIT** JOB TYPE: **8 5/8" SURFACE** TICKET NO.: **33951**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL/GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1330							ON LOCATION
								TD - 224 SETC 223
								TP - 224 8 5/8 #/FT - 23
								15' CEMENT LEFT IN CASING
	1420							BREAK CIRCULATION
	1435	4 1/2	41		✓		150	MAX CEMENT - 170 SKS STANDARD, 2% GEL, 3% CEC
	1443	6	0		✓		250	DISPLACE CEMENT
	1445		13 1/2				150	CEMENT DISPLACED - SHUT IN
								CIRCULATED 20 SKS CEMENT TO PET
								WASH TRUCK
	1530							JOB COMPLETE
								THANK YOU
								WAYNE, AUSTIN, ISAAC, SHAWN