KOLAR Document ID: 1315546

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 # 33335
Name: IA Operating, Inc.
Address 1: 9915 W. 21ST STREET, SUITE B
Address 2:
City: WICHITA State: KS Zip: 67205 + __ __ __ __
Contact Person: Jonathan Allen
Phone: (316) 721-0036
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Jeff Lawler
Purchaser: CHS

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 #:

07/07/2016 Spud Date or Recompletion Date
07/13/2016 Date Reached TD
08/18/2016 Completion Date or Recompletion Date

API No.: 15-065-24118-00-00
Spot Description:
N2 - SE - SE - NE Sec. 18 Twp. 6 S. R. 25 ☐ East ☑ West
1992 Feet from ☑ North / ☐ South Line of Section
330 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: Graham
Lease Name: SPRING CREEK Well #: 18-1
Field Name:
Producing Formation: Lansing
Elevation: Ground: 2575 Kelly Bushing: 2583
Total Vertical Depth: 3903 Plug Back Total Depth: 3848
Amount of Surface Pipe Set and Cemented at: 307 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 2158 Feet
If Alternate II completion, cement circulated from: 2158
feet depth to: 0 w/ 125 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 18000 ppm Fluid volume: 700 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: 09/06/2016
☑ **Confidential Release Date:** 09/06/2018
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** Karen Ritter **Date:** 09/12/2016

Operator Name: IA Operating, Inc. Lease Name: SPRING CREEK Well #: 18-1

Sec. 18 Twp. 6 S. R. 25 ☐ East ☑ West County: Graham

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 *(Attach Additional Sheets)*	☑ Yes	☐ No
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
Anhydrite	2167	+416
Topeka	3472	-889
Heebner	3628	-1045
Lansing	3667	-1084
BKC	3852	-1269

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
Surface	1.25	8.625	23	307	Common	180	2% Gel, 3% CC
Production	8.875	5.5	15.5	3898	EA2	125	EA2 1/4#/sx floseal

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:
08/18/2016	☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	30	0	0		33

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL: Top	Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	3821-25	

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:
	2.875	3834	

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

Form	ACO1 - Well Completion
Operator	IA Operating, Inc.
Well Name	SPRING CREEK 18-1
Doc ID	1315546

All Electric Logs Run

Sonic
Dual Induction
Compensated Density Neutron
Micro

Form	ACO1 - Well Completion
Operator	IA Operating, Inc.
Well Name	SPRING CREEK 18-1
Doc ID	1315546

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3821-25	500 Gal 15% MCA	3821-25

Form	ACO1 - Well Completion
Operator	IA Operating, Inc.
Well Name	SPRING CREEK 18-1
Doc ID	1315546

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	1.25	8.625	23	307	Common	180	2% Gel, 3% CC
Production	8.875	5.5	15.5	3898	EA2	125	EA2 1/4#/sx floseal

DIAMOND TESTING, LLC

TESTER : TIM VENTERS
CELL # 620-388-6333

General Information

Company Name	IA OPERATING, INC.		
Contact	JONATHAN ALLEN	Job Number	T541
Well Name	SPRING CREEK #18-1	Representative	TIM VENTERS
Unique Well ID	DST #1, LKC "B-F", 3680-3742	Well Operator	IA OPERATING, INC.
Surface Location	SEC 18-6-25, GRAHAM CO. KS.	Report Date	2016/07/11
Well License Number		Prepared By	TIM VENTERS
Field	WILDCAT		
Well Type	Vertical		

Test Information

Test Type	CONVENTIONAL		
Formation	DST #1, LKC "B-F", 3680-3742		
Well Fluid Type	01 Oil		
Test Purpose	Initial Test		
Start Test Date	2016/07/11	Start Test Time	15:51:00
Final Test Date	2016/07/12	Final Test Time	03:08:00
Gauge Name	5504		

Test Results

RECOVERED: 780' GAS IN PIPE
650' GO, 6% GAS, 94% OIL, GRAVITY: 36
680' G,SMCO, 4% GAS, 91% OIL, 5% MUD
310' G,W&VHVCO, 8% GAS, 39% OIL, 16% WATER, 37% MUD
310' G,SO&MCW, 4% GAS, 19% OIL, 65% WATER, 12% MUD
1950' TOTAL FLUID

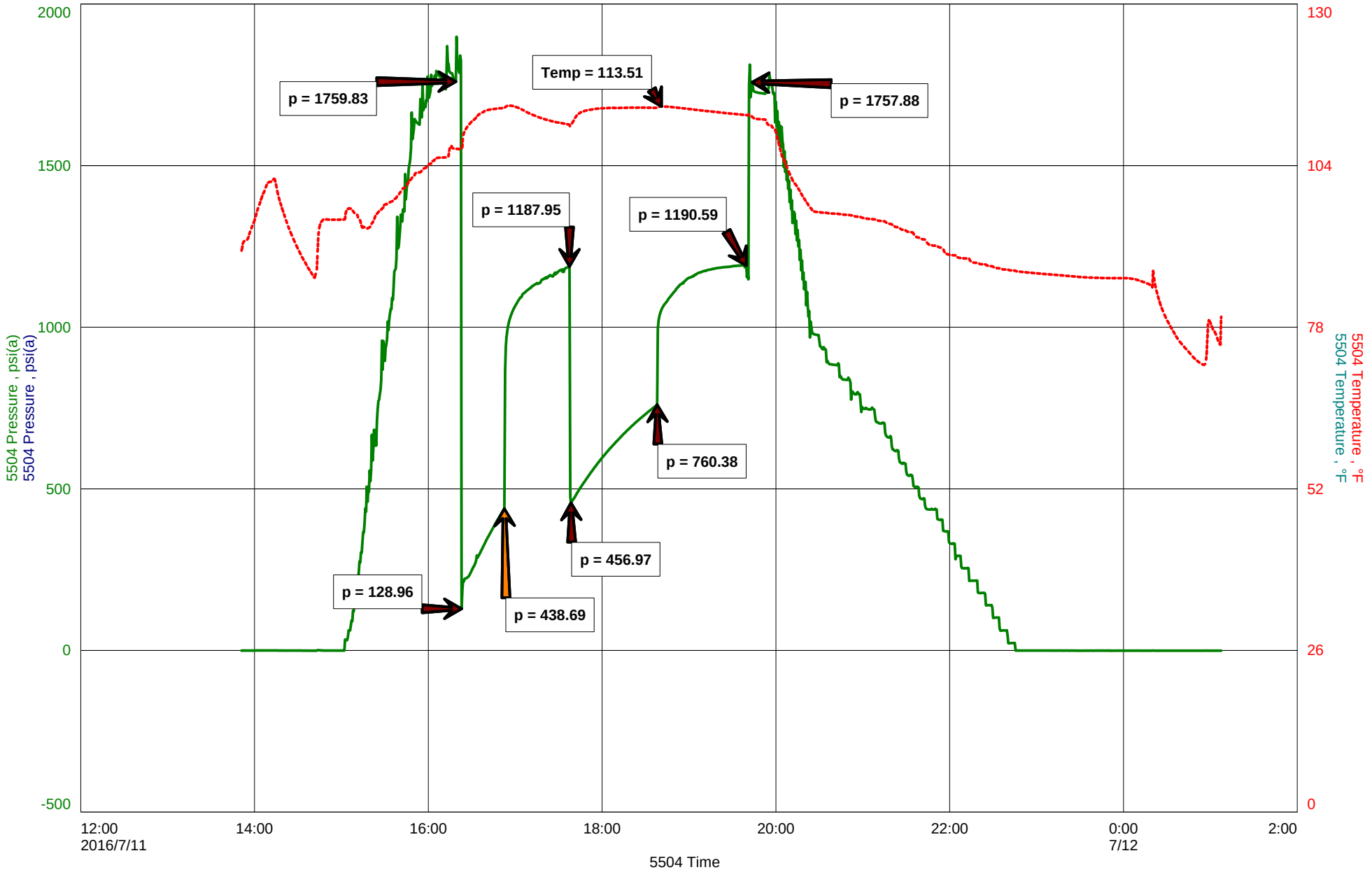
TOOL SAMPLE: 4% GAS, 94% OIL, 1% WATER, 1% MUD

CHLORIDES: 43,000 ppm
PH: 7.5
RW: .25 @ 55 deg.

IA OPERATING, INC.
DST #1, LKC "B-F", 3680-3742
Start Test Date: 2016/07/11
Final Test Date: 2016/07/12

SPRING CREEK #18-1
Formation: DST #1, LKC "B-F", 3680-3742
Pool: WILDCAT
Job Number: T541

SPRING CREEK #18-1



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: SPRINGCREEK18-1DST1

TIME ON: 15:51 7-11-16
TIME OFF: 03:08 7-12-16

Company IA OPERATING, INC. Lease & Well No. SPRING CREEK #18-1

Contractor DISCOVERY DRILLING CO., INC. RIG #2 Charge to IA OPERATING, INC.

Elevation 2583 KB Formation LKC "B-F" Effective Pay _____ Ft. Ticket No. T541

Date 7-11-16 Sec. 18 Twp. 6 S Range 25 W County GRAHAM State KANSAS

Test Approved By JEFF LAWLER Diamond Representative TIM VENTERS

Formation Test No. 1 Interval Tested from 3680 ft. to 3742 ft. Total Depth 3742 ft.

Packer Depth 3675 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Packer Depth 3680 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3668 ft. Recorder Number 5504 Cap. 5,000 P.S.I.

Bottom Recorder Depth (Outside) 3739 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type CHEMICAL Viscosity 48 Drill Collar Length 0 ft. I.D. 2 1/4 in.

Weight 9.0 Water Loss 6.0 cc. Weight Pipe Length 311 ft. I.D. 2 7/8 in

Chlorides 1,000 P.P.M. Drill Pipe Length 3343 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 26 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 31 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 31' DP IN ANCHOR Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: GOOD 2 INCH BLOW, BUILDING, REACHING BOB 2 MIN. (BOB BB)

2nd Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 6 1/2 MIN. (NO BB)

Recovered 780 ft. of GIP

Recovered 650 ft. of GO, 6% GAS, 94% OIL, GRAVITY: 36

Recovered 680 ft. of G,SMCO, 4% GAS, 91% OIL, 5% MUD

Recovered 310 ft. of G,W&VHMCO, 8% GAS, 39% OIL, 16% WATER, 37% MUD

Recovered 310 ft. of G,SO&MCW, 4% GAS, 19% OIL, 65% WATER, 12% MUD

Recovered 1950 ft. of TOTAL FLUID CHLORIDES: 43,000 ppm

Remarks: PH: 7.5

RW: .25 @ 55 deg.

TOOL SAMPLE: 4% GAS, 94% OIL, 1% WATER, 1% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 6:22 PM A.M. P.M. Time Started Off Bottom 9:37 PM A.M. P.M. Maximum Temperature 114 deg.

Initial Hydrostatic Pressure..... (A) 1760 P.S.I.

Initial Flow Period..... Minutes 30 (B) 129 P.S.I. to (C) 439 P.S.I.

Initial Closed In Period..... Minutes 45 (D) 1188 P.S.I.

Final Flow Period..... Minutes 60 (E) 457 P.S.I. to (F) 760 P.S.I.

Final Closed In Period..... Minutes 60 (G) 1191 P.S.I.

Final Hydrostatic Pressure..... (H) 1756 P.S.I.

DIAMOND TESTING, LLC

TESTER : TIM VENTERS
CELL # 620-388-6333

General Information

Company Name	IA OPERATING, INC.		
Contact	JONATHAN ALLEN	Job Number	T542
Well Name	SPRING CREEK #18-1	Representative	TIM VENTERS
Unique Well ID	DST #2, LKC "H-J", 3766-3822	Well Operator	IA OPERATING, INC.
Surface Location	SEC 18-6S-25W, GRAHAM CO. KS.	Report Date	2016/07/12
Well License Number		Prepared By	TIM VENTERS
Field	WILDCAT		
Well Type	Vertical		

Test Information

Test Type	CONVENTIONAL		
Formation	DST #2, LKC "H-J", 3766-3822		
Well Fluid Type	01 Oil		
Test Purpose	Initial Test		
Start Test Date	2016/07/12	Start Test Time	14:58:00
Final Test Date	2016/07/12	Final Test Time	23:18:00
Gauge Name	5504		

Test Results

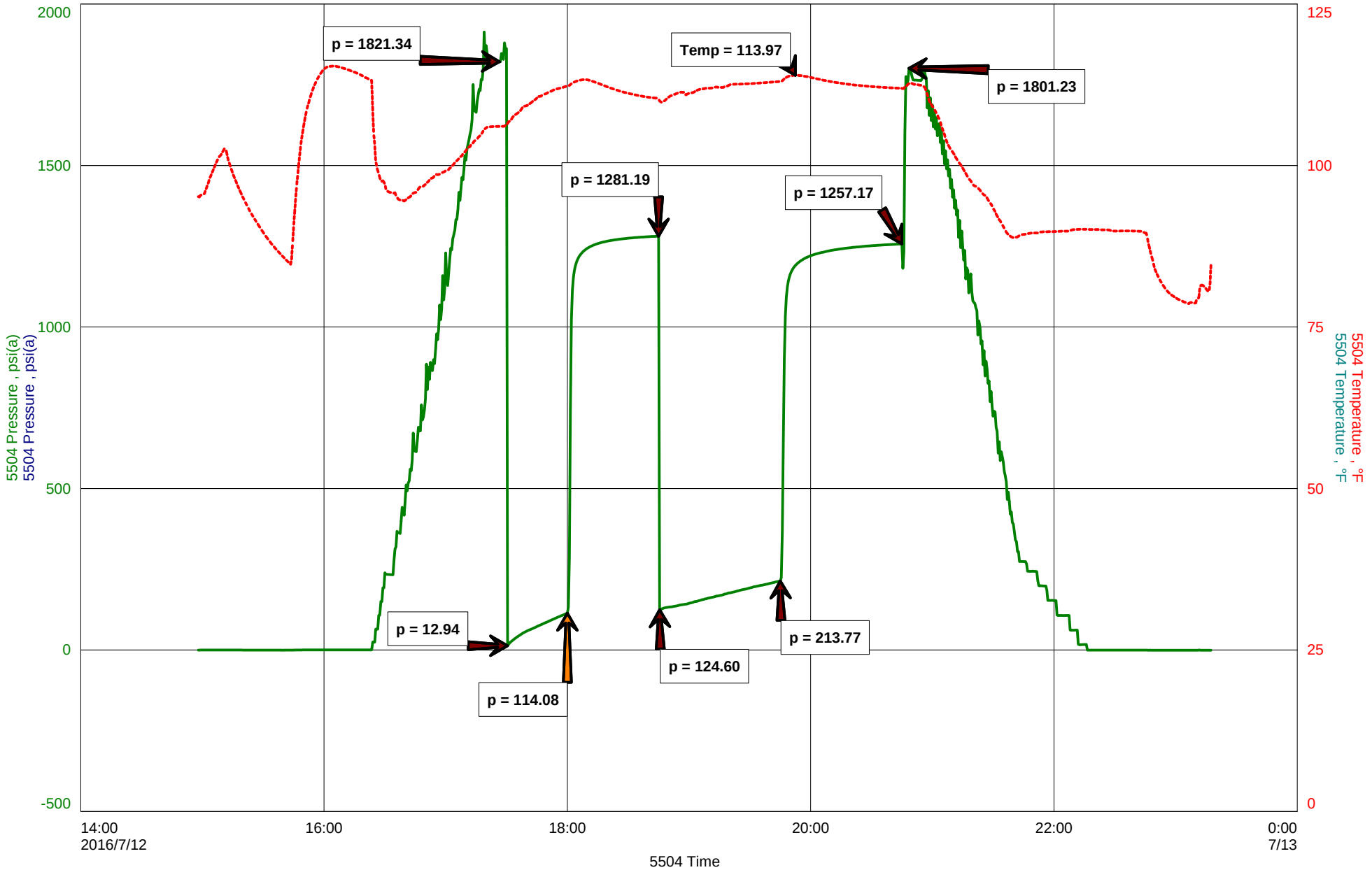
RECOVERED: 765' GAS IN PIPE
355' GO, 2% GAS, 98% OIL, GRAVITY: 35
185' G,HMCO, 18% GAS, 50% OIL, 32% MUD
540' TOTAL FLUID

TOOL SAMPLE: 91% OIL, 9% MUD

IA OPERATING, INC.
DST #2, LKC "H-J", 3766-3822
Start Test Date: 2016/07/12
Final Test Date: 2016/07/12

SPRING CREEK #18-1
Formation: DST #2, LKC "H-J", 3766-3822
Pool: WILDCAT
Job Number: T542

SPRING CREEK #18-1



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: SPRINGCREEK18-1DST2

TIME ON: 14:58
TIME OFF: 23:18

Company IA OPERATING, INC. Lease & Well No. SPRING CREEK #18-1

Contractor DISCOVERY DRILLING CO., INC. RIG #2 Charge to IA OPERATING, INC.

Elevation 2583 KB Formation LKC "H-J" Effective Pay _____ Ft. Ticket No. T542

Date 7-12-16 Sec. 18 Twp. 6 S Range 25 W County GRAHAM State KANSAS

Test Approved By JEFF LAWLER Diamond Representative TIM VENTERS

Formation Test No. 2 Interval Tested from 3766 ft. to 3822 ft. Total Depth 3822 ft.

Packer Depth 3761 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Packer Depth 3766 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3754 ft. Recorder Number 5504 Cap. 5,000 P.S.I.

Bottom Recorder Depth (Outside) 3819 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type CHEMICAL Viscosity 53 Drill Collar Length 0 ft. I.D. 2 1/4 in.

Weight 8.9 Water Loss 8.0 cc. Weight Pipe Length 311 ft. I.D. 2 7/8 in

Chlorides 900 P.P.M. Drill Pipe Length 3429 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 26 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 24 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 32' DP IN ANCHOR Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING, REACHING BOB 10 MIN. (WS BB)

2nd Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 13 1/2 MIN. (3" BB)

Recovered 765 ft. of GIP

Recovered 355 ft. of GO, 2% GAS, 98% OIL, GRAVITY: 35

Recovered 185 ft. of G,HMCO, 18% GAS, 50% OIL, 32% MUD

Recovered 540 ft. of TOTAL FLUID

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Remarks: _____

TOOL SAMPLE: 91% OIL, 9% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 5:30 PM A.M. P.M. Time Started Off Bottom 8:45 PM A.M. P.M. Maximum Temperature 114 deg.

Initial Hydrostatic Pressure..... (A) 1821 P.S.I.

Initial Flow Period..... Minutes 30 (B) 13 P.S.I. to (C) 114 P.S.I.

Initial Closed In Period..... Minutes 45 (D) 1281 P.S.I.

Final Flow Period..... Minutes 60 (E) 125 P.S.I. to (F) 214 P.S.I.

Final Closed In Period..... Minutes 60 (G) 1257 P.S.I.

Final Hydrostatic Pressure..... (H) 1801 P.S.I.

Scale 1:240 Imperial

Well Name:	SPRING CREEK #18-1		
Surface Location:	N2 SE SE NE SEC. 18 - 6S - 25W		
Bottom Location:			
API:	15-065-24118		
License Number:	33335		
Spud Date:	7/7/2016	Time:	4:30 PM
Region:	GRAHAM COUNTY KANSAS		
Drilling Completed:	7/13/2016	Time:	7:49 AM
Surface Coordinates:	1992' FNL & 330' FEL		
Bottom Hole Coordinates:			
Ground Elevation:	2575.00ft		
K.B. Elevation:	2583.00ft		
Logged Interval:	3300.00ft	To:	3900.00ft
Total Depth:	3900.00ft		
Formation:	LANSING - KANSAS CITY		
Drilling Fluid Type:	FRESH WATER / CHEMICAL GEL		

OPERATOR

Company:	IA OPERATING, INC.		
Address:	9915 W 21ST ST SUITE B WICHITA, KS 67205		
Contact Geologist:	JON ALLEN		
Contact Phone Nbr:	(316) 721-0036		
Well Name:	SPRING CREEK #18-1		
Location:	N2 SE SE NE SEC. 18 - 6S - 25W		
API:	15-065-24118		
Pool:		Field:	WILDCAT
State:	KANSAS	Country:	USA

SURFACE CO-ORDINATES

Well Type:	Vertical
Longitude:	-100.1446823
Latitude:	39.5324787
N/S Co-ord:	1992' FNL
E/W Co-ord:	330' FEL

LOGGED BY

BIG CREEK CONSULTING

Company:	BIG CREEK CONSULTING, INC.		
Address:	1909 MAPLE ELLIS, KS 67637		
Phone Nbr:	(785) 259-3737		
Logged By:	GEOLOGIST	Name:	JEFF LAWLER

CONTRACTOR

Contractor:	DISCOVERY DRILLING		
Rig #:	2		
Rig Type:	MUD ROTARY		
Spud Date:	7/7/2016	Time:	4:30 PM
TD Date:	7/13/2016	Time:	7:49 AM
Rig Release:		Time:	

ELEVATIONS

K.B. Elevation: 2583.00ft
K.B. to Ground: 8.00ft
Ground Elevation: 2575.00ft

NOTES

WELL COMPARISON SHEET

	SPRING CREEK 18-1				¤ EMPIRE DRILLING MUIR #1 NW NW NW 18-6-25						• COBALT ENERGY, LLS SD UNIT 'A' #1-19 SW NW SW SE 19-6-25						• BLUERIDGE PETRO. CORP. SHOEN TRUST #2-22 SE NW NW NW 22-6-25						P&A 6-02 N-B COMPANY KLIEN #1 NW SE SE 19-6-25					
	KB	2583	GL	2575	KB	2553					KB	2602					KB	2591					KB	2595				
	LOG TOPS		SAMPLE TOPS		COMP. CARD		LOG		SMPL.		LOGS		LOG		SMPL.		LOGS		LOG		SMPL.		COMP. CARD		LOG		SMPL.	
FORMATION	DEPTH	DATUM	DEPTH	DATUM	DEPTH	DATUM	CORR.		CORR.		DEPTH	DATUM	CORR.		CORR.		DEPTH	DATUM	CORR.		CORR.		DEPTH	DATUM	CORR.		CORR.	
ANHYDRITE TOP	2167	416	2167	416	2085	468			-	52	2170	432			-	16	2177	414			+	2	2165	430			-	14
BASE	2199	384	2202	381							2202	400			-	19	2209	382	+	2	-	1	2198	397	-	13	-	16
TOPEKA	3472	-889	3477	-894	3449	-896	+	7	+	2	3478	-876	-	13	-	18	3462	-871	-	18	-	23	3484	-889	+	0	-	5
HEEBNER SHALE	3628	-1045	3629	-1046	3614	-1061	+	16	+	15	3633	-1031	-	14	-	15	3667	-1076	+	31	+	30	3639	-1044	-	1	-	2
TORONTO	3650	-1067	3652	-1069	3638	-1085	+	18	+	16	3656	-1054	-	13	-	15	3691	-1100	+	33	+	31						
LKC	3667	-1084	3670	-1087	3656	-1103	+	19	+	16	3672	-1070	-	14	-	17	3706	-1115	+	31	+	28	3675	-1080	-	4	-	7
BKC	3852	-1269	3853	-1270	3840	-1287	+	18	+	17	3862	-1260	-	9	-	10	3893	-1302	+	33	+	32	3867	-1272	+	3	+	2
CONGLOMERATE					4043	-1490																						
ARBUCKLE					4069	-1516																						
TOTAL DEPTH	3903	-1320	3900	-1317	4119	-1566	+	246	+	249	3925	-1323	+	3	+	6	3975	-1384	+	64	+	67	3910	-1315	-	5	-	2

DST #1 LKC B - F 3680' 0 3742'

DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: SPRINGCREEK18-1DST1

TIME ON: 15:51 7-11-16
TIME OFF: 03:08 7-12-16

Company IA OPERATING, INC. Lease & Well No. SPRING CREEK #18-1

Contractor DISCOVERY DRILLING CO., INC. RIG #2 Charge to IA OPERATING, INC.

Elevation 2583 KB Formation LKC "B-F" Effective Pay Ft. Ticket No. T541

Date 7-11-16 Sec. 18 Twp. 6 S Range 25 W County GRAHAM State KANSAS

Test Approved By JEFF LAWLER Diamond Representative TIM VENTERS

Formation Test No. 1 Interval Tested from 3680 ft. to 3742 ft. Total Depth 3742 ft.

Packer Depth 3675 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.

Packer Depth 3680 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3668 ft. Recorder Number 5504 Cap. 5,000 P.S.I.

Bottom Recorder Depth (Outside) 3739 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 48 Drill Collar Length 0 ft. I.D. 2 1/4 in.

Weight 9.0 Water Loss 6.0 cc. Weight Pipe Length 311 ft. I.D. 2 7/8 in

Chlorides 1,000 P.P.M. Drill Pipe Length 3343 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 26 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 31 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 31' DP IN ANCHOR Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: GOOD 2 INCH BLOW, BUILDING, REACHING BOB 2 MIN. (BOB BB)

2nd Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 6 1/2 MIN. (NO BB)

Recovered 780 ft. of GIP

Recovered 650 ft. of GO, 6% GAS, 94% OIL, GRAVITY: 36

Recovered 680 ft. of G,SMCO, 4% GAS, 91% OIL, 5% MUD

Recovered 310 ft. of G,W&VHMCO, 8% GAS, 39% OIL, 16% WATER, 37% MUD

Recovered 310 ft. of G,SO&MCW, 4% GAS, 19% OIL, 65% WATER, 12% MUD

Price Job

Recovered 1950 ft. of TOTAL FLUID	CHLORIDES: 43,000 ppm	Other Charges
Remarks:	PH: 7.5	Insurance
	RW: .25 @ 55 deg.	
TOOL SAMPLE: 4% GAS, 94% OIL, 1% WATER, 1% MUD		Total

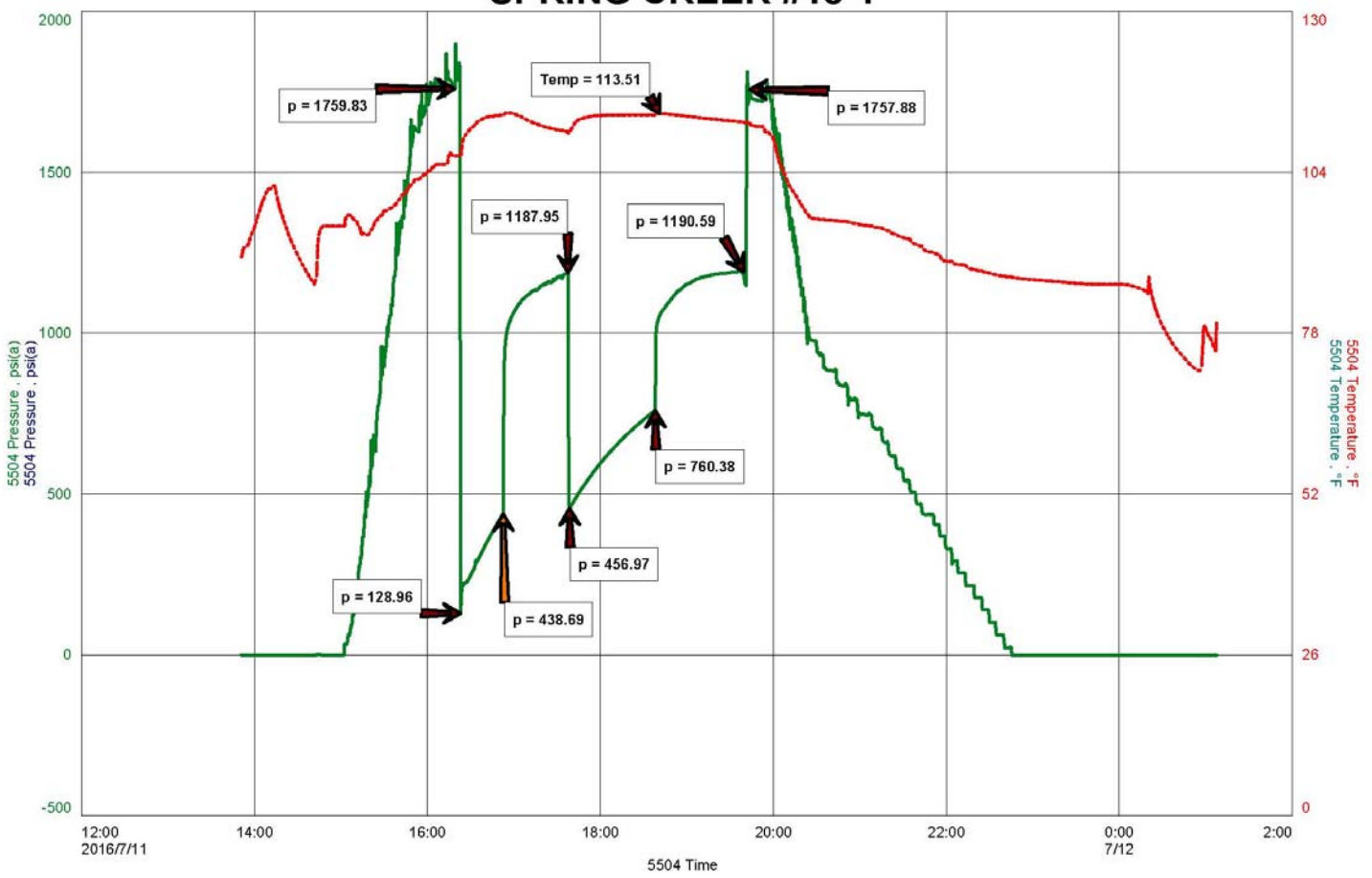
Time Set Packer(s) 6:22 PM A.M. P.M. Time Started Off Bottom 9:37 PM A.M. P.M. Maximum Temperature 114 deg.

Initial Hydrostatic Pressure			(A)	1760	P.S.I.	
Initial Flow Period	Minutes 30	(B)	129	P.S.I. to (C)	439	P.S.I.
Initial Closed In Period	Minutes 45	(D)	1188	P.S.I.		
Final Flow Period	Minutes 60	(E)	457	P.S.I. to (F)	760	P.S.I.
Final Closed In Period	Minutes 60	(G)	1191	P.S.I.		
Final Hydrostatic Pressure		(H)	1756	P.S.I.		

DST #1 CHART

IA OPERATING, INC.
DST #1, LKC "B-F", 3680-3742
Start Test Date: 2016/07/11
Final Test Date: 2016/07/12

SPRING CREEK #18-1
Formation: DST #1, LKC "B-F", 3680-3742
Pool: WILDCAT
Job Number: T541



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DST #2 LKC H-J 3766' - 3822'

DIAMOND TESTING

P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

TIME ON: 14:58

TIME OFF: 23:18

DRILL-STEM TEST TICKET

FILE: SPRINGCREEK18-1DST2

Company IA OPERATING, INC. Lease & Well No. SPRING CREEK #18-1

Contractor DISCOVERY DRILLING CO., INC. RIG #2 Charge to IA OPERATING, INC.

Elevation 2583 KB Formation LKC "H-J" Effective Pay Ft. Ticket No. T542

Date 7-12-16 Sec. 18 Twp. 6 S Range 25 W County GRAHAM State KANSAS

Test Approved By JEFF LAWLER Diamond Representative TIM VENTERS

Formation Test No. 2 Interval Tested from 3766 ft. to 3822 ft. Total Depth 3822 ft.

Packer Depth 3761 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.

Packer Depth 3766 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3754 ft. Recorder Number 5504 Cap. 5,000 P.S.I.

Bottom Recorder Depth (Outside) 3819 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 53 Drill Collar Length 0 ft. I.D. 2 1/4 in.

Weight 8.9 Water Loss 8.0 cc. Weight Pipe Length 311 ft. I.D. 2 7/8 in

Chlorides 900 P.P.M. Drill Pipe Length 3429 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number 4 Test Tool Length 26 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 24 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 32' DP IN ANCHOR Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING, REACHING BOB 10 MIN. (WS BB)

2nd Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 13 1/2 MIN. (3" BB)

Recovered 765 ft. of GIP

Recovered 355 ft. of GO, 2% GAS, 98% OIL, GRAVITY: 35

Recovered 185 ft. of G,HMCO, 18% GAS, 50% OIL, 32% MUD

Recovered 540 ft. of TOTAL FLUID

Recovered ft. of

Recovered ft. of

Remarks:

TOOL SAMPLE: 91% OIL, 9% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 5:30 PM A.M. P.M. Time Started Off Bottom 8:45 PM A.M. P.M. Maximum Temperature 114 deg.

Initial Hydrostatic Pressure ..... (A) 1821 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 13 P.S.I. to (C) 114 P.S.I.

Initial Closed In Period ..... Minutes 45 (D) 1281 P.S.I.

Final Flow Period ..... Minutes 60 (E) 125 P.S.I. to (F) 214 P.S.I.

Final Closed In Period ..... Minutes 60 (G) 1257 P.S.I.

Final Hydrostatic Pressure ..... (H) 1801 P.S.I.

DST #2 CHART

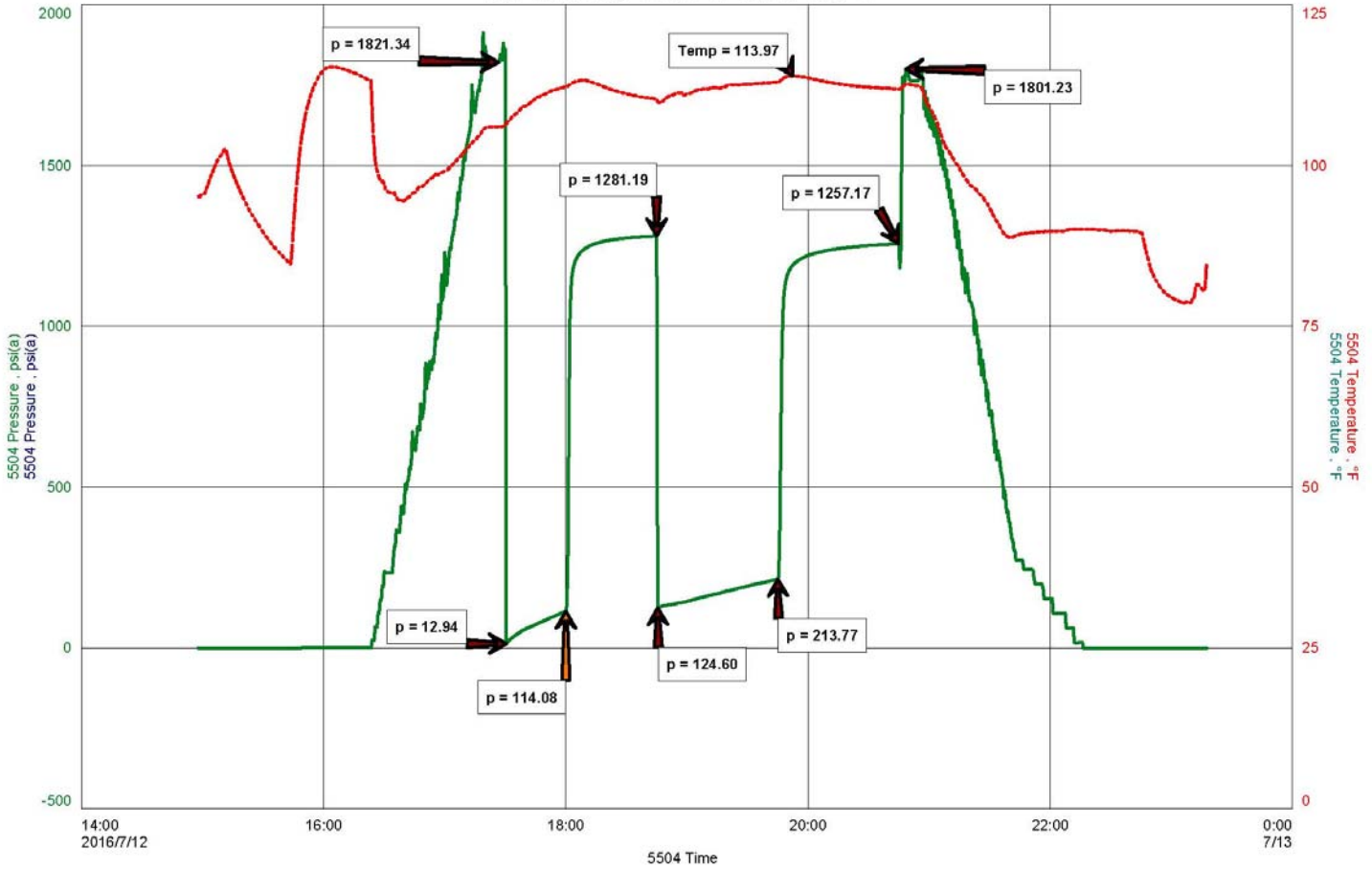
IA OPERATING, INC.
DST #2, LKC "H-J", 3766-3822

SPRING CREEK #18-1
Formation: DST #2, LKC "H-J", 3766-3822

Start Test Date: 2016/07/12
Final Test Date: 2016/07/12

SPRING CREEK #18-1

Pool: WILDCAT
Job Number: T542



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ROCK TYPES

Cht
shale, gry

Carbon Sh
shale, red

Arg/Shale

ACCESSORIES

STRINGER
Sandstone

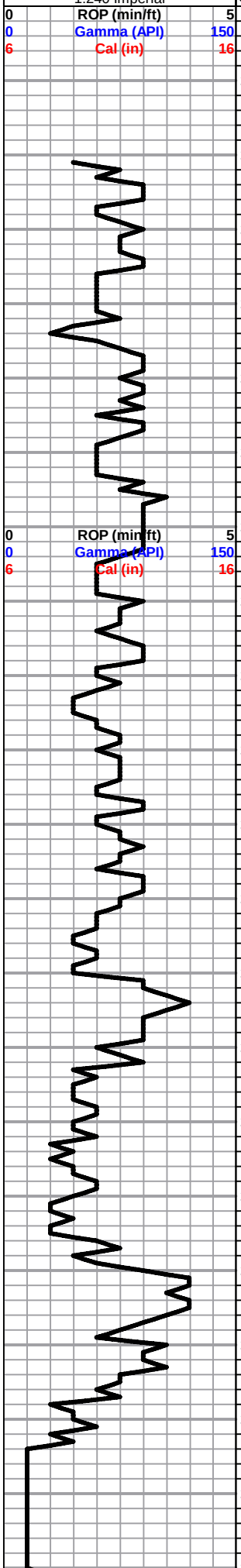
OTHER SYMBOLS

MISC
- Daily Report
- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt

DST
- DST Int
- DST alt

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)

Curve Track #1 ROP (min/ft) Gamma (API) Cal (in)	Depth | Intervals Interval Interval	DST	Lithology	Oil Show	Geological Descriptions	Curve Track #3



Cored Inter
DST Interva

1:240 Imperial

1' DRILL TIME THROUGH ANHYDRITE
1' DRILL TIME FROM 3350' - RTD
10' WET/DRY SAMPLES FROM 3420' - RTD

GEOLOGICAL SUPERVISION BY JEFF LAWLER

8 5/8" SURFACE PIPE SET @ 307'

ANHYDRITE TOP 2167' (+416) E-LOG 2167' (+416)
ANHYDRITE BASE 2202' (+381) E-LOG 2199' (+384)

Lm- Cream Buff, VFXLN, dense, well cemented, mostly tight w/ poor vis. porosity, few pcs sl chalky in part

Lm- Cream Off White, VF-FXLN, fsl, some arenaceous in part, loosely cemented w/ sctrd interXLN porosity, clean & barren, Sh- Gray Maroon, dense & waxy
Lm- A/A w/ tan mostly tight oolitic w/ clear cementation, min. vis. porosity, several pcs of granular & sl oolitic w/ mod. well inter oolite porosity, some chalky in part

Sh- Mint Green Maroon, dense & waxy, soft & earthy

Lm- Lt Pink Cream & Yellow, dense, well cemented w/ dense reXLN, oolitic w/ sctrd XLN porosity & secondary clear reXLN porosity, barren

Lm- Off White, VF-FXLN, dense, well cemented, mostly oolitic w/ sctrd XLN porosity, clean & barren, some soft white chalk

Lm- A/A w/ several pcs of salmon/white cherty oolitic Ls w/ min. vis. porosity, few pcs of clear, sub-rounded loosely cemented consolidated & well sorted Ss. w/ consistent porosity, barren
Lm- Cream Off White, FXLN, massive, oolitic, loosely cemented, sctrd XLN porosity, barren

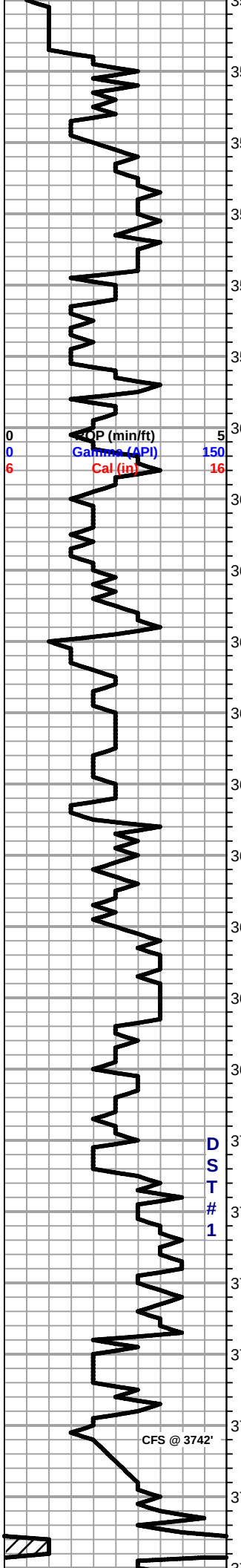
Sh- Black Gray Green Maroon, soft, earthy, dense & waxy

TOPEKA 3477' (-894) E-LOG 3472' (-889)

Lm- Cream Off White, FXLN, dense, oolitic, mod. dev. w/ dense XLN porosity, barren

Lm- Cream Buff, VF-FXLN, dense, well cemented, sl fsl, poor vis. porosity, earthy

Sh- Black Gray Maroon, carbonaceous, gritty & earthy



Ss- Frosted Tan, Vf Grn, dense, mod. well cemented, consolidated & well sorted, sub-rounded, barren

Sh- Maroon, gritty & earthy Ss- Brown/Maroon, Fn Grn, loosely cemented

Lm- Cream Tan, FXLN, fsl, mod. dev. w/ dense XLN porosity & clear replacement porosity, barren, soft white chalk

Sh- Black Maroon Green, carbonaceous, gritty & earthy, waxy

Lm- Cream Off White, FXLN, oolitic, mod. well dev. w/ sctrd XLN & fn ppt porosity, clear replacement cementation

Lm- Cream Buff, VF-FXLN, dense, well cemented & mostly tight w/ sctrd XLN porosity, barren

Lm- Cream Off White, VF-FXLN, densely packed small oolites, poorly dev. w/ clear replacement cementation, massive, sctrd XLN porosity, barren

Lm/Chert- Translucent Gray, CryptoXLN, porcelain like chert/cherty Ls w/o vis. porosity/matrix

HEEBNER 3629' (-1046) E-LOG 3628' (-1045) Sh- Black Maroon Green, fissile & carbonaceous, gritty & earthy

SHORT TRIP SURVEY 1 1/4 dgr

DST #1 LKC B-F
3680' - 3742'
30-45-60-60

1950' TF
780' GIP
650' GO
(6%G, 94%O)
GRAVITY: 36 API

680' GSMCO
(4%G, 91%O, 5%M)

310' GW&HMCO
(8%G, 39%O, 16% W, 37%M)

310' GSO&MCW
(4%G, 19%O, 65% W, 12%M)

IFP: 129-439#
FFP: 457-760#
SIP: 1188-1191#

TORONTO 3652' (-1069) E-LOG 3650' (-1067) Lm- Buff Cream, FXLN, dense, well cemented, poorly dev. w/ sctrd XLN porosity, barren, much soft white chalk

Sh- Maroon Green, gritty & earthy, waxy & dense

LKC 3670' (-1087) E-LOG 3678' (-1084) Lm- Off White, VF-FXLN, mostly dense & tight, some fsl & sl oolitic, poorly dev. w/ sctrd XLN porosity, vry clean & barren

Lm- Cream Off White, VF-FXLN, dense, poorly dev. & mostly tight w/ sctrd XLN porosity

Sh- Maroon Gray, gritty & earthy

Lm- Cream Off White, FXLN, fsl & oolitic, mod. well dev. w/ sctrd inter oolite ppt porosity, SCTRD DRK - SUB SAT. STN, TR FO, WK-FR ODR

C.jpg

Lm- Cream Off White, FXLN, fsl, well cemented, sctrd inter fsl ppt porosity, reXLN w/in porosity, SCTRD LT STN, NSFO, WK ODR

D.jpg

Lm- Cream Buff, VF-FXLN, dense, well cemented & mostly tight w/ poor vis. porosity, barren

Sh- Marron argillaceous clumps

Lm- Tan Cream, F-MEDXLN, well dev. & oolitic w/ mostly consistent ppt inter oolite porosity, few w/ sctrd reXLN w/in porosity, SCTRD LT-DRK STN, TR FO UPON CRUSH, WK-FR ODR, SL INCREASED IN 40 min. SAMPLE

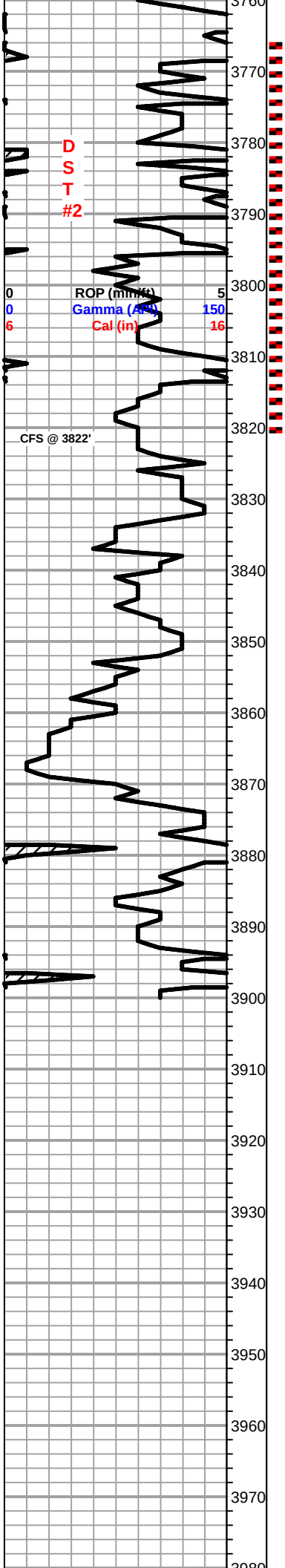
F.jpg

****AUTO DRILLER PROBLEMS / DRILL TIME ERRACT****

DST #2 LKC H-J
3786' - 3822'
30-45-60-60

765' GIP
540' TOTAL FLUID

Lm/Chert- Bone White Milky Gray, fresh bedded vitreous chert & loosely cemented chalky Ls w/ poor vis. porosity, all vry clean & barren



Lm- Tan Buff Gray, VF-FXLN, dense, well cemented, sl fsl, tight w/ sctrd XLN porosity

Sh- Black Maroon Gray Green, fissile & carbonaceous, gritty & earthy, argillaceous clumps

Lm/Dolo-Tan, VF-FXLN, dense, well cemented, micro pyrite inclusions, sctrd dev. & ppt porosity, some w/ reXLN veins, DRK STN, GD SHW GSY FO UPON CRUSH, FR ODR, dense well cemented dolomite w/ consistent XLN porosity, barren

Lm/Chert- Cream Off White, VF-FXLN, dense, well cemented, mostly tight w/ poor vis. porosity, fresh bedded vitreous chert

Sh- Gray Maroon, gritty & earthy, gummy argillaceous clumps

Lm- Cream Tan, F-MEDXLN, mix of sctrd dev. oolitic Ls w/ sctrd ppt & XLN porosity, SCTRD DRK STN, TR FO & dense, poorly dev. cream Ls w/ sctrd XLN porosity, BLK RESIDUAL TARRY STN, NSFO, ALL W/ FR

3822' 40 min.- Lm- Cream, well dev. oolitic w/ consistent ppt inter oolite porosity, SCTRD DRK STN, FR SFO UPON CRUSH, FR ODR

Lm- Off White, VF-FXLN, sl fsl, dense, poorly dev. w/ sctrd XLN porosity, barren

Sh- Maroon Gray, dense & waxy, gritty & earthy

Lm- Cream Off White, VF-FXLN, poorly dev. mix of well cemented w/ sctrd XLN porosity & loosely cemented & chalky w/ min. vis. porosity, vry clean & barren

BKC 3953' (-1270) E-LOG 3852' (-1269) Sh- Maroon Gray, gritty & earthy, dense & waxy, some pebbley

Sh/Ss- Sh A/A, Ss- Lt Green, Vf Grn, consolidated & mod. cemented, sub-rounded to rounded, consistent intergranular porosity, barren, some argillaceous clumps of maroon shale

Lm- Cream Buff Tan, VF-FXLN, dense, well cemented, mostly tight w/ min. vis. to sctrd XLN porosity, some w/ glauconite inclusions, barren

Sh- Maroon Gray Green, gritty & earthy, dense & waxy

Sh- A/A w/ argillaceous clumps

RTD 3900' (-1317) LTD 3903' (-1320) @ 06:49 7/13/2016

355' CLN OIL (2%G, 98%O)
185' GSY HMCO (18%G, 50%O, 32%M)

IFP: 13-114#
FFP: 125-214#
SIP: 1281-1257#

H.jpg

J.jpg

J_2.jpg

3980

3990

C.jpg

C X 25

D.jpg


A003 1280x1024 2016/07/11 09:38:09 Unit: mm Magnification: 96.9 x 1
0.5 mm

D X 35

F.jpg


A005 1280x1024 2016/07/11 11:07:44 Unit: mm Magnification: 77.5 x 1
0.5 mm

F X 20

H.jpg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H X 25

J.jpg


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0.5 mm
J X 20

J_2.jpg


A008 1280x1024 2016/07/12 13:39:22 Unit: mm Magnification: 96.9 x 1
0.5 mm
J x 20

JOB LOG

SWIFT Services, Inc.

DATE 7-1-16 PAGE NO.

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Ext Operating	18-1	Spring Creek	Shallow Surface	39542

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								On location
								8 5/8 Csg.
								RTD 307
	1015							Start Running Csg
	1055							Break Circ on Bottom
	1110	4	5					Pump wtr Spacer
	1115	4	0					Start Cmt - 180 sks Standard
		4	44					End Cmt - 2% gel 3% CC
	1125	4	0					Start Disp
		4	13					Circ Cmt to pit
	1130	4	15.5					End Disp.
								* Circulated 30 sks cmt to pit
								Thanks ! David, Jon, & Isaac

JOB LOG — SWIFT Services, Inc.

DATE: 18 Jul 16 | PAGE NO.: 1

CUSTOMER: L.A. Operating | WELL NO.: 18-1 | LEASE: Spring Creek | JOB TYPE: cement long string | TICKET NO.: 29325

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								175 sk EA-2 cement w/ ¼# Flocele
								5½ x 15.5# casing 93 joints 3890 total pipe
								shoe jt 42.17' Port collar 45 2158'
								Centralizers 1, 4, 7, 10, 13, 44, 46 Basket #45
								TD = 3900
	2000							on loc TPK 114
14 Jul	0003							start 5½ x 15.5# casing in well
	0150							Drop ball - circulate
	0230	4	12				250	Pump 500 gal mud flush
		4	20				250	Pump 20 bbl KCL flush
			11					Plug RH - MH 30 sk - 20 sk
	0245	4½	29				250	mix EA-2 cement 125 sk @ 15.3 ppg
								Drop latch down plug
								Wash out pump & line
	0308	6					250	Displace plug
		3½	84				650	
	0330		92				1500	Land plug
								Release pressure to truck - dried up
	0340							wash truck
								Rack up
	0400							Job complete
								Thanks
								Blain, Flint & crew

JOB LOG — **SWIFT Services, Inc.** — DATE 7-18-16 — PAGE NO.

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
E.A. Operating	18-1	Spring Creek	Port Collar	29549

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	1100							On Location w/ Port collar tool
								5 1/2 x @ 7/8
								Port Collar - 2157'
	145					1200		test p.c.
	150							Open P.C.
		4.5	0			300		Start Cmt @ 11.2 ppg
		4.5	105			600		Circ Cmt
		4.5	105			600		Raise Cmt Weight to 14.5 ppg
	215	4.5	110			600		End Cmt & Disp - 200 SKS SMD
						1200		Close P.C. and test - Closed
								Run 3 Joints
	230	4	30					Rev out
								Thanks
								David, Austin & Isaac