KOLAR Document ID: 1310890

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 #	API No.:					
Name:	Spot Description:					
Address 1:						
Address 2:	Feet from North / South Line of Section					
City: State: Zip:+	Feet from					
Contact Person:	Footages Calculated from Nearest Outside Section Corner:					
Phone: ()	□NE □NW □SE □SW					
CONTRACTOR: License #	GPS Location: Lat:, Long:					
Name:	(e.g. xx.xxxxx) (e.gxxx.xxxxx)					
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84					
Purchaser:	County:					
Designate Type of Completion:	Lease Name: Well #:					
New Well Re-Entry Workover	Field Name:					
□ Oil □ WSW □ SWD	Producing Formation:					
Gas DH EOR	Elevation: Ground: Kelly Bushing:					
	Total Vertical Depth: Plug Back Total Depth:					
CM (Coal Bed Methane)	Amount of Surface Pipe Set and Cemented at: Feet					
Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used? ☐ Yes ☐ No					
If Workover/Re-entry: Old Well Info as follows:	If yes, show depth set: Feet					
Operator:	If Alternate II completion, cement circulated from:					
Well Name:	feet depth to:w/sx cmt.					
Original Comp. Date: Original Total Depth:						
□ Deepening       □ Re-perf.       □ Conv. to EOR       □ Conv. to SWD         □ Plug Back       □ Liner       □ Conv. to GSW       □ Conv. to Producer	Drilling Fluid Management Plan (Data must be collected from the Reserve Pit)					
	Chloride content: ppm Fluid volume: bbls					
Commingled Permit #:	Dewatering method used:					
Dual Completion Permit #:						
SWD Permit #:	Location of fluid disposal if hauled offsite:					
EOR Permit #:	Operator Name:					
GSW Permit #:	Lease Name: License #:					
	Quarter Sec TwpS. R					
Spud Date or Date Reached TD Completion Date or Recompletion Date Recompletion Date	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 Approved by: Date:

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### Page Two

Operator Name:					Lease Nam	ne:			Well #:	
Sec Tw	pS. F	R [	East	West	County:					
open and closed and flow rates if	, flowing and sh gas to surface t ty Log, Final Lo	nut-in pressurest, along wit	es, whe h final c ain Geo	ther shut-in pre hart(s). Attach physical Data a	essure reached extra sheet if r and Final Electr	station more : ric Loc	level, hydrosta space is needed	tic pressures, d.	bottom hole tempe	val tested, time tool erature, fluid recovery,  Digital electronic log
Drill Stem Tests (Attach Addit			Ye	es No		Log Formation (Top), De		n (Top), Deptl	n and Datum	Sample
Samples Sent to	Geological Sur	vey	Ye	es 🗌 No		Name	)		Тор	Datum
Cores Taken Electric Log Run Geologist Repor List All E. Logs F	t / Mud Logs		Y€  Y€	es No						
			Repo		RECORD [	Nev	w Used rmediate, producti	on. etc.		
Purpose of St		ze Hole Orilled	Siz	e Casing (In O.D.)	Weight Lbs. / Ft.		Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
				ADDITIONAL	OF MENTING /					
Purpose:	[	Depth	Typo		# Sacks Use		EEZE RECORD	Typo a	ad Parcent Additives	
Perforate Protect Ca Plug Back	Top	Bottom	туре	Type of Cement # Sacks			Type and Percent Additives			
Plug Off Z										
Did you perform     Does the volum     Was the hydraul	e of the total base	fluid of the hyd	draulic fra	cturing treatmen		•	Yes ns? Yes	No (If No	, skip questions 2 an , skip question 3) , fill out Page Three o	,
Date of first Produ	ction/Injection or	Resumed Produ	uction/	Producing Meth			Coolift 0	thor (Fundain)		
Estimated Produc	otion	Oil Bb	le.	Flowing Gas	Pumping  Mcf	Wate		ther <i>(Explain)</i> bls.	Gas-Oil Ratio	Gravity
Per 24 Hours		Oli Bb	15.	Gas	IVICI	vvale	ı Di	JIS.	Gas-Oil Hallo	Gravity
DISPO	OSITION OF GAS	S:		N	METHOD OF CO	MPLE.	TION:		PRODUCTIO	N INTERVAL:
Vented	Sold Use	d on Lease		Open Hole		Dually		nmingled	Тор	Bottom
(If vente	ed, Submit ACO-18	.)			(5	SUDITIIL I	ACO-5) (Subi	mit ACO-4)		
Shots Per Foot	Perforation Top	Perforation Bottom	on	Bridge Plug Type	Bridge Plug Set At		Acid,		Cementing Squeeze Kind of Material Used)	Record
TUBING RECOR	D: Size:		Set At:		Packer At:					

Form	ACO1 - Well Completion
Operator	White Exploration, Inc.
Well Name	Arnold 2
Doc ID	1310890

## All Electric Logs Run

Compensated Density Neutron Log
Dual Induction Log
Micro Log
Sonic Log

Form	ACO1 - Well Completion
Operator	White Exploration, Inc.
Well Name	Arnold 2
Doc ID	1310890

### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
Surface	12.25	8.625	24	1726	See attached	795	See attached
Production	7.875	5.5	15.5	5649	See attached	615	See attached

Attached to and Made a Part of ACO-1 Form for WHITE EXPLORATION, Inc. ARNOLD #2 1285' FSL and 2240' FEL Section 6-29S-40W Stanton County, Kansas API# 15-187-21326-00-00

### Surface Casing Cement

Cemented with 595 sacks 65/35 Cement with 6% gel and 3% CC and ½#/sack Pheno-seal. Followed by 200 sacks of Common Cement with 2% CC and ½#/sack of Pheno-seal.

### **Production Casing Cement**

Cemented bottom stage with 60 sacks of H-Con Cement with 3% CC, and ¼# Pheno Seal/sack and 200 sacks of H-Long Cement with 10% salt, 5# Kol-Seal/sack, .25% Defoamer and .6% Fluid Loss additive.

Cemented thru DV Tool @ 3226' with 315 sacks of H-Con Cement with 3% CC, and ¼# Pheno-Seal/sack, Followed by 100 sacks of Common Cement with 2% CC and ¼# Pheno-Seal/sack. Cement circulated to Surface. Plug Mouse Hole with 20 sacks and Rat Hole with 30 sacks of Common Cement with 2 % CC and ¼# Pheno-Seal/sack.

### Acid/Frac Record

Acidized with 2400 gallons of 7-1/2% MCA acid

Fracked with 19,000# of 16/30 Sand, 6,000# of 16/30 Resin Coated Sand and 26,700 gallons of gelled water.

Treater:



## **HURRICANE SERVICES INC**

Customer	White Explor	ation Inc.		Date;	4/30/2016	SO#:	1286	
	Terry Baird			Dato,				
Address:								
City, State:								
County, Zip:								
County, Zip:								
Field	d Order No.:	100	637	Open Hole:			Perf Depths (ft)	Perfs
	Well Name:	Arno	ld #2	Casing Depth:	1729.84			
	Location:	John	nson	Casing Size:	8 5/8			
	Formation:			Tubing Depth:				
Туре	of Service:	Sur	face	Tubing Size:				
	Well Type:		)il	Liner Depth:				
	Age of Well:	No.	ew	Liner Size:				
	acker Type:			Liner Top:		_		
	cker Depth:			Liner Bottom: Total Depth:	1726'			
i re	eatment Via:	Ca:	sing	totai beptii.	1720	L	Total Perfs	0
878Ka28KBM646	INJECTIO	N RATE	PRESSI	URE Caracter and a second and a	Barta dan janggan sanggan	the control of the control	PROP HCL	FLUID
TIME	FLUID	N2/CO2	STP	ANNULUS	REMARKS		(lbs) (gls)	(bbls)
1:00 AM				Called Out				
7:30 PM				Trucks on locati	on			
					eting Spot & Set up Trucks			
		· • · · · · · · · · · · · · · · · · · ·			3 24# Casing =1729'.84			
			<del>  </del>		juide Shoe on bottom AFU Insert	n Collar		
					Centralizers on Jt's 1-21-31 Cement Baskets on Jt's 21-31			
9:00 PM				Start Casing	50117(321-0)			
10:20 PM					om Drop Ball Break Circulation W	Rig		
10.20 F (8)				Circulate 1 Hou				
11:22 PM	5.0		50.0	Start Pumping 1				10.00
11:24 PM	5.0		75,0	Start Mix 595 sx	65/35 6% Gel 3% C.C 1/4#/sx Phe	no-Seal		210.00
	5.0		100.0	Start Mix 200 sx	Common 2% C.C. 1/4#/sx Pheno-	seal		43,45
12:40 AM				Shut Down Rele	ase 8 5/8 Top Rubber Plug			
12:45 AM	1.0		100,0	Start Displacem	ent W/H20			
	5.0		350.0	75 Out Circulate	Cement to Pit			75.00
1:07 AM			900.0	Plud Landed				109.00
1:10 AM			<u>.</u>	Release Psi & H		TOTAL -		470.46
						TOTAL:	-	472,45
		SUM	MARY		PRODUCTS USED			*
	Max Fl. Rate	Avg Fl. Rate	Max PSI	Avg PSI				
	5,0	3.7	900.0	235.7				
								l
		<del></del>						

Customer:



	INJECTIO	ON RATE	PRES	SURE		PROP (lbs)	HCL (gls)	FLUID (bbls)
TIME	FLUID	N2/CO2	STP	ANNULUS	REMARKS	Process (IDS)	(gis)	(cols)
				******	Cement in Collar Lot Set			-
					Cement Still in Cellar			***
1:45 AM					Rack up trock			·
2:00 AM				,	Off Location			
					Thank You			
					Please Call Again			
		!						
					Todd Tom Bill Ron Danny Jesus			
8:00 AM					Callod Out 5-1-2016			
9:00 AM		· · · · · · · · · · · · · · · · · · ·			On Location With Trucks Hold Safety Meeting			
					Spot & Sot up trucks			
	2.0		75.0		Mix 120 sx Common			25.00
	Z.O		, 0,0		Coment in Cellar			
					Wash up Truck & Rack Up Truck		·····	
10:00 AM					Off Location			<u> </u>
					Thank You	ļ		
				,	Tom Bill Danny			
								***************************************
· · · · · · · · · · · · · · · · · · ·								
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(	1	.1.	1		1			



### **HURRICANE SERVICES INC**

Customera	White Explor	ation Inc.			Date:		SON	1	1286	
Representative:	Terry Baird				] '	***************************************	-			
Address:					1					
City, State:					1					
County, Zip:					1					
				<del></del>	!			<del></del>		
Fiel	d Order No.:	100	639		Open Hole:		]	Perf De	pths (ft)	Perfs
	Well Name:	Amo	ld #2	C	asing Depth:	5649*				
	Location:	Joh	nson		Casing Size:	5 1/2 15.5#	_			
_	Formation:			T	ubing Depth:		4			
Тур	e of Service:		ngstring		Tubing Size:		4			
	Well Type: Age of Well:		oil ew		Liner Depth: Liner Size:	<del>V </del>	-			····
	acker Type:	130	CAA		Liner Top:		7			
	cker Depth:			L	iner Bottom:		1			
	eatment Via:	Cas	sing		Total Depth:	5651'				
	,				'		<b>,</b>		Total Perfs	0
TIME	INJECTIO FLUID	N RATE N2/CO2	PRES STP	SURE ANNULUS		REMARKS		PROP (lbs)	HCL (gls)	FLUID (bbis)
11:30 PM					Called Out	I/SWAII/10	en komen andre andre en	September 1		
9:45 AM		, , , , , , , , , , , , , , , , , , , ,			On location W F	E & Pump Truck				
					Rig Laying Dow	n				
					Run 135 Jt's 5 1	/2 Casing 15,5# =5649'				
				***************************************	Shoe Jt=20'.99 F	Float Shoe & LD Baffle				
		***********				Jt's 2-3-4-5-6-7-9-12-15-18-23-30				
		<del></del>				on Jt's 2-59 Scrathers Jt's 5-6-	<u> </u>			**************************************
2:40 DM					DV Tool Jt 58=3					<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>
2:40 PM 2:48 PM	1		700.0		Casing on Botto	Circulation W/Rig 1 Hour	· · · · · · · · · · · · · · · · · · ·			
4;48 PM		•	100.0		Start Pumping F					6.00
	3.5				Start Pumping N					12.00
	3.5		250.0		Start Pumping h					6.00
	5.0		250.0		Start Mix & Pum	p Lead 60 Sx H-Con @ 12.1 #/G	al			26.61
	5.0		250.0	<del></del>	Start Mix & Pum	p Tail 200 Sx H-Long @ 15#/Gal		ļ		51.29
5:28 PM					1	r Pump & Lines Release LD Plug	3	-		10.00
12:00 AM			100.0		Start Displacem	ent 2% KCL		1		2.00
	7.0		900.0		Lift Psi		TOTAL:			100.00 738.17
							IVIAL		<u> </u>	730.17
			MARY			PRODUCTS USED				
	Max FI, Rate 7.0	Avg Fl, Rate 3.8	Max PSI 2,000.0	Avg PSI 643.8	7					
			, -,		-					
										<del> </del>
Treater:								Customer:		



#### FLUID (bbis) INJECTION RATE PRESSURE (lbs) ANNULUS (gls) REMARKS TIME FLUID N2/CO2 STP. Slow Rate 3.0 136.50 1,800.0 Land Plug Release & Held 6:03 PM 3.0 Drop open Tool Load Closing plug 6:07 PM Open DV Tool W Pump Truck 2,000.0 6:21 PM 15.00 450.0 Pump H20 5.0 Shut Down Hook up to Rig Pump Circulate 1.5 Hour 10.00 100.0 Start Pumping H20 7:50 PM 4.0 139,69 200.0 Start Mix & Pump 315 Sx H-Con@ 12.1#/Gal 7:55 PM 3.5 24.58 Start Mix & Pump 100 Sx Comm0n @14,8 #Gal 10.00 Shut Down Clear Pump & Lines 8:40 FM 5.0 100.0 Start Displacement H20 8:40 PM 31,00 Lift Psi 300,0 8:42 PM 4.0 70.00 3.0 800.0 Slow Rate 78.50 2,000.0 Land plug 3.0 9:02 PM Release & Held 9:07 PM 5.00 Plug Rat Hole 9:15 PM 4.00 Plug Mouse Hole Wash Up Truck & Rack Up Truck Off Location 10:15 PM Thank You Please Call Again Todd Bill Jr Tom Ben Circulate Cement to Pit =35 sx H-Con H-Con 3% CC 1/4#/Sx Pheno-Seal =375 Sx Total H-Long 10%Salt 5%Cal-Set 5#/Sx Koseal .25% Defoamer .6% Fluid Loss =200 Sx Total Common 2% CC 1/4 #/Sx phono-soal =100 Sx Total Rat & Mouse Hole Common 2% CC 1/4 #/Sx Pheno-seal

Activity provided on this page is calculated in the summary and totals on page 1



# Scale 1:240 (5"=100') Imperial Measured Depth Log

Well Name: Arnold #2 Location: 6-29S-40W

License Number: API: 15-187-21326 Region: Stanton Co., KS

Spud Date: 04/28/16 Drilling Completed: 05/05/16

Surface Coordinates: 1285' FSL, 2240' FEL

**Bottom Hole** 

Coordinates:

Ground Elevation (ft): 3314 K.B. Elevation (ft): 3325 Logged Interval (ft): 4200 To: 5650 Total Depth (ft): 5650

Formation: Mississippian Type of Drilling Fluid: Chemical

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### **OPERATOR**

Company: White Exploration, Inc. Address: 1635 N. Waterfront Pkwy.

St. 100

Wichita, KS 67206

### **GEOLOGIST**

Name: Andrew White

Company: White Exploration, Inc.

Address:

### Remarks

Due to log evaluation, production casing will be run on the Arnold #2. During logging, a bridge was encountered at 5631.

### General Info

**Drilling Contractor: Murfin Rig 21** 

Logs: CJ Cased Hole Solutions

Compensated Density/Neutron, Dual, Micro, Sonic

Drilling Mud: Mudco/Service Mud, Inc.

**DST: None Taken** 

Surveys: 673'-.75, 1034'-.75, 2268' .25, 3062'-.5, 3660' .25, 4196'-.5, 4666'-.5, 5650'-.75

### **Daily Status**

4/28/16: Spud Well @ 5:30 P.M. 4/29/16: Drilling ahead @673'

4/30/16: Drilling Surface hole @1330', set 41 jts 8-5/8" 24# Casing @ 1726', 595 sacks 65/35 w/ 6% gel and

3%CC and 1/4# sack Pheno-seal, 200 sacks common w/ 2%CC and 1/4# sack Pheno-seal

5/1/16: top off with 125 sacks Common Cement

5/2/16: Drilling ahead @ 2542' 5/3/16: Drilling ahead @ 3846' 5/4/16: Drilling ahead @ 4774' 5/5/16: Drilling ahead @ 5592'

5/6/16: Laying down drill pipe to run production casing, Set 5-1/2" 15.5# Production Casing @ 5649' and

Cemented with 260 sacks of cement, DV tool @ 3226', cemented with 415 sacks of cement

	3	White Ex	WI	nite		
	4	Arnold #2	Arno	Arnold #1		
		6-29S-40W	13	6-299	5-41W	
	128	5' FSL, 2240	490'FSL,	1515' FEL		
	KB:3325	KB:3325				
	Sample	Log	Datum	Relati	onship	
Heebner		3685	-360	+	11	
Lansing		3754	-429	+	32	
Cherokee	4546	4535	-1210	+	15	
Morrow	5028	5010	-1685	+	14	
LMM	5330	5334	-2009	+	10	
Miss	5530	5526	-2201	+.	35	

Berexco
RA 1-6
6-29S-40W
800' FSL, 2975' FEL
KB: 3330
Relationship
+9
+8
+4
+6
+5
+26















