

Confidentiality Requested:

Yes No

### Kansas Corporation Commission Oil & Gas Conservation Division

1093141

Form ACO-1
August 2013
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. 15
Name:	Spot Description:
Address 1:	SecTwpS. R 🔲 East 🗌 West
Address 2:	Feet from North / South Line of Section
City: State: Zip:+	Feet from East / West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	□NE □NW □SE □SW
CONTRACTOR: License #	GPS Location: Lat:, Long:
Name:	(e.g. xx.xxxxxx) (e.gxxx.xxxxxx)
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84
Purchaser:	County:
Designate Type of Completion:	Lease Name: Well #:
New Well Re-Entry Workover	Field Name:
☐ Oil       ☐ WSW       ☐ SHOW         ☐ Gas       ☐ D&A       ☐ ENHR       ☐ SIGW         ☐ OG       ☐ GSW       ☐ Temp. Abd.         ☐ CM (Coal Bed Methane)       ☐ Cathodic       ☐ Other (Core, Expl., etc.):         ☐ If Workover/Re-entry: Old Well Info as follows:         Operator:	Producing Formation:  Elevation: Ground: Kelly Bushing: Feet  Total Vertical Depth: Plug Back Total Depth: Feet  Multiple Stage Cementing Collar Used? Yes No  If yes, show depth set: Feet  If Alternate II completion, cement circulated from: sx cmt.
Original Comp. Date: Original Total Depth:  Deepening Re-perf. Conv. to ENHR Conv. to SWD  Plug Back Conv. to GSW Conv. to Producer	Drilling Fluid Management Plan (Data must be collected from the Reserve Pit)
Commingled         Permit #:	Chloride content: ppm Fluid volume: bbls  Dewatering method used:  Location of fluid disposal if hauled offsite:  Operator Name:
GSW Permit #:	Lease Name:
Spud Date or Date Reached TD Completion Date or 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
Geologist Report Received
UIC Distribution
ALT I II III Approved by: Date:

Page Two



Operator Name:			Lease Name:			Well #:	
Sec Twp	S. R	East West	County:				
open and closed, flow	ring and shut-in pressu	ormations penetrated. D res, whether shut-in pre ith final chart(s). Attach	ssure reached stati	c level, hydrosta	tic pressures, bott		
		tain Geophysical Data a r newer AND an image f		gs must be ema	iled to kcc-well-lo	gs@kcc.ks.gov	v. Digital electronic log
Drill Stem Tests Taker (Attach Additional		Yes No			on (Top), Depth an		Sample
Samples Sent to Geo	logical Survey	☐ Yes ☐ No	Nam	9		Тор	Datum
Cores Taken Electric Log Run		Yes No					
List All E. Logs Run:							
		CASING Report all strings set-c	RECORD Ne conductor, surface, inte		ion, 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 / SQU	EEZE RECORD			
Purpose: Perforate	Depth Top Bottom	Type of Cement	# Sacks Used		Type and P	ercent Additives	
Protect Casing Plug Back TD							
Plug Off Zone							
	ulic fracturing treatment or otal base fluid of the hydra	n this well? aulic fracturing treatment ex	ceed 350.000 gallons	Yes ?      Yes		p questions 2 an p question 3)	d 3)
	· ·	submitted to the chemical of	_	Yes		out Page Three	of the ACO-1)
Shoto Par Foot	PERFORATIO	N RECORD - Bridge Plug	s Set/Type	Acid, Fra	cture, Shot, Cement	Squeeze Record	i
Shots Per Foot	Specify Fo	ootage of Each Interval Perf	orated	(AI	mount and Kind of Ma	terial Used)	Depth
TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run:			
					Yes No		
Date of First, Resumed	Production, SWD or ENH	R. Producing Meth		Gas Lift C	Other (Explain)		
Estimated Production Per 24 Hours	Oil B		Mcf Wate			as-Oil Ratio	Gravity
DISPOSITIO	ON OF GAS:	N.	METHOD OF COMPLE	TION:		PRODUCTIO	ON INTERVAL:
Vented Sold		Open Hole	Perf. Dually	Comp. Cor	nmingled		
	bmit ACO-18.)	Other (Specify)	(Submit A	ACO-5) (Sub	mit ACO-4)		



CITY, STATE, ZIP CODE

ENERGY

TICKET

		_		
			(	
	1	٥		
	1	٥		
		J		
(	2	1		
(				

Services, Inc.		CITY, STATE, ZIP CODE				PAGE OF
SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE		STATE	CITY	DATE OWNER
1. NESS (3)4 KS		BEESLEY BI-H GOVE		N	GOVE KS	5 July 12
2.	TICKET TYPE CONTRACTOR	OR 1	RIG NAME/NO.	SHIPPED	SHIPPED DELIVERED TO	ORDER NO.
٥	SALES 250	BSALES DISCOUGRY DRILLING RIGE!		AIA		
	WELL TYPE	WELL CATEGORY	JOB PURPOSE /		WELL PERMIT NO.	WELL LOCATION .
4.	010	DEVELOPMENT	45 LONGSTRING			TRUS, EN HUTO
REFERRAL LOCATION	INVOICE INSTRUCTIONS					

5461 17	PAGE TOTAL		ERFORMED )WN? AND	OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? WE UNDERSTOOD AND MET YOUR NEEDS?	REMIT PAYMENT TO:	include,	eof which	the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.	the terms and cor but are not limite
00 -5 CP0 1		EE DECIDED ACREE	SURVEY AGREE	SUR		grees to	les and a	LEGAL TERMS: Customer hereby acknowledges and agrees to	LEGAL TERMS:
_									
5000 S	30/2/C	_	(प्रिक्र)	74.	ROTATING HEAD RESTAL				6117
37/18	Q) (18)		2		LIQUID KCL				221
12519	1 25		SCOME		MUD FLUSH				283
300 00	EN 0208		169.	OFILL	INSERT FLOAT SHOE W/AUTO FILL				407
225	225		169	F	LATCH DOWN PLUG & BAFFLE				400
50 CAHE	2400) 00	2527 Fr	1 6A :		PORT CIDLLAR				404
20 CSLA	2500		3 24		CEMENT BASKETS				403
455 00	65700		764		CENTRALIZERS				402
1500 m	1500 pg	4509/5	1408		Pump CHARGE				578
4208	0000		70 mil		MILEAGE # 110				575
AMOUNT	PRICE	QTY. UM	QTY. U/M		DESCRIPTION	ACCT DF	Loc	PART NUMBER	REFERENCE
						ACCOUNTING	AC	SECONDARY REFERENCE/	PRICE

**LIMITED WARRANTY** provisions. but are not limited to, PAYMENT, RELEASE, INDEMNITY, and

START OF WORK OR DELIVERY OF GOODS MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO

TIME SIGNED PAN

DATE SIGNED

SWIFT OPERATOR

APPROVAL

SWIFT SERVICES, INC.

OUR SERVICE WAS

NESS CITY, KS 67560 P.O. BOX 466

PERFORMED WITHOUT DELAY?

785-798-2300 ARE YOU SATISFIED WITH OUR SERVICE? WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?

☐ CUSTOMER DID NOT WISH TO RESPOND ONO General Solution TOTAL 13,126/09 739 92

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

Thank You!

Federal Tax I.D.# 20-2886107 5408 Home Office P.O. Box 32 Russell, KS 67665 Phone 785-483-2025 Cell 785-324-1041 On Location Finish County State Sec. Range Twp. Date Location Well No Lease ENERGY Contractor Owner LISTANO To Quality Oilwell Cementing, Inc. Type Job You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. T.D. Hole Size Charge To Depth Csg Depth Tbg. Size Street Depth State City Tool Shoe Joint The above was done to satisfaction and supervision of owner agent or contractor. Cement Left in Csg Cement Amount Ordered 40 Displace Meas Line EQUIPMENT Cementer Pumptrk Common Helper Driver Poz. Mix Driver Driver Gel. Driver JOB SERVICES & REMARKS Calcium Hulis Remarks: Salt Rat Hole Flowseal Mouse Hole Centralizers Kol-Seal Mud CLR 48 Baskets CFL-117 or CD110 CAF 38 D/V or Port Collar 315 TESTED TO 1,000 LBS Sand 2520 TESTED TO 1000 BS Handling Mileage FLOAT EQUIPMENT TURNED HOLE CIPCULATED DI Guide Shoe OUT TESTED DUE Centralizer US to SOEFCOLLAR 24 Baskets TOOL TO 1.000 #5

Centralizers

Baskets

Mud CLR 48

CFL-117 or CD110 CAF 38

PLUD @ 3375 TESTED TO 1,000 85

Sand

PLUD @ 3375 TESTED TO 1,000 85

Sand

Mileage

TURNED HOLE CITICULATED TO 100 BHANDING 400

Mileage

FLOAT EQUIPMENT

OUT TESTED PLUS TO 1,000 BHANDING Guide Shoe

Up to prescoular of 1,000 BHANDIS TESTED CENTRALIZER

EDO TO 1,000 BHANDIS TESTED CONTROL BASKETS

ATTOM MITTER STORT FOR TO 1,000 BHANDIS Float Shoe

CLOSED AND TESTED FOR TO 1,000 BHANDIS Float Shoe

Latch Down

DUT.

Pumptrk Charge Port Collect

Mileage 38

TAX

Discount

Total Charge

# QUALITY DILWELL CEMENTING, INC. Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Cell 785-324-1041 Home Office P.O. Box 32 Russell, KS 67665 No. 979

Oeli 703-324-1041	Ip emolecti ber	rielldelap na	ed sarl filoss en	idustatine II baravili	si erasibueriorena ru	no is randariakan
Sec.	Twp. Ran	ige	County	State	On Location	Finish
Date 6-25-12 12	14 2	9 6	are,	Homsas,	SS, "CUSTOMER" a	6:48m
Lease Scesley	Well No. A-	Loc	ation 8	Tene SES	Evila	genor ent gruonsa ores to eav und
Contractor Discovery	Tilling /	Rel	Owner	to lower the rate o	utomatically reformed	sontract shall be a
Type Job Serface	a conco			oilwell Cementing, Inc	c. cementing equipmen	t and furnish
Hole Size 124	T.D. 22	20	cementer an		ner or contractor to d	
Csg. 8\$ 23/3	Depth 22	0	Charge To	ustane E	Mod Corp	- ATTORNE
Tbg. Size	Depth		Street		seed a long to a	easonable sum a
Tool	Depth	Harte oping to	City	UO' ni bajail asibris	State	PRICESA
Cement Left in Csg. //)-/5	Shoe Joint	LALITY shall	The above wa	as done to satisfaction	and supervision of owne	agent or contractor
Meas Line	Displace 1	3 Bb	Cement Amo	ount Ordered 15	O Common	OMER.
EQUIP	MENT	iluoda bos a	3800	29/en/	TIDAUD COUNTY	DURYOT -
Pumptrk 5 No. Cementer Helper	teve	a od like tost	Common /	5 Out off, alia do	ent most so or seg at	uiling equipment
Bulktrk 12 No. Driver Driver	Not	AOTELIO bo	Poz. Mix	HEMOTE	d to and paid by CUS Iday cykposss: ⊬ •	TY, will be charge
Bulktrk No. Driver Driver	Polis	<del>отизті вас</del> г	Gel. 3	IER will pay QUALL	er meterial, CUSTON	al solution or other
JOB SERVICES	& REMARKS	this Contra	Calcium 5	otherwise specifie	L, CHARGES: Unles	- DEADHAU
Remarks:	nd property dame	lic flability ar	Hulls	ABILITIES: 1. QUAS	CONDITIONS AND L	- SERVICE
Rat Hole	not be liable for	isrie YTLAL	Salt	ions beyond QUALI	and unknown condit	o many unicertal
Mouse Hole of allue to amusto lie	bas yas teniags !	es, from and	Flowseal	Y, its officers, agen	old harmiess QUALI	ify, defend, and r
Centralizers	udani mawaa uua	and Antonional	Kol-Seal			
Baskets		Ac unforma	Mud CLR 48	g argury, aroxineaa, on 8	apod to to stradord o	(A) Damagen wner, and:
D/V or Port Collar	r loss, or damage	ell, reservoir	CFL-117 or	CD110 CAF 38	pollution, surface or a	(B) Oil spills
CONTROL WAY THE CONTROL OF CONTROL	Twee stages of the VI	LIAUO to es	Sand	to earlismoned a v	necken war QUAUL ce is caused by the r	ng out of or in our
when be coming or		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Handling /	158	ed to any of QUALP	2. With resp
(Oment Aid	1216/14	Joseph	Mileage	5.55 Till 1		total bas 33MC
volume and the second	Zen er er		( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	FLOAT EQUIPM	/ENT	SUBJECT THE CUE
stremes ni noltse issimada ozna	a nativision panalis	000 10 2	Guide Shoe	acosas ve miolais	s emuses for each	es. 3 OLIALITY
			Centralizer	ner fluids.	ination of water or offi	aused by contarn
TWINNIOW bits isners in it stories	o moti eeti ed ol has behivesa saas	II yo beftern	Baskets	ill merchandise man	QUALITY warrants a	VARRANTIES: 1.
am, merchanasa which is deter-	nak apiter style.	form for a	AFU Inserts	imponipe l'Inger qu	beticil visanicki zi v	nder this warran
BORDER AND THE BUILDING BORDER			Float Shoe			LIAUO yd benir
any detective melonandise shall	ed visit regard to	nd saly rame	Latch Down	reup aeogaug r	ARTICULAR USE O	TINESS FOR A
se lable for any consequents),	DUALITY shall not	O bas ,bebi	SNE	allowance for erect	placement thereof or	e the repair or re
1 2 /			JUNEA		thosily:	pociet, incidentel. 2. More spec
vina lo sh si to sany	e si dodina or i lea	allo fila	Pumptrk Cha	arge Surface	this contract that \$	i gnidtol/ (A)
1 hard	rectness of any fac	ITOO TO VOST	Mileage 3		Atlandise used com-	vonk done or mela (B) Nothing
- Willoam anotabnemmo	r research, or rec	s. analysis o	nain Information	,	at lo noitaterpretation of te	
JALITY or its employees in the ATLANCE on-	obnu eropilgen er	duct or gros e by OUALI	ie willful misc <del>on</del> (C) Work dan	ess is caused by the	Discount	Y, unless the in-
X Signature Cliff May	(10()	is an indepe				rol of the CUSTO
Signature (1)	uly				5	IN THE CUSTOME



Scale 1:240 Imperial

Well Name: BEESLEY A #1

NW NW SE SW 12 - 14S - 29W Surface Location:

**Bottom Location:** 

API: 15-063-22007-0000

License Number: 33922

> Spud Date: 6/25/2012 Time: 3:34 PM

Region: **GOVE** 

**Drilling Completed:** 7/4/2012 Time: 7:38 PM

Surface Coordinates: 1210' FSL & 1580' FWL

**Bottom Hole Coordinates:** 

**Ground Elevation:** 2689.00ft K.B. Elevation: 2697.00ft

Logged Interval: 220.00ft To: 4510.00ft

Total Depth: 4510.00ft

Formation:

Drilling Fluid Type: FRESH WATER/CHEMICAL GEL

**OPERATOR** 

Company: MUSTANG ENERGY CORPORATION

Address: P.O. BOX 1121

HAYS, KS 67601

Contact Geologist: **ROD BRIN** Contact Phone Nbr: (785) 628-3660

Well Name: BEESLEY A #1

NW NW SE SW 12 - 14S - 29W Location: API: 15-063-22007-0000

Pool:

Field: MABEL "L" NORTHWEST

State: **KANSAS** Country: USA

#### **SURFACE CO-ORDINATES**

Well Type: Vertical

Longitude: -100.4961725 Latitude: 38.8471317

N/S Co-ord: 1210' FSL E/W Co-ord: 1580' FWL

#### **LOGGED BY**



Company: SOLUTIONS CONSULTING

Address: 108 W 35TH

HAYS, KS 67601

Phone Nbr: (785) 259-3737

Logged By: Geologist Name: JEFF LAWLER

CONTRACTOR

Contractor: **DISCOVERY DRILLING** 

Dia #

ixiy #. Rig Type: **MUD ROTARY** 

Spud Date: 6/25/2012 Time: 3:34 PM TD Date: 7/4/2012 7:38 PM Time: 7/5/2012 Rig Release: Time: 4:00 PM

#### **ELEVATIONS**

K.B. Elevation: 2697.00ft Ground Elevation: 2689.00ft

K.B. to Ground: 8.00ft

#### **NOTES**

DUE TO STRUCTURAL POSITION AND DRILLSTEM TEST RESULTS 4 1/2" PRODUCTION CASING WAS RUN TO FURTHER TEST ZONES WITH PERFORATION.

#### RESPECTFULLY SUBMITTED, JEFF LAWLER

							•						Ħ						Ħ						•		
						MUSTAN	IG ENI	ERGY	(			TRATEGIC	PETR	OL.IN	c.			DONALDS	SLAW	/SONV	V			DONALE	D SLA	WSON	
						COBE	RLYC	#1				NELDA	BEESL	EY#1				BEESL	EYU	#1				PRAT	HER E	#1	
		BEESEI	EY A #1		N	W SE NE S	E 11-1	L4S-29	9W			NE SW SW	12-1	45-29\	N			NENESV	V 12-	14-29				N2 S2 S	E 12-	14-29	
	KB		2697		KB		27	702			KB		27	707			KB		2	654			KB		2	674	_
		TOPS		ETOPS		ORT/LOG	LC		SMP		COMP			OG	SM		COMP		_	OG	SIV			.CARD	-	OG	SN
FORMATION	DEPTH	DATUM	DEPTH	DATUM	100000000000000000000000000000000000000	DATUM	co		COR		- C. C. C. C. C. C.	DATUM		RR.	co		***************************************	DATUM		DRR.		1000	DEPTH	DATUM	CC	ORR.	CC
ANHYDRITE TOP	2135	562	2135	562	2149	553	+	9		9	2146	561	+	1	+	1	2104	550	+	12	+	12	2104	570	170	8	-
BASE	2169	528	2171	526	2183	519	+	9		7	2180	527	+	1		1	2138	516	+	12	+	10	2140	534	-	6	H
ТОРЕКА	3549	-852	3556	-859	3550	-848	-	7		11						_		1222		200	_						Н
HEEBNER SHALE TORONTO	3775 3794	-1078 -1097	3779 3797	-1082 -1100	3773 3793	-1071 -1091	- 5	6		11 9	3789 3809	-1082 -1102	+	5	+	2	3748 3768	-1094 -1114	+	16	+	12	3755 3776	-1081 -1102	+	5	
LKC	3814	-1117	3816	-1119	3810	-11091		9		11	3826	-1102		2	+	0	3788	-1114	+	17	+	15	3776	-1102		3	
MUNCIE CREEK	3961	-1264	3965	-1268	3961	-1259		5	_	9	3981	-1274		10	+	6	3947	-1293	+	29	+	25	3942	-1268		1	Ť
STARK SHALE	4052	-1355	4053	-1356	4050	-1348		7		8	4074	-1367	-	12	+	_	4029	-1375	+	20	+	19	4032	-1358	+	3	1
BKC	4119	-1422	4123	-1426	4116	-1414	-	8		12	4139	-1432	+	10	+	6	4097	-1443	+	21	+	17	4096	-1422	1	0	
MARMATON	4145	-1448	4146	-1449	4145	-1443	-	5	_	6	1205	2,02		10			4124	-1470	+	22	+	21	4122	-1448	+	0	-
PAWNEE	4217	-1520	4218	-1521	4221	-1519	-	1	-	2	4247	-1540	+	20	+	19	4201	-1547	+	27	+	26	4200	-1526	+	6	+
MYRICK STATION	4282	-1585	4276	-1579	4280	-1578	-	7	-	1							4259	-1605	+	20	+	26	4258	-1584	-	1	+
FT. SCOTT	4310	-1613	4310	-1613	4307	-1605	17	8	-	8	4332	-1625	+	12	+	12	4288	-1634	+	21	+	21	4288	-1614	+	1	+
CHEROKEE SHALE	4334	-1637	4339	-1642	4333	-1631	0	6	2	11	4358	-1651	+	14	+	9	4313	-1659	+	22	+	17	4316	-1642	+	5	+
JOHNSON ZONE	4381	-1684	4390	-1693	4381	-1679	-	5		14	4408	-1701	+	17	+	8	4360	-1706	+	22	+	13	4362	-1688	+	4	-
MISSISSIPIAN	4414	-1717	4407	-1710	4405	-1703	-3	14	-	7	4436	-1729	+	12	+	19	4390	-1736	+	19	+	26	4400	-1726	*	9	+
RTD			4510	-1813	4500	-1798			-	15	4501	-1794			-	19	4480	-1826			+	13					
LTD	4510	-1813			4501	-1799		14								-	4481	-1827	+	14			4495	-1821	+	8	

#### DST #1 LKC "D - F"



#### DRILL STEM TEST REPORT

Mustang Energy Corp 12-14s-29w-Gove

Po Box 1121 Beesley A #1 Hays Ks 67601

Job Ticket: 47792 **DST#: 1** 

ATTN: Rod Brin Test Start: 2012.06.30 @ 05:52:02

#### GENERAL INFORMATION:

Formation: LKC-D-F

Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial) Deviated: No

Time Tool Opened: 07:42:02 Tester: Jeff Brown

Time Test Ended: 12:47:02 Unit No: 44

3868.00 ft (KB) To 3925.00 ft (KB) (TVD) 2697.00 ft (KB) Interval: Reference Elevations:

Total Depth: 3925.00 ft (KB) (TVD) 2689.00 ft (CF) KB to GR/CF: Hole Diameter: 8.00 ft

7.88 inches Hole Condition: Good

Inside Serial #: 8321

Press@RunDepth: 235.35 psig @ 3904.00 ft (KB) Capacity: 8000.00 psig Start Date: 2012.06.30 End Date: 2012.06.30 Last Calib.: 2012.06.30

Start Time: 05:52:03 End Time: 12:46:02 Time On Btm: 2012.06.30 @ 07:41:32

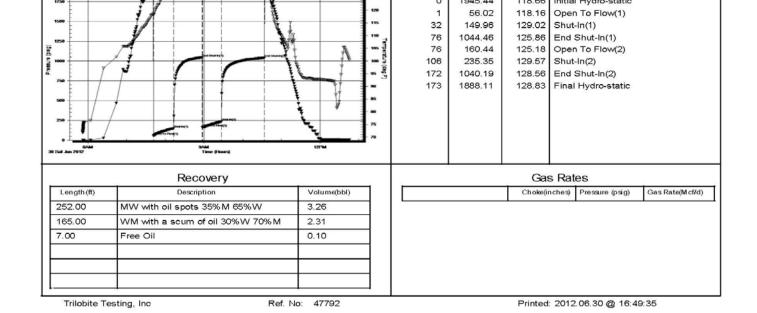
Time Off Btm: 2012.06.30 @ 10:34:02

TEST COMMENT: IFP-Good Blow BOB in 14 1/4 min

ISI-Dead no blow back FFP-Good blow BOB in 18 1/2 min

FSI-Dead no blow back

	Pressure vs. Time			PI	RESSUR	E SUMMARY
2000 -	8321 Pressure 8321 Temperature		Time	Pressure	Temp	Annotation
2000		- 130	(Min.)	(psig)	(deg F)	
	7 / /	126	17-11	CONTRACTOR OF THE PARTY.	Compression and	SANTO SANTO ANDRES CONT. DE SANTO CONT.



#### DST #2 LKC "H - I"



#### DRILL STEM TEST REPORT

Mustang Energy Corp

Po Box 1121 Hays Ks 67601

ATTN: Rod Brin

12-14s-29w-Gove

Beesley A #1

Job Ticket: 47793 DST#: 2 Test Start: 2012.07.01 @ 03:09:01

#### GENERAL INFORMATION:

Formation: LKC-H-I

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:08:01 Time Test Ended: 09:54:31

3960.00 ft (KB) To 4030.00 ft (KB) (TVD)

Total Depth: 4030.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good Test Type: Conventional Bottom Hole (Reset)

Jeff Brown Tester:

Unit No:

Reference Elevations: 2697.00 ft (KB)

2689.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8321 Inside

60.87 psig @ 8000.00 psig 3998.00 ft (KB) Press@RunDepth: Capacity: Start Date: 2012.07.01 End Date: 2012.07.01 Last Calib.: 2012.07.01 Start Time: 03:09:02 End Time: Time On Btm: 2012.07.01 @ 05:07:31 09:53:31 Time Off Btm: 2012.07.01 @ 08:15:31

TEST COMMENT: IFP-Weak blow built to 1 3/4 in

ISI-Dead no blow back

FFP-Dead -Flushed tool Weak blow built to 1/2 in

FSI-Dead no blow back

Pressure vs. Time			DI	PESSI IR	E SUMMARY
	125 Tomportulate 125 Tomportulate 125 Tomportulate 125 Tomportulate 126 Tomportulate 127 Tomportulate 128 Tomportulate 129 To	Time (Min.) 0 1 32 91 91 123 188 188	Pressure (psig) 2025.64 53.80 60.02 992.01 60.21 60.87 874.08 2025.72	Temp (deg F) 117.40 116.96 117.31 119.77	Annotation  Initial Hydro-static Open To Flow(1) Shut-In(1) End Shut-In(1) Open To Flow(2) Shut-In(2) End Shut-In(2) Final Hydro-static
Recovery				Gas	s Rates
Length (ft) Description	Volume(bbl)			Choke(ii	nches) Pressure (psig) Gas Rate(Mcf/d)

		Recovery			Gas	s Rat	es	
	Length (ft)	Description	Volume(bbl)		Choke(in	rches)	Pressure (psig)	Gas Rate(Mcf/d)
- 1	45.00	V/CCC14 00/ C C70/ 14	0.07					

15.00	VSOCIVI 3%O 97%IVI	0.07				
	war or as a second					
Recovery from multiple tests						

Trilobite Testing, Inc

Ref. No: 47793

Printed: 2012.07.02 @ 09:28:15

#### DST #3 LKC "J - K"



#### DRILL STEM TEST REPORT

Mustang Energy Corp

12-14s-29w-Gove

Po Box 1121 Hays Ks 67601 Beesley A #1

Job Ticket: 47794

ATTN: Rod Brin

Test Start: 2012.07.01 @ 19:52:50

#### GENERAL INFORMATION:

Formation: LKC-J & K Time Tool Opened: 21:38:20

Interval:

No Whipstock: ft (KB) Deviated:

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Time Test Ended: 02:22:50

4028.00 ft (KB) To 4090.00 ft (KB) (TVD)

Unit No: 44

Reference Elevations: 2697.00 ft (KB) 2689.00 ft (CF)

Total Depth: 4090.00 ft (KB) (TVD) 7.88 inches Hole Condition: Good Hole Diameter:

KB to GR/CF: 8.00 ft

DST#: 3

Serial #: 8321 Inside

Press@RunDepth: 166.84 psig @ 4064.00 ft (KB) Capacity: 8000.00 psig

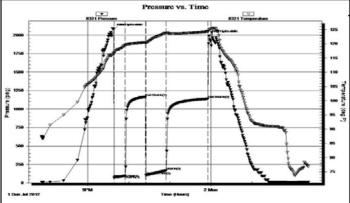
Start Date: 2012.07.01 End Date: 2012.07.02 Last Calib.: 2012.07.02 Start Time: 19:52:51 End Time: 02:22:50 Time On Btm: 2012.07.01 @ 21:37:50

Time Off Btm: 2012.07.01 @ 23:57:20

PRESSURE SUMMARY

TEST COMMENT: IFP=Strong blow BOB in 3 min

ISI=Weak surface blow back built to 3 in FFP=Strong blow BOB in 4 min FSI=Good blow back BOB in 12 1/2 min



	- 1	Time	Pressure	Temp	Annotation
125		(Min.)	(psig)	(deg F)	
120		0	2078.63	116.72	Initial Hydro-static
115		1	68.90	116.59	Open To Flow(1)
110		17	96.11	119.42	Shut-In(1)
105	9	47	1163.61	120.46	End Shut-In(1)
	8	48	104.58	120.31	Open To Flow(2)
100	-	77	166.84	123.72	Shut-In(2)
95	95	138	1136.91	124.28	End Shut-In(2)
90		140	1986.86	124.89	Final Hydro-static
85					
90					
75					

#### Length (ft) Description Volume(bbl) 94.00 OCGM 30%G 10%O 60%M 1.05 252.00 Gassy Oil 60%G 40%O 3.53 2425-GIP 0.00

Recovery

Recovery from multiple tests

0.00

Gas Rates

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

Trilobite Testing, Inc Ref. No: 47794 Printed: 2012.07.02 @ 09:27:33



#### DRILL STEM TEST REPORT

Mustang Energy Corp

12-14s-29w-Gove

Po Box 1121 Hays Ks 67601 Beesley A #1

Job Ticket: 47795

DST#:4

ATTN: Rod Brin

Test Start: 2012.07.02 @ 23:08:40

#### GENERAL INFORMATION:

Formation: Altamont B, Pawnee

Deviated: No Whipstock ft (KB)

Time Tool Opened: 01:00:10 Jeff Brown Tester:

Time Test Ended: 05:52:40

Interval: 4152.00 ft (KB) To 4258.00 ft (KB) (TVD)

4258.00 ft (KB) (TVD) Total Depth:

Hole Diameter: 7.88 inchesHole Condition: Good Test Type: Conventional Bottom Hole (Reset)

Unit No:

Reference Bevations: 2697.00 ft (KB)

2689.00 ft (CF)

KB to GR/CF: 8.00 ft

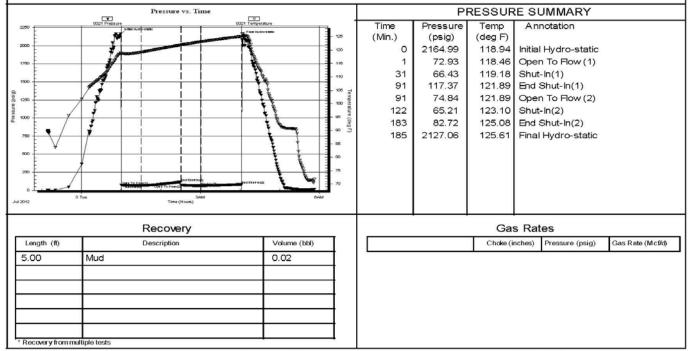
Serial #: 8321 Inside

65.21 psig @ Press@RunDepth: 4222.00 ft (KB) Capacity: 8000.00 psig Start Date: 2012.07.02 End Date: 2012.07.03 Last Calib.: 2012.07.03

Start Time: 23:08:41 End Time: 05:52:40 Time On Btm: 2012.07.03 @ 00:59:40 Time Off Btm: 2012.07.03 @ 04:04:40

TEST COMMENT: IFP-Weak blow built to 1 in

ISI-Dead no blow back FFP-Dead -Flushed tool dead FSI-Dead no blow back



Trilobite Testing, Inc

Ref. No: 47795

Printed: 2012.07.03 @ 07:40:25



Congl



Dolprim Dolsec Lmst fw<7



Lmst fw7> shale, grn shale, gry

**ROCK TYPES** 



Carbon Sh shale, red Shcol

Ss.

#### **ACCESSORIES**

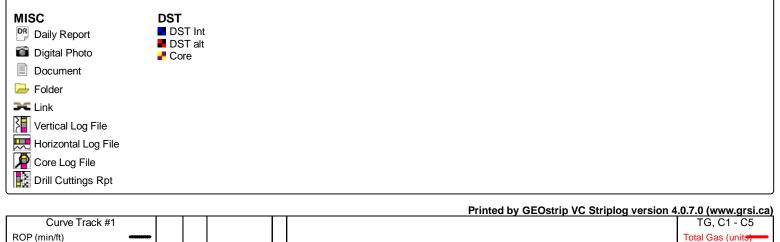
**MINERAL** Sandy

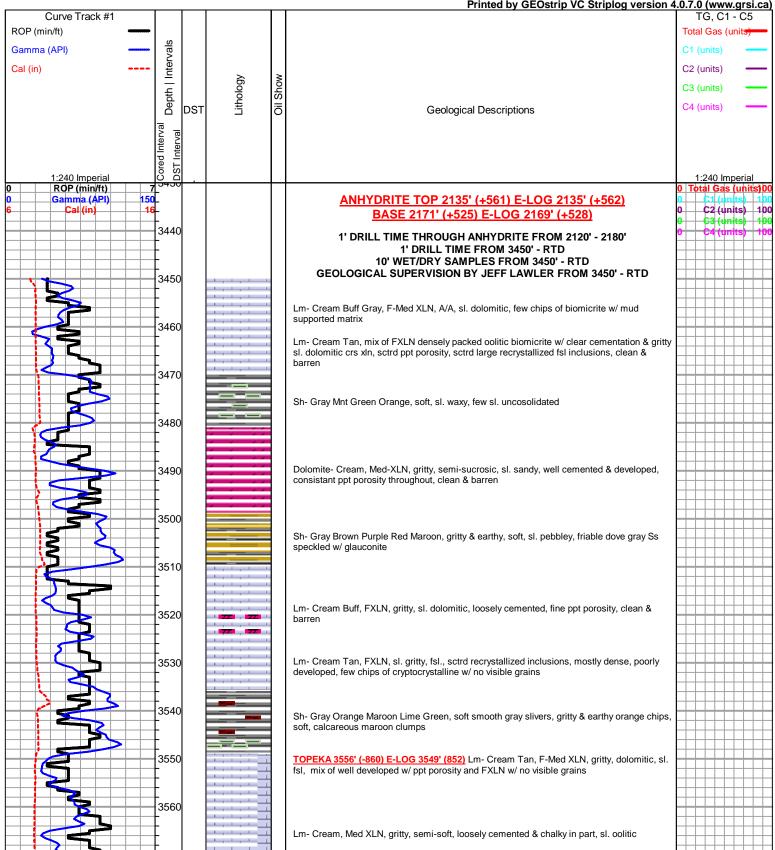
**STRINGER** ^ Chert

Dolomite --- Sandstone green shale

red shale

**TEXTURE** c Chalky

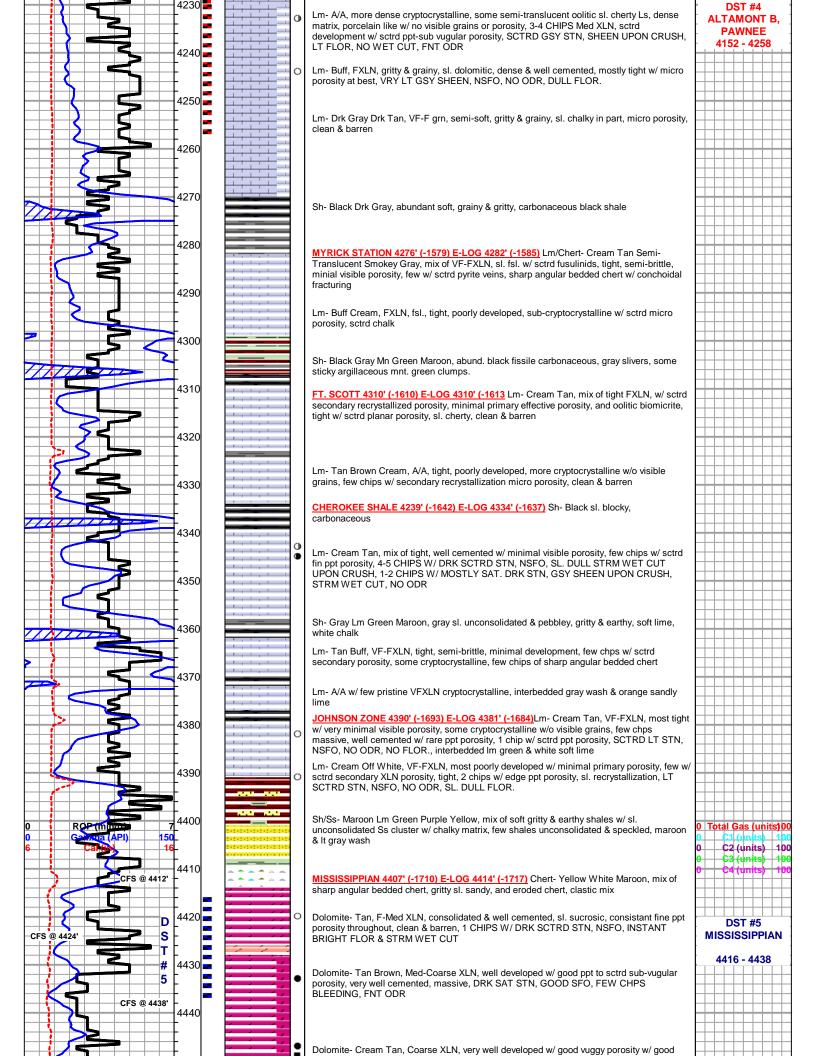


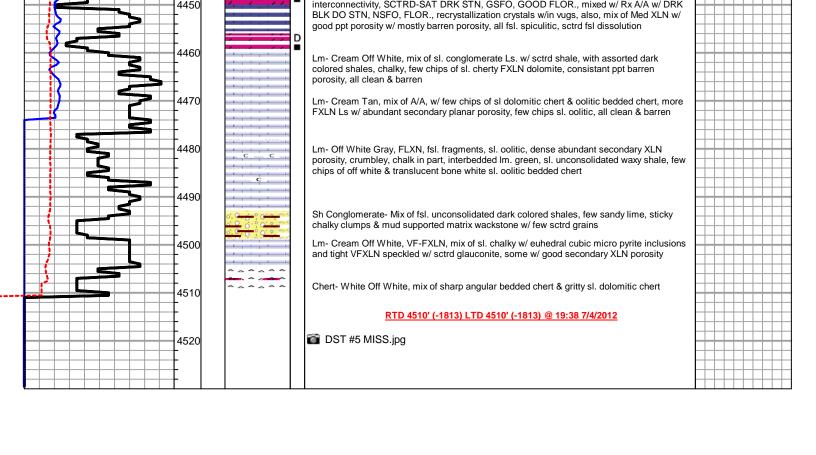


5	3570		Lm- A/A, w/ few chips of Orange sharp angular bedded chert and drk gray high energy biomicrite w/ fsl. fragments, trashy				
	3580 - - 3590		Lm- Cream, F-Med XLN, sl. fsl, well cemented, moderately developed w/ consistant fine ppt porosity, sl. dolomitic, few sctrd recrystallized fsl, clean & barren				
0 ROC min/ft) 7 0 Ga www 27) 150 6 (II) 16	3600 3-	-	Sh- Lt & Drk Gray Orange Mnt Green Brown, soft, gritty & earthy, few sl. sandy, some unconsolidated & pebbley, soft flaky argillaceous, sl waxy	0 Tota	C1 (	as (ui	100 100
5	3610		Lm- Cream Buff, FXLN, mostly well cemented, sl. fsl, tight w/ sctrd ppt porosity, clear dense matrix, chips of striated pyrite, few chips of trashy bioclasts w/ fsl fragments	0	C4 (	units	100
	3620		Dolomite- Cream Med-Coarse XLN, mix of massive, granular, fsl., very well developed w/ good ppt porosity throughtout and Med XLN, gritty, consolidated & well cemented, vry fine ppt porosity, all clean & barren, sctrd chalk, interbedded shale lenses				
	3630		Lm- Cream, Med-Coarse XLN, all gritty & granular, mix of sl. dolomitic cherty Ls & sl. siliceous cherty dolomitic Ls, all w/ good developement and consistant porosity, no shows noted				
	3640		Lm- Cream Gray, mix of mottled, gritty dolomitic Ls, moderately developed w/ ppt porosity, few chips w/ tight argillaceous matrix, and semi-brittle lt gray mottled cherty Ls w/ minimal visible porosity				
	3650 - 3660		Lm- A/A, chalky in part, chips of gritty sl. dolomitic chert, few chips eroded & reworked, some fsl w/ fusulinids & bedded, little to no visible porosity				
3	3670		Lm- Cream Buff, F-Med XLN, gritty, sl. fsl w/ sctrd fusulinids, mix of loosely cemented & well cemented, all clean & barren				
	3680		Dolomite- Tan Cream, F-Med XLN, sucrosic, well cemented, few sctrd recrystallized inclusions, ppt porosity throughout, interbedded waxy shales				
	3690	77	Lm- Buff, FXLN, gritty, tight & well cemented, some w/o visible grains & dense micro XLN porosity  Lm- A/A, w/ tan FXLN sucrosic dolomite, dense & very well cemented, sctrd visible euhedral				
	3700		rhombs under higher magnification  Lm- Cream Buff, FXLN, dense, well cemented, dolomitc, fsl w/ dense clear matrix, few chips of lt gray fsl bedded chert				
	3710		Lm- Cream Buff Tan, Med-Coarse XLN, gritty & granular, sl. fsl. mix of well developed w/ good ppt porosity and semi-soft, calcareous, fine, grainy & gritty, w/ fine ppt porosity, chips of white calcareous chalk				
	3720		Lm- Cream Off White, Med XLN, densely packed, fine, oolitic w/ siliceous cementation, minimal to fine sctrd ppt porosity, few chips of gray dense algal Ls, few chips of brown very dense, well cemented argillaceous Ls w/o visible grains				
	3730		Lm- Cream Buff, FXLN, gritty & grainy, well cemented sI dolomitic, few chips of VFXLN cryptocrystalline w/o visible grains, tight, most w/ limited visible porosity				
	3740 	C C	Lm- Cream Buff, mix of Med XLN, fsl., fsl, Ls, moderately developed w/ sctrd ppt porosity, FXLN sucrosic dolomite, sharp angular bedded fsl chert w/ fusulinids, few chips of sl. unconsolidated biomicrite, all clean and barren				
	3750	CCC	Lm- Buff Tan, FXLN, mostly sl. unconsolidated & pebbley, some w/ mud supported matrix, few chips of soft white calcareous chalk				
	3760		Sh- Drk Gray Maroon Lm Green Purple, soft, some smooth, few semi-sticky argillaceous clumps, sl. unconsolidated				
1	3770		Lm/Chert- Tan, mix of mud supported matrix, gritty sl. dolomitic chert, FXLN fsl Ls, all mottled & dirty, ppt porosity at best, all clean & barren				
// ///////////	3780		HEEBNER 3779' (-1083) E-LOG 3775' (-1078) Sh- Black Lm Green Orange Brown, anbundant black fissile, slatey, carbonaceous, gritty & earthy, few Ss clusters, fn gr, consolidated & friable, clean & barren				
			Sh- Gray Brown Lm Green, soft, slivers, few argillaceous chips very well compacted &				$\mp$

ыоску, some gray wasn TORONTO 3797' (-1100) 3-LOG3794' (-1097) Lm/Dolomite- Off White, Med XLN, massive, sl. fsl, mix of loosely cemented Ls w/ dense fenestral ppt porosity & sucrosic FXLN dolomite, well cemented, all very clean, no shows noted, chalky 3800 C2 (units) 3810 LKC 3816' (-1119) E-LOG 3814' (-1117) Lm- Cream Tan, Med XLN, gritty & grainy, granular, dolomitic, w/ good ppt porosity, moderately developed, few chips of buff bedded 3820 Lm- Cream Tan, F-Med XLN, oolitic w/ dense matrix, some loosely cemented, sctrd ppt porosity, few fusulinids, 2-3 chips w/ VRY LT GSY SHEEN UPON CRUSH, NO SFO, NO FLOR., NO STN, NO ODR 3830 Lm- Cream Buff, A/A, oolitic w/ partial skeletal dissolution & assoc. w/ rare vuggy porosity associated, tight cryptocrystalline w/ minimal visible grains 3840 Sh- Drk Gray Maroon Orange, soft, few chips sl. fsl, gritty & earthy, few sandy 3850 Lm/Chert- Cream Buff, VF-FXLN, tight, densely cemented matrix, few chips of oolitic 3860 biomicrite w/ siliceous cementation, mix of sl. cherty Ls w/ minimal visible porosity and sharp angular bedded chert, few chips gritty sl. dolomitic chert 3870 Lm- Tan, Med-Coarse XLN, oolitic-oomolidic, 40-60% skeletal dissolution, poor intracastic connectivity, vuggy porosity, most w/ clear cementation, barren porosity, no shows noted, no 3880 mineral flor., clean & barren, some chips of oolitic biomicrite w/ densely packed oolites, clean dense matrix cementation Lm- Cream, F-Med XLN, oolitic w/ sctrd fsl. moderately developed w/ sctrd interstitial 3890 D porosity, more oolitic biomicrtie w/ no visible porosity, porcelain like, some sub-SHORT TRIP crpytocrystalline w/ few sctrd recrystallized inclusions S **STRAP +0.27 SURVEY 1 1/4** dgr. #1 3900 Lm- Cream Tan, FXLN, semi-brittle, minimal development, chalky in part, some w/ sctrd secondary porosity, mostly tight, some chips w/ sctrd fine ppt porosity, LT GSY STN, GSY **DST #1** FO UPON CRUSH, STRM WET CUT UPON CRUSH, NO ODR LKC "D-F" 3868 - 3925 3910 0 Lm- Cream Tan, FXLN, sl dolomitic, sucrosic, few chips friable w/ consistant ppt porosity, SCTRD DRK BROWN STN, LIVELY FO & FNT ODR UPON CRUSH Lm- Off White, FXLN, dense, semi-brittle, sctrd development w/ sctrd ppt porosity, LT GSY 3920 STN, LIVELY FO UPON CRUSH, FNT ODR, few chips of gritty sl. dolomitic chert CFS @ 3925' 3930 Dolomite- Cream Tan, Med XLN, mix of sucrosic w/ good consistant ppt porosity, few sl. friable, and dense tight matrix w/ no visible porosity, all clean and barren 3940 Lm- Cream Tan, Med-Coarse XLN, mix of gritty, sl. sucrosic dolomitic Ls w/ sctrd ppt porosity, Crse XLN sl. granular sl. oolitic dolomite, some very well cemented w/ sctrd ppt porosity to well developed w/ consistant ppt porosity, and few pcs of gritty white chert, all clean & barren 3950 Lm- Cream Tan Lt Gray, VFXLN, mix of crptocrystalline, sub-cryptocrystallie w/ sctrd recrystallized inclusion, and sl. cherty Ls, all tight w/ no-minimal visible porosity, brittle & tight 3960 MUNCIE CREEK 3965' (-1268) E-LOG 3961' (-1264) Sh- Black Gray Maroon, fissile, slatey, well compacted, soft smooth gray shale, few sl. sandy 397 3980 Lm- Brown Tan, FXLN, mostly semi-brittle, well cemented w/ sctrd fine XLN porosity, tight w/ minimal develoopment, sctrd secondary porosity, sl. oolitic, FEW CHIPS W/ FTN SCTRD STN, NO SFO, LT FLOR, FNT ODR, few chips of med xln, moderately developed LKC "H & I" 3990 dolomite, sctrd ppt porosity, FNT GSY STN, NSFO, DULL FLOR. 3960 - 4030 S Lm- Cream Tan, F-Med XLN, mix of tight sub-cryptocrystalline and fsl. & sl. oolitic w/ good interstitial porosity, well developed med xln, SCTRD GSY STN, GSY FO UPON CRUSH, GSY ODR, few chips of biomicrite w/ fusulinids & sctrd oolites 4000 ROP (min/(t) 0 Total Gas (units)0 C2 (units)

on- Gray brown, dense, sr. waxy, grilly & earthy Lm- Cream, FXLN, moderately well developed, consistant fine ppt porosity, well cemented, sl. fsl, DRK BRWN STN, FLOATING GLOBULES UPON CRUSH, GSY ODR Lm- Cream, F-Coasre XLN, mix of densely packed oolitic biomicrite w/ dense tight matrix, semi-brittle and very well developed oolitic grainstone, good intraoolite vuggy porosity w/ sctrd recrystallization w/in, DRK RESIDUAL DO STN, NSFO, FNT GSY ODR 4030 Lm- Cream Off White, F-Coarse XLN, mix of gritty fine grainstone, loosely cemented, w/ ppt porosity, FXLN w/ few visible grains & tight, Med-Coarse XLN, oolitic, sctrd. skeletal dissolution, few chips of pearl shaped spherical oolite clusters, sctrd w/ good introolite 4040 porosity, SCTRD LT STN, SL SGSYFO UPON CRUSH, SWEET GSY ODR, few chps of oolitic bedded chert Lm- Cream Lt Gray, FXLN, dense, very well cemented, semi-brittle, sctrd cavernous porosity w/ fr connectivity, SCTRD GSY STN, GD GSY FO UPON CRUSH, SWEET GSY a 4050 STARK SHALE 4053' (-1356) E-LOG 4052' (-1355) Sh- Black Gray Maroon Lm Green, CFS @ 4054 abundant black fissile slatey carbonaceous chps, smooth slivers, soft & earthy D **DST #3** 4060 S LKC "J&K" Т 4028 - 4090 Lm- Cream Tan, Med XLN, moderately developed, sl. oolitic, fine ppt porosity throughout, # LT GSY STN, GSY DISSOLUTION & SL. SFO UPON CRUSH, LT GSY ODR 3 4070 Lm- Cream Tan Buff, F-Med XLN, mix of algal Ls, FXLN, loosely cemented, sl. chalky, w/ ppt porosity, few w/ sctrd secondary crystalline porosity, and VFXLN, tight, subcryptocrystalline w/ few visible grains, semi-brittle 4080 Lm- A/A, more FXLN, few sl. granular mud supported matrix Sh- Black Drk Purple Red, fissile, slatey, some semi-lithofied, carbonaceous, gritty & earthy, thin slivers 4090 S @ 4090' Lm- Brown Tan Cream, FXLN, mix of brown oolitic biomicrite, brittle w/ no minimal visible porosity, cream FLXN, sl. fsl, tight, sctrd micro porosity, and tan argillaceous Ls, no visible 4100 4110 Lm- Gray Buff, FXLN, tight w/ no effective development, few sl. fsl, few chips of tan cryptocrystalline w/ no visible grains 4120 BKC 4123' (-1426) E-LOG 4119' (-1422) Sh- Red Gray, sl. sandy, gritty, gritty gray slivers 4130 Lm- Brown Tan, F-Med XLN, semi-brittle, sctrd fine ppt porosity, poor development, mostly tight Ss/ Sh- Mnt Green Brown Sl. Frosted, mix of sl. frosted med grn, well sorted & consolidated w/ glauconite speckles and sandy limes, fn to med grn. Sh- Gray Brown, soft, gritty & earthy 4140 MARMATON 4146' (-1449) E-LOG 4145' (-1448) Lm- Cream Tan, VF-FXLN, mostly dense, semi-brittle cryptocrystalline to sub-cryptocrystalline, tight w/ minimal visible porosity, few O small chps w/ dense XLN porosity, friable, LT SCTRD STN, NO SFO, NO ODR, chalky in 4150 Sh- Gray, some gritty & massive, some smooth long slivers Lm- Tan Brown, FXLN, mix of tight FXLN, and FLXN w/ dense secondary porosity, sl. fsl, poorly developed w/ only XLN porosity, few chips w/ FLAKEY SCTRD LT BRWN STN, FNT GSY ODR UPON CRUSH, NSFO, NO FLOR. 4180 Sh- Gray Lt Purple Mnt Green Brown White, mostly sl. sandy lime, some white calcareous soft chalk Sh- A/A, red, gritty & earthy, more soft sl. sandy lime Lm- Cream Tan, FXLN, semi-brittle, sctrd development w/ fine ppt porosity, FEW CHIPS W/ SCTRD DRK BRWN STN, GSY SHEEN, 1-2 CHIPS W/ SL. GSY FO UPON CRUSH, NO ODR, DULL FLOR. W/ SLOW STRM WET CUT 1 CHIP WELL DEVELOPED W/ GOOD PPT POROSITY & STN A/A, DULL FLOR W/ SLOW STRM BRIGHT WET CUT 4200 D Total Gas (units)0 C2 (units) C3 (units) Lm- Tan Cream, FXLN, mostly tight, w/ sctrd XLN porosity, well cemnted, w/ minimal 4210 development, few chips of FXLN sucrosic dolomite, clean & barren, 1 Brwn chips, FXLN w/ good sub-vuggy porosity, SAT DRK STN, NSFO, DULL FLOR, NO ODR CCFS @ 4218' PAWNEE 4218' (-1521) E-LOG 4217' (-1520) Lm- F-Med XLN, mix of sub-cryptocrystalline 4220 w/ sctrd recrystallized secondary porosity, some semi-translucent w/ dense secondary porosity (poss. fracturing), few chips of algal Ls, & Med XLN, sctrd ppt porosity, SCTRD DRK BRWN STN, THIN GSY SHEEN, NSFO, LIGHT FLOR, 1-2 CHPS W/ SLW STRM SLOPE 1 dgr. WET CUT, VRY FNT GSY ODR, sl. fsl w/ crinoids & few fuslulinds





#### DST #5 MISS.jpg



#### DRILL STEM TEST REPORT

Mustang Energy Corp

ft (KB)

12-14s-29w-Gove

Po Box 1121 Hays Ks 67601 Beesley A #1 Job Ticket: 47755

ATTN: Rod Brin

DST#:5 Test Start: 2012.07.04 @ 04:28:00

#### GENERAL INFORMATION:

Formation: Mississipian

Deviated: No Whipstock: Time Tool Opened: 06:07:30

Test Type: Conventional Bottom Hole (Reset)

Cody Bloedorn Tester:

Time Test Ended: 10:54:00

Unit No:

4416.00 ft (KB) To 4438.00 ft (KB) (TVD) Interval:

2697.00 ft (KB) Reference Bevations: 2689.00 ft (OF)

Total Depth: 4438.00 ft (KB) (TVD)

KB to GR/CF: 8.00 ft

7.88 inchesHole Condition: Fair Hole Diameter:

Serial #: 8737 Outside

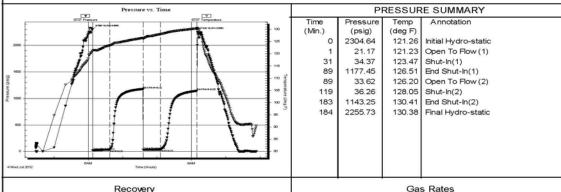
Press@RunDepth: 36.26 psig @ 4435.00 ft (KB) Start Date: 2012.07.04 End Date: Start Time: 04:28:01 End Time:

Capacity: 8000.00 psig Last Calib.: 2012.07.04 Time On Btm: 2012.07.04 @ 06:07:00

2012.07.04 @ 09:11:00 Time Off Btm:

TEST COMMENT: 30 - IF- 2" blow

60 - ISI- No blow back 30 - FF- 3/4" blow 60 - FSI- No blow back



2012.07.04

10:54:00

	recovery	
Length (ft)	Description	Volume (bbl)
45.00	HOCM, 30%O, 70%M	0.35
* Recovery from r	nultiple tests	

Gas Rates					
	Choko (inchos)	Dronnuro (noin)	Con Date (Maffet		

Trilobite Testing, Inc.

Ref. No: 47755

Printed: 2012.07.04 @ 11:47:11

Conservation Division Finney State Office Building 130 S. Market, Rm. 2078 Wichita, KS 67202-3802



Phone: 316-337-6200 Fax: 316-337-6211 http://kcc.ks.gov/

Sam Brownback, Governor

Mark Sievers, Chairman Thomas E. Wright, Commissioner Shari Feist Albrecht, Commissioner

September 14, 2012

Rodney Brin Mustang Energy Corporation PO BOX 1121 HAYS, KS 67601

Re: ACO1 API 15-063-22007-00-00 Beesley A 1 SW/4 Sec.12-14S-29W Gove County, Kansas

#### **Dear Production Department:**

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully, Rodney Brin