# KANSAS CORPORATION COMMISSION OF GINAL OIL & GAS CONSERVATION DIVISION



Form ACO-1 June 2009 Form Must Be Typed Form must be Signed All blanks must be Filled

#### **WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # 34055		API No. 15 - 065-23633-00-00
Name: H & M Petroleum Corporation		Spot Description:
Address 1: 13570 Meadowgrass Drive		NE_SE_Sec. 31 Twp. 9 S. R. 24 ☐ East West
Address 2: Suite 101		1,980 Feet from North / South Line of Section
City: Colorado Springs State: CO Zip: 809	)21+	Feet from
Double Allen		Footages Calculated from Nearest Outside Section Corner:
Phone: ( 719 ) 590-6060		□ NE □ NW ☑ SE □ SW
22575		County: Graham
Name: WW Drilling, LLC		Lease Name: Betty Thunder Well #: 777
Wellsite Geologist: Clayton Erickson		Field Name: Dreil
Purchaser: Coffeyville Resources		Producing Formation: Kansas City "C", "D", "K"
Designate Type of Completion:		Elevation: Ground: 2,540' Kelly Bushing:2,545'
<u> </u>	orkovor	Total Depth: 4,170' Plug Back Total Depth:
	orkover	Amount of Surface Pipe Set and Cemented at: 5 jts @ 220 Feet
☑ Oil ☐ WSW ☐ SWD	SIOW	
Gas D&A ENHR	∐ SIGW	Multiple Stage Cementing Collar Used?
☐ OG ☐ GSW	Temp. Abd.	If yes, show depth set: 2200 Feet
CM (Coal Bed Methane)		If Alternate II completion, cement circulated from: 2200
Cathodic Other (Core, Expl., etc.):		feet depth to: Surface w/ 150 sx cmt.
If Workover/Re-entry: Old Well Info as follows:		· · · · · · · · · · · · · · · · · · ·
Operator:		Drilling Fluid Management Plan
Well Name:		(Data must be collected from the Reserve Pit)
Original Comp. Date: Original Total De	pth:	Chloride content: 1000 ppm Fluid volume: 200 bbls
☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to GSW	Conv. to SWD	Dewatering method used: _Evaporation
Plug Back: Plug Back	Total Depth	Location of fluid disposal if hauled offsite:
Commingled Permit #:		Operator Name:
Dual Completion Permit #:		Lease Name: License #:
SWD Permit #:		
ENHR Permit #:		QuarterSecTwpS. R East West
GSW Permit #:		County: Permit #:
**************************************	31/2010	
	pletion Date or ompletion Date	
Kansas 67202, within 120 days of the spud date, recor of side two of this form will be held confidential for a pe	mpletion, workover or c riod of 12 months if red e logs and geologist w	the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information quested in writing and submitted with the form (see rule 82-3-107 for confidencell report shall be attached with this form. ALL CEMENTING TICKETS MUST form with all temporarily abandoned wells.
AFFIDAVIT		KCC Office Use ONLY
I am the affiant and I hereby certify that all requirements of lations promulgated to regulate the oil and gas industry ha and the statements herein are complete and correct to the	ave been fully complied	regu- d with Date:
1/B/ TV		☐ Confidential Release Date: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Signature:		Geologist Report Received
Title: Office Manager Date:	08/03/2010	UlC Distribution  ALT □ □ □ □ □ Approved by: □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
		· · · · · · · · · · · · · · · · · · ·

Operator Name: H & M Petroleum Corporation				Lease	Name:	Betty Thund	er	Well #:77	7	
Sec. 31 Twp.9	s. r. <u>24</u>	East	✓ West	Count	<sub>y:</sub> <u>Gra</u> h	am				
INSTRUCTIONS: Sh time tool open and ck recovery, and flow rat- line Logs surveyed. A	osed, flowing and shu es if gas to surface to	ut-in pressi est, along v	ures, whether so with final chart(s	hut-in pre:	ssure rea	ched static leve	l, hydrostatic p	ressures, bottom l	hole temp	erature, fluid
Drill Stern Tests Taken  (Attach Additional Sheets)  ✓ Yes □ No					<b>V</b> L	og Formati	on (Top), Depti	n and Datum		Sample
Samples Sent to Geological Survey					Nam	-	:4_	Top		Datum 346
Cores Taken	,				Topek	Corral Anhydr	ne	2199 3609		064
Electric Log Run		Ø Y			1	ner Shale		3828		283
Electric Log Submitte (If no, Submit Copy	•	<u> </u>	es 🗸 No		Lansir			3865	-1	320
List All E. Logs Run:					i	ng "D"		3903	-1	358
DI, Micro, Son	ic. Neutron/D	ensity f	Porosity		1	ie Creek Shal	e	3989	-1	444
2.,	, , , , , , , , , , , , , , , , , ,		0.00.0		Kansa	s City K/Base	Kansas City	4065/4098	-1	520/-1553
		_		RECORD	✓ Ne					
Purpose of String	Size Hole Drilled	Siz	ort all strings set-c ze Casing t (In O.D.)	We	eight . / Ft.	Setting Depth	Type of Cement	# Sacks Used		and Percent
Surface	12 1/4"	8 5/8"	,	23#		213'	Common	165		el/5% CC
Production	7 7/8"	5 1/2"		15.5#		4158'	EA2	385	10% S	alt/5% Cal
Purpose:	Depth Top Bottom	Туре	ADDITIONAL of Cement		ING / SQL	JEEZE RECORI		nd Percent Additives	<b>.</b>	
Protect Casing Plug Back TD Plug Off Zone										
Shots Per Foot			RD - Bridge Plug Each Interval Perf				acture, Shot, Cer Amount and Kind o	ment Squeeze Recor of Material Used)	rd	Depth
4	4069-4073					Shot				4073
4	3903-3906					Shot				3906
4	3894-3896				·	Shot				3896
TUBING RECORD: Size: Set At: 2 7/8"					At:	Liner Run:	Yes	No		
Date of First, Resumed Production, SWD or ENHR. Producing Meth 05/07/2010 Flowing					ng 🔲	Gas Lift	Other (Explain)			
Estimated Production Per 24 Hours	Oil 131	Bbls.	Gas 0	Mcf	Wate		Bbls.	Gas-Oil Ratio		Gravity 38.9
					Comp. Co	ommingled bmit ACO-4)	PRODUCTIO 3894'-4073'		VAL: RECEIVE	

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

AUG 0 5 2010 KCC WICHITA

SWIFT Services. Inc. DATE 23-31-10 **JOB LOG** CUSTOMER DETRIMENT CORP WELL NO. BETTY THUMDER 257448 PRESSURE (PSI) PUMPS VOLUME (BBL) (GAL) CHART RATE (BPM) **DESCRIPTION OF OPERATION AND MATERIALS** TUBING CASING 2200 DUCATION CMT: BYTEN 150EA &, TOP 2055MD, LH 305MD LTD 4165 RTD 4170, Serfije 4158, SJ 21.27, Juscon 4136 5/215.52 D.V. TOUL TOP#49, 2200FT BOOWKILL CEN/35,79.11,13,15,17,19,48 BASAT 4974 3D-150FT 0000 START COLOFIDATERY 0140 TACOMES - PULLUD, WROPBALL BREAKCIAC ABOTATELIAC D145 12 0255 500 MUDFLASH SDOCKS YU FUNH 2% 00 362 EAD CMT BOSS DROPLD.PLUG, WASHOUTA 0310 START DISD W/ AD - V/ RIL MUS 46.0 625 CONTONBOTTEN - STUD BOTTING PIPE 90.0 bos 950 1500 LAND PLUG 985 0325 4.5 RELEASE DRY, DRUP D.V. OPENING DARY **6330** 0355 OPENDIV. 40 40 0346 CIAC 1 HZ, PLUG RH YSMO CAT 30505 0435 7.0 6.0 0440 20.0 WCLFLUSH 2% 57 START SMD COTT DOSSES CAT ON DU 523 RECEIVED الالا E-4D CMT AUG 0 5 2010 Dlop D.V. CLOSING PLUG KCC WICHITA 0505 200 STARTOUSP 5.5 0 250 20.0 CIRCOM TOPIT! 30545 36.0 ا دەي 14100 LAND PLUE, CLOSE D.U. 4.5 523 12515 JOB COMPLETE

> THANNYOU! DAVE JOSAB RUSSEU

AUG 0 5 2010

KCC WICHITA

PLUG & FLOAT EQUIPMENT

#### MIT TO R I BOX 90 D TOXIE KS 67740

STREET

CITY

STATE

#### SCHIPPERS OIL FIELD SERVICE L.L.C.

DATE 3/2/1/ SEC. 3/	RANGE/TWP. 67 . 2 . 1	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
				COUNTY	STATE!
LEASE Both The	estro	WELL# 777			
			•		
			•		
CONTRACTOR W	W10	OWNER //	117		
TYPE OF JOB					
HOLE SIZE	T.D. 22/	CEMENT			
CASING SIZE 8 %	DEPTH 2/3	AMOUNT ORDERED			
TUBING SIZE	DEPTH				
DRILL PIPE	<b>ДЕРТН</b>				
TOOL	DEPTH				
PRES. MAX	MINIMUM	COMMON	165	@///	239.7
DISPLACEMENT 17 3/4	从/shoe joint	POZMIX		@	
CEMENT LEFT IN CSG.		GEL		@ 26	28 00
PERFS		CHLORIDE	5	@ 52	765"
		ASC		@	
EQUPIMENT				@	
				@	<u> </u>
PUMP TRUCK				@	
	海,			@	
BULK TRUCK				@	<u> </u>
#				@	
BULK TRUCK				@	
				@ —	
				@	
		HANDLNG	173	@ /35	33>
		MILEAGE	34	@ / 5	5-9-
				TOTAL	
				<u> </u>	
REMARKS	<u>:</u>	SERVICE S	artan		
		DEPT OF JOB		@	
	1 10-4	PUMP TRUCK CHAR	GE 95)	@	9.00
6116 (8	A017	EXTRA FOOTAGE	produced and the second page 200 for the second page 2	@	
and the state of t	A 4:	MILEAGE	37	@ 6 ==	2>12
plac boun	W 4,15 P1	MANIFOLD	ting the second production of the second control of the second con	@	100
the first tracking the first war as a second	an was grown and the same of t	triging processing to go and an extension and the second section of the co	er og grenne var var sig for <del>i more side. Det</del>	@	1
		**************************************	Starting Manager of Top Manager	TOTAL	

#### WELLSITE GEOLOGICAL CONSULTING

## **GEOLOGICAL ANALYSIS & WELL REPORT**

H & M Petroleum Corp.

**BETTY THUNDER No. 777** 

1,980' FSL & 660' FEL C-NE-SE Section 31 - Township 9 South - Range 24West Graham County, Kansas

April 16, 2010

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#### **GENERAL INFORMATION**

Elevation: G.L. 2,540' K.B. 2,545'
All measurements are from K.B.

Field: Dreil

Drilling Contractor/Rig No.: WW Drilling/Rig 10

Total Depth: RTD: 4,170' LTD: 4,165'

Surface Casing: 8.5/8" @ 220'

Production Casing: 5 ½" @ 4,166'

Drill Time Kept: 3,550'-4,170' RTD

Samples Examined: 3,600'-4,170' RTD

Geological Supervision: 3,550'-4,170' RTD

Wellsite Geologist: Clayton Erickson - Loomis, Nebraska

Consulting Wellsite Geologist

Drill Stem Tests:

1) Lansing "A"-"C" Zone's - Open hole test

2) Lansing "D" Zone - Open hole test

3) Kansas City "H"-"K" Zone's - Open hole test

Mud Company/Mud Type/Engineer: Morgan Mud/Chemical/Dave Lines

Electric Logging Company: Log-Tech

Log Suite: -Dual Induction

-Micro Log

-Neutron/Density Porosity

-Sonic

Samples: Examined & discarded

Total Depth Formation: Base/Kansas City

Well Status: Production casing set to test several Zone's in the

Lansing/Kansas City Group

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## **DAILY DRILLING CHRONOLOGY**

2010 <u>Date</u>	7:00 A.M. <u>Depth</u>	24 Hour <u>Footage</u>	7:00 A.M. Operation; 24 Hour Activity
03/25/10	0	0	MIRU; spud @ 11:45 A.M., drill to 221', 15" circ., TOOH, run 5 jts 8 5/8" surf. csg., set @ 220', cement csg., WOC 8', drill plug @ 12:15 A.M 3/26/10, jet, drilling.
03/26/10	886'	886'	Drilling ahead; jet, drilling, jet, drilling, jet, drilling, jet, drilling.
03/27/10	2,730'	1,844'	Drilling ahead; jet, drilling, wash suction, drilling, displace/mud up @ 2,910', drilling, 30" pump repair, drilling.
03/28/10	3,535'	805'	Drilling ahead; CFS @ 3,890', drilling, CFS @ 3,905', short trip - 41 stands, lost circ./mix hulls (lost 200 bbls) - mix mud, short trip - 44 stands, circ. 1'/ clean hole.
03/29/10	3,905'	370'	Circulate For Sample; drop dev. survey, TOOH - strap pipe, pick up test tool, TIH, run DST No. 1, TOOH, lay down test tool, wash floor, TIH w/bit, circ. 1' - clean hole, drilling, CFS @ 3,920', TOOH, pick up test tool, TIH, run DST No. 2, TOOH - reverse out DST oil recovery, lay down test tool, TIH w/bit, circ. 30" - clean hole, drilling.
03/30/10	3,945'	40'	Drilling ahead; CFS @ 3,950', drilling, CFS @ 4,023', drilling, CFS @ 4,040', drilling, CFS @ 4,059', drilling, CFS @ 4,084', TOOH, pick up test tool, TIH, run DST No. 3, TOOH, lay down test tool, TIH w/bit - break circ., circ. 30" on bottom, drilling.
03/31/10	4,100'	155'	Drilling ahead; reach 4,175' RTD @ 9:45 A.M., circ. 1.25', drop dev. survey, TOOH, rig up loggers, run full suite wireline logs (4.5'), TIH w/bit, circ. 1', TOOH laying down drill pipe, rig up csg crew - run 5 ½" production csg set @ 4,166', cement csg - plug down @ 5:15 A.M 4/1/10, rig down.
04/01/10	4,170'	70'	Rigging Down; rig released @ 7:15 A.M.  RECEI
			ALIC OF

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#### **DEVIATION SURVEYS**

<b>Depth</b>	<b>Deviation (Degrees)</b>
221'	1.0
3,905'	1.0
4,170'	1.0

#### REFERENCE WELLS

Reference Well "A": Thunderbird & Petroleum Resources

Dreiling "A" No. 4

**NW-SE-NE** 

Section 31-T9S-R24W Graham County, KS

KB: 2,553' RTD: 4,118'

Date Drilled: November, 1970 TD Formation: Base/Kansas City

Status: Abandoned Kansas City "I" & "K" Zone's oil well

(IP 63 BOPD, no water)

Reference Well "B": Don E-Pratt

Elmer Dreiling No. 1

SW-SW-SW

Section 32-T9S-R24W Graham County, KS

KB: 2,537'

RTD: 4,115' (No Log Run)
Date Drilled: October, 1976
TD Formation: Base/Kansas City

Status: Dry & Abandoned

Reference Well "C": Energy Three

Dreiling No. 1 NW-SW-NW

Section 32-T9S-R24W Graham County, Kansas

KB: 2,544' RTD: 4,155'

Date Drilled: March, 1982

TD Formation: Base/Kansas City

## **FORMATION TOPS**

· · · · · · · · · · · · · · · · · · ·	ВЕТТУ	THUNDE	R No. 777	Dreiling "A" Elmer No. 4 Dreiling No. 1	Dreiling No. 1				
FORMATION	SAMPLE	1	LOG	REFERENCE	REFERENCE	REFERENCE	Е	IFFERENCE TO	0
7-	TOPS	TOPS	DATUM	WELL "A"	WELL "B"	WELL "C"	WELL "A"	WELL "B"	WELL "C"
PERMIAN									
Stone Corral Anhydrite	2202	2199	+346	+352	NA	+335	+6	NA	-11
PENNSYLVANIAN									
Topeka	3612	3609	-1064	-1067	-1074	NA	+3	+10	NA
Heebner Shale	3833	3828	-1283	-1285	-1289	-1295	+2	+6	+12
Lansing "A"	3871	3865	-1320	-1324	-1327	-1333	+4	+7	+13
Lansing "D"	3908	3903	-1358	-1363	NA	-1375	+5	NA	+17
Muncie Creek Shale	3995	3989	-1444	-1444	NA	-1460	FLAT	NA	+16
Kansas City "K"	4073	4065	-1520	-1523	NA	-1536	+3	NA	+16
Base/Kansas City	4107	4098	-1553	-1551	-1556	-1563	-2	+3	+10

#### **ZONES OF INTEREST**

**Formation** Log Depth <u>Lithologic & Show Descriptions</u>, Remarks

Lansing "A" 3,865'-3,869' Limestone, white-cream, fine crystalline grain stone, common pyrite, slightly chalky, poor-good inter-

granular porosity, some with poor pin point porosity, GOOD SHOW: fair odor, even saturated light brown

oil stain, fair show free oil/break.

The Lansing "A" Zone was included on DST No. 1 with the Lansing "C" Zone and on a 30 minute total flow period recovered 2,401 feet of gas in pipe and 1,007 feet of fluid consisting of 697 feet of clean gassy oil (30% gas, 70% oil), and 310 feet of mud cut gassy oil (30% gas, 45% oil, 25% mud), with shut in pressures of 703-700 p.s.i. (Oil = 38 degrees API Gravity).

Log-Tech logs show this zone has a very clean gamma ray signature, fair SP development, maximum 7% neutron porosity, maximum 9% density porosity, maximum 8% sonic porosity, 6 feet of microlog development, and a maximum 28 ohms deep

resistivity. Lansing "C" 3,892'-3,898'

Limestone, white-cream, fine crystalline pack stone to grain stone, slightly chalky, poor pin point porosity saturated with oil, frequent good vuggy and inter-granular porosity with brown spotty - saturated oil stain, GOOD SHOW: strong odor, poor show free oil.

This zone was included on DST No. 1 with the Lansing "A" Zone and recovered 2,401 feet of gas in pipe and 1,007 feet of fluid consisting of 697 feet of clean gassy oil (30% gas, 70% oil), and 310 feet of mud cut gassy oil (30% gas, 45% oil, 25% mud). with shut in pressures of 703-700 p.s.i. (Oil = 38degrees API Gravity).

Log-Tech logs show this zone has a very clean gamma ray signature, medium SP development, maximum 8% neutron porosity, maximum 13.5% density porosity, maximum 9.5% sonic porosity, 5 feet of microlog development (3,993'-3,998'), and has a maximum 25 ohms deep resistivity.

Lansing "D"

3,903'-3,909'

Limestone, white, predominately fine crystalline, oolitic grain stone development, good intergranular porosity, GOOD SHOW: fair odor, even light brown oil stain, poor show free oil.

This zone was isolated on DST No. 2 and recovered gas to surface 30 minutes into the final shut in period and 1,550 feet of fluid consisting of 62 feet of clean gassy oil (30% gas, 70% oil), 1,364 feet of clean gassy oil (35% gas, 65% oil), and 124 feet of mud cut gassy oil (30% gas, 50% oil, 20% mud), with shut in pressures of 621-626 p.s.i. (Oil = 36 degrees API Gravity).

Log-Tech logs show this zone has a very clean gamma ray signature, good SP development, maximum 19.5% neutron porosity, maximum 18% density porosity, maximum 14% sonic porosity, 6 feet of microlog development (3,903'-3,909'), and has a maximum 60 ohms deep resistivity.

Kansas City "K"

4,069'-4,073'

44.5

Limestone, white, fine crystalline grain stone, poor inter-granular porosity, FAIR SHOW: very faint odor, even brown stain, fair show free oil/break.

This zone was covered on DST No. 3 (Kansas City "H" - "K" Zone's) and on a 45 minute total flow period recovered 150 feet of gas in pipe and 510 feet of fluid consisting of 390 feet of muddy oil (80% oil, 20% mud), 60 feet of oil cut mud (20% oil, 80% mud), and 60 feet of mud cut oily water (10% oil, 70% water, 20% mud) with shut in pressures of 1,184-1,100 p.s.i. (Oil = 25 degrees API Gravity).

Log Tech Logs show this zone has a very clean gamma ray signature, fair SP development, maximum 14.5% neutron porosity, maximum 15.5% density porosity, maximum 13.5% sonic porosity, with very good microlog development over the entire porosity interval, and has a maximum 55 ohms deep resistivity.



#### DRILL STEM TEST REPORT

H&M Petroleum

Betty Thunder #777

31-9s-24w Graham, Ks

13570 Meadow grass Drive

Suite 101

Job Ticket: 37780

DST#: 1

Colorado Springs, Colo ATTN: Clayton Erickson

Test Start: 2010.03.29 @ 09:05:33

#### **GENERAL INFORMATION:**

Time Tool Opened: 10:50:48

Time Test Ended: 15:40:33

Formation:

A-C

Deviated:

Whipstock No

ft (KB)

Test Type: Conventional Bottom Hole

Tester:

Shane McBride

Unit No:

40

2545.00 ft (KB)

Reference Bevations:

2540.00 ft (CF)

KB to GR/CF:

5.00 ft

Total Depth: Hole Diameter:

Interval:

Start Date:

Start Time:

3862.00 ft (KB) To 3905.00 ft (KB) (TVD) 3905.00 ft (KB) (TVD)

7.88 inchesHole Condition: Fair

Serial #: 8368

Inside Press@RunDepth:

381.39 psig @

09:05:33

2010.03.29

3863.00 ft (KB)

End Time:

End Date:

2010.03.29

15:05:33

Capacity:

8000.00 psig

Last Calib.:

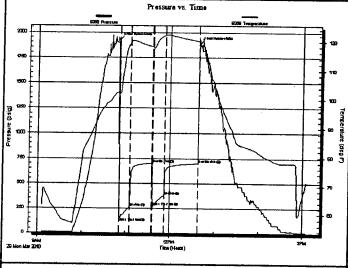
2010.03.29 2010.03.29 @ 10:50:18

Time On Btm: Time Off Btm

2010.03.29 @ 12:38:48

TEST COMMENT: B.O.B. in 2 min.

Bled off throughout B.O.B. in 1 min. Bled off throughout



		Р	RESSU	RE SUMMARY
Temperature (deg P)	Time (Min.) 0 IS" 16 30" 46 15" 62 45" 108 109	Pressure (psig) 1927.23 111.37 262.68 703.40 273.34 381.39 700.90 1885.54	Temp (deg F) 102.62 102.08 119.66 118.26 118.02 122.18 120.09	Annotation Initial Hydro-static Open To Flow (1) Shut-In(1) End Shut-In(1) Open To Flow (2)

Langth (ft)	Description	Volume (bbl)
310.00	mc g o 25%m30%g 45%o	3.22
697.00	c g o 30%g 70%o	9.78
0.00	2401' gas in pipe	0.00

**Gas Rates** Choke (inches) Pressure (psig) Gas Rate (Mct/d)

Trilobite Testing, Inc.

Ref. No: 37780

Printed: 2010.03.29 @ 17:02:23 Page 1



#### **DRILL STEM TEST REPORT**

H&M Petroleum

Betty Thunder #777

13570 Meadow grass Drive

Suite 101

31-9s-24w Graham, Ks

Job Ticket: 37781

DST#: 2

Colorado Springs, Colo ATTN: Clayton Erickson

Test Start: 2010.03.29 @ 21:20:50

#### **GENERAL INFORMATION:**

Time Tool Opened: 22:53:35

Time Test Ended: 03:45:05

Formation:

Deviated:

No Whipstock ft (KB)

Test Type:

Conventional Bottom Hole

Tester:

Shane McBride

Unit No:

40

Reference Elevations:

2545.00 ft (KB)

interval: Total Depth: Hole Diameter: 3905.00 ft (KB) To 3920.00 ft (KB) (TVD)

3920.00 ft (KB) (TVD)

7.88 inchesHole Condition: Fair

2540.00 ft (CF)

KB to GR/CF:

5.00 ft

Serial #: 8368 Press@RunDepth:

Inside

554.26 psig @ 2010.03.29

3906.00 ft (KB) End Date:

2010.03.30

and the contract of the contra

Capacity:

8000.00 psig

Start Date: Start Time:

21:20:50

End Time:

03:28:05

Last Calib .: Time On Btm: 2010.03.30

Time Off Btm

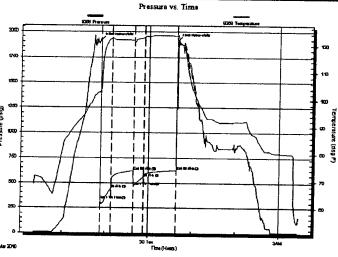
2010.03.29 @ 22:53:20 2010.03.30 @ 00:39:50

TEST COMMENT: B.O.B. in 1/2 min.

B.O.B. return in 10 min

B.O.B. @ open

B.O.B. return in 13 min G.T.S. 30 min into shutin



	PRESSURE SUMMARY									
	Time	Pressure	Temp	Annotation						
0	(Min.)	(psig)	(deg F)							
	0	1918.85	103.28	Initial Hydro-static						
٥	1	328.63	102.40	Open To Flow (1)						
	15	441.73	122.34	Shut-In(1)						
ວ ສຸ	46	621.32	121.76	End Shut-In(1)						
nger.	47	470.05	121.65	Open To Flow (2)						
ature	61	554.26	122.96	Shut-in(2)						
Temperature (deg F)	106	626.13	123.41	End Shut-In(2)						
٦	107	1911.89	123.64	Final Hydro-static						
				-						
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#### Recovery Length (ft) Description Volume (bbl) mcgo20%m30%g50%o 124.00 0.61 1364.00 c g o 35%g 65%o reversed out 19.13 62.00 c g o 30%g 70%o 0.87 0.00 G.T.S. on final shutin 0.00

Gas Rates						
	Chole (inches)	Pressure (psig)	Gas Rate (Mct/d)			



#### DRILL STEM TEST REPORT

H&M Petroleum Corp

Betty Thunder #777

31-9S-24w Graham, Ks

13570 Meadow grass Drive Suite 101 Colorado Springs CO 80921

Job Ticket: 37255

DST#: 3

ATTN: Clayton Erickson

Test Start: 2010.03.30 @ 21:36:12

**GENERAL INFORMATION:** 

Formation:

LKC"H-K"

Deviated:

No Whipstock ft (KB)

Test Type: Conventional Bottom Hole

Time Tool Opened: 23:05:12 Time Test Ended: 03:44:12

Tester:

Tyson Flax

Unit No:

44

Interval:

3993.00 ft (KB) To 4085.00 ft (KB) (TVD)

Reference Bevations:

2545.00 ft (KB)

Total Depth:

4085.00 ft (KB) (TVD)

2540.00 ft (CF)

Hole Diameter:

7.88 inchesHole Condition: Good

KB to GR/CF:

5.00 ft

Serial #: 6669

Press@RunDepth: Start Date:

Inside 209.95 psig @

4000.00 ft (KB) End Date:

2010.03.31

Capacity: Last Calib .: 8000.00 psig

Start Time:

2010.03.30 21:36:13

End Time:

03:44:12

Time On Btm:

2010.03.31 2010.03.30 @ 23:04:12

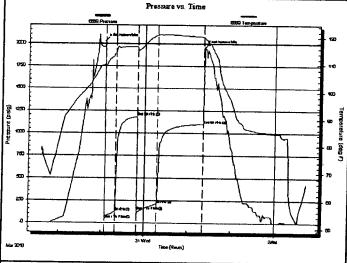
Time Off Btm:

2010.03.31 @ 01:21:42

TEST COMMENT: IFP-BOB in 6.5 min.

ISI-Weak blow back built to 3.5"

FFP-BOB in 5 min FSI-BOB in 14 min



PRESSURE	
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11/20001/2	CUMINARI
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I	Time	Pressure	Temp	Annotation
I	(Min.)	(psig)	(deg F)	
	0	2030.63	110.04	Initial Hydro-static
1	15" <sup>1</sup>	39.89	109.47	
	30° 15	124.33	114.40	Shut-In(1)
1	<sup>30</sup> 45	1184.01	116.72	End Shut-In(1)
	46	134.02	116.35	Open To Flow (2)
1	30° 73	209.95	120.90	, ,
I	60" 137	1100.02	120.28	End Shut-In(2)
l	138	1958:81	119.71	Final Hydro-static
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#### Recovery

60.00	MOOW 10%O, 70%W, 20%M	0.30
~~ ~~		1
60.00	OOM 20%O,80%M	0.30.
390.00	MO 80%O,20%M	5.43
0.00	150' GIP	0.00

Gas Rates

Chole (inches) | Pressure (psig) Gas Rate (McMd)

Trilobite Testing, Inc.

Ref. No: 37255

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### **SUMMARY**

The Betty Thunder Prospect is located in southwestern Graham County where prolific oil reserves are found in the multiple pay zone Lansing/Kansas City Group limestones. The prospect was originally defined through sub surface structure and isopach (thickness) mapping based on well control in the area, which indicated a northwest-southeast trending structural feature extending southeastward from the abandoned Dreil Field which produced 269,407 BO from the Lansing/Kansas City Group from 1970-1999.

A 3-D seismic survey was shot over the Betty Thunder leasehold and geophysical interpretation of this seismic survey confirmed a prominent southeast trending structure at the Lansing/Kansas City level, located in the SE/4 of Section 31-T9S-R24, extending southeast from the Dreil Field, along with significant thinning in the Stone Corral Anhydrite to Lansing interval (Anhydrite-Lansing Isochron). The Betty Thunder No. 777 location was picked from the 3-D seismic survey, and as interpreted, encountered the Top/Lansing 4 feet higher structurally to the nearest abandoned oil producers in the Dreil Field.

Three (3) open hole drill stem test's were run in the Betty Thunder No. 777 during the drilling of the well. DST No. 1 covered the Lansing "A"-"C" Zone's and on a 30 minute flow period recovered 2,401 feet of gas in pipe with 1,007 feet of fluid consisting of 697 feet of clean gassy oil and 310 feet of mud cut gassy oil with shut in pressures's of 703-701 p.s.i.

DST No. 2 isolated the Lansing "D" Zone and on a 30 minute flow period recovered gas to surface with 1,550 feet of fluid consisting of 1,426 feet of clean gassy oil and 124 feet of mud cut gassy oil with shut in pressures's of 621-626 p.s.i.

DST No. 3 covered the Kansas City "H"-"K" Zone's and on a 45 minute flow period recovered 150 feet of gas in pipe and 510 feet of fluid consisting of 390 feet of muddy oil, 60 feet of oil cut mud, and 60 feet of mud cut oily water with shut in pressures of 1,184-1,100 p.s.i

The Betty Thunder No. 777 well is located approximately 10 miles west and 10 miles south of Hill City, Kansas in southwestern Graham County, Kansas.

The primary objectives in the Betty Thunder No. 777 included the Lansing "C", "D", and "F" Zone's and the Kansas City "J" and "K" Zone's. Secondary objectives included the Lansing "A" and "E" Zone's and the Kansas City "H", "I" and "L" Zone's.

The Betty Thunder No. 777 well was spudded on March 25, 2010, and production casing was set on April 1, 2010. No significant drilling problems were encountered during the drilling of this well.

The well was under 24-hour geological supervision from 3,550 feet to 4,170 feet RTD. Wet and dry drilling samples were caught by the drilling crews from 3,600 feet to 4,170 feet RTD at 10-

foot intervals. All lithologic descriptions were lagged to true depth by the consulting wellsite geologist.

#### **Hydrocarbon Shows**

Numerous significant free oil sample shows were observed and recorded in the samples during the drilling of the Betty Thunder No. 777 in the primary and secondary objective Lansing/Kansas City Group:

-Lansing "A" Zone	Good Show:	fair odor, light brown oil stain, fair show free oil (covered on DST No. 1)
-Lansing "C" Zone	Good Show:	strong odor, brown oil stain to saturated oil stain, poor show free oil (covered on DST No. 1)
-Lansing "D" Zone	Good Show:	fair odor, light brown oil stain, poor show free oil (isolated on DST No. 2)
-Lansing "F" Zone	Fair Show:	fair odor, some brown oil stain, very poor show free oil (was not drill stem tested)
-Lansing "G Prime" Zone	Poor Show:	fair odor, spotty brown oil stain, poor show free oil (included on DST No. 3)
-Kansas City "H" Zone	Intermediate Show:	fair-good odor, fair show free oil, light brown oil stain, scattered dead oil stain, (covered on DST No. 3)
-Kansas City "I" Zone	Fair Show:	fair odor, very poor show free oil, brown oil stain, (covered on DST No. 3)
-Kansas City "J" Zone	Poor Show:	faint odor, poor show free oil, brown oil stain, (covered on DST No. 3)
-Kansas City "K" Zone	Fair Show:	very faint odor, brown oil stain, fair show free oil (covered on DST No. 3)

There were no observed sample hydrocarbon shows recorded in the Topeka or Toronto Formation's, Lansing "E" and "G" Zone's or the Kansas City "L" Zone.

Complete lithologic descriptions and hydrocarbon sample shows can be found in the detailed "Zones of Interest" portion of this geologic report. Complete Drill Stem Test fluid recovery results and pressures can be found in this report under "Drill Stem Tests".

#### **Structural Position**

The Betty Thunder No. 777 well runs predominately structurally high in relation to Reference Well "A" (with the exception of the Base/Kansas City), predominately structurally high in relation to Reference Well "B" (with the exception of the Anhydrite), and structurally high throughout the well in relation to Reference Well "C".

Compared to Reference Well "A"/Thunderbird & Petroleum Resources Dreiling "A" No. 4 (NW-SE-NE-Section 31-T9S-R24W), the Betty Thunder No. 777 runs: +6 feet high at the Stone Corral Anhydrite, +3 feet high at the Topeka, +2 feet high at the Heebner Shale, +4 feet high at the Top/Lansing "A", +3 feet high at the Kansas City "K" Zone, and -2 feet low at the Base/Kansas City.

Compared to Reference Well "B"/Don E. Pratt Elmer Dreiling No. 1 (SW-SW-SW-Section 32-T9S-R24W), the Betty Thunder No. 777 runs: (not available-Stone Corral Anhydrite, +10 feet high at the Topeka, +6 feet high at the Heebner Shale, and +7 feet high at the Top/Lansing "A", and +3 feet high at the Base/Kansas City.

Compared to Reference Well "C"/Energy Three Dreiling No. 1 (NW-SW-NW-Section 32-T9S-R24W), the Betty Thunder No. 777 runs: -11 feet low at the Stone Corral Anhydrite, +12 feet high at the Heebner Shale, +13 feet high at the Top/Lansing "A", +16 feet high at the Kansas City "K" Zone, and +10 feet high at the Base/Kansas City.

A complete structural comparison of the Formation Tops in this well, in relation to the Reference Wells, can be found in the detailed "Formation Tops" table in this geologic report.

#### Conclusion

The Betty Thunder No. 777 test well location was determined through a 3-D seismic survey shot over the Betty Thunder Prospect which indicated this well would be located structurally high and thin (Anhydrite-Lansing Isochron) relative to most of the oil well's in the nearby Dreil Field (located in Section's 30 and 31-T9S-R24W).

Log-Tech logs confirmed the structural position of the primary and secondary objective Lansing/Kansas City Group in the Betty Thunder No. 777 is structurally high in relation to the three Reference Well's used for correlation in this report.

Several well developed porous and permeable reservoirs were encountered in the Lansing/Kansas City Group, as confirmed through drill stem test fluid and pressure recoveries, and Log-Tech porosity and micro log's.

Based on the positive structural position of the Lansing/Kansas City Group relative to the surrounding well control and nearby oil production, and the gas and clean gassy oil recoveries on Drill Stem Test's No. 1 and 2, 5 ½" production casing was set in the Betty Thunder No. 777.

The clean gassy oil and gas in pipe recovery (no water was recovered) on Drill Stem Test No.

1, which covered the Lansing "A" and "C" Zone's indicates both the Lansing "A" and Lansing "C" Zone's have commercial oil production potential, as does the Lansing "D" Zone which was isolated on Drill Stem Test No. 2 (recovered gas to surface and clean gassy oil with no water). The Kansas City "K" Zone has a well developed reservoir and appears to have oil pay with possibly some water.

Respectfully Submitted,

Richard J. Hall

Certified Petroleum Geologist No. 58

Whitehall Exploration