



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1220529
OIL & GAS CONSERVATION DIVISION

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 # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- 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: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1220529

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Bowman, William F. dba The Bill Bowman Oil Company
Well Name	Mayr 1
Doc ID	1220529

All Electric Logs Run

Dual Induction Log
Dual Compensated Porosity Log
Microresistivity Log
Gamma Ray Correlation Log
Computer Processed Interpretation Log

Form	ACO1 - Well Completion
Operator	Bowman, William F. dba The Bill Bowman Oil Company
Well Name	Mayr 1
Doc ID	1220529

Tops

Name	Top	Datum
Anhydrite	2784	+271
Base of Anhydrite	2824	+231
Neva	3346	-291
Foraker	3480	-425
Tarkio	3571	-516
Topeka	3720	-665
Heebner	3923	-868
Lansing	3966	-911
Base of Kansas City	4213	-1158
Marmaton	4252	-1197
Cherokee	4388	-1333
RTD	4460	

ALLIED OIL & GAS SERVICES, LLC 063452

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:

oakley

DATE <u>6-2-14</u>	SEC <u>29</u>	TWP <u>3</u>	RANGE <u>34</u>	CALLED OUT	ON LOCATION <u>11:00 AM</u>	JOB START <u>11:20</u>	JOB FINISH <u>12:00</u>
LEASE <u>mayr</u>	WELL # <u>1</u>	LOCATION <u>Atwood 6W 1/2 S 100 Ac. Lins</u>	COUNTY <u>W. Lins</u>	STATE <u>KS</u>			
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR White knight
 TYPE OF JOB Surface
 HOLE SIZE 12 1/4 T.D. 262'
 CASING SIZE 8 7/8 DEPTH 260'
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 15'
 PERFS.
 DISPLACEMENT 15,600 bbl

OWNER same
 CEMENT AMOUNT ORDERED 225 sks com
3% cc 2% gel
 COMMON 225 sks @ 17.90 4027.50
 POZMIX @
 GEL 423 # @ 1.05 444.15
 CHLORIDE 634 # @ 1.10 697.40
 ASC @

EQUIPMENT
 PUMP TRUCK CEMENTER Andrew Finckel
 # 423-281 HELPER Alan Flipse
 BULK TRUCK
 # 323 DRIVER Romiro (Tus)
 BULK TRUCK
 # DRIVER

Material Ticket @ 5,169.00
 HANDLING 243.07 @ 2.48 602.81
 MILEAGE 275 11.02 mi @ 1831.50

REMARKS:

Cement did circulate

TOTAL

SERVICE

DEPTH OF JOB 260'
 PUMPTRUCK CHARGE 1512.25
 EXTRA FOOTAGE @
 MILEAGE 6.0 miles @ 7.20 432.00
 MANIFOLD @
Light vehicle @ 4.40 264.00

TOTAL 4672.88

CHARGE TO: Bowman Oil Co
 STREET _____
 CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

@ _____
 @ _____
 @ _____
 @ _____
 @ _____

TOTAL _____

To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) _____
 TOTAL CHARGES 9,841.61
 DISCOUNT 2,165.16 (22%) IF PAID IN 30 DAYS
7,676.45 Net

PRINTED NAME _____
 SIGNATURE Terry Acuston



Services, Inc.

CHARGE TO: **Bill Bowman Oil Co.**
 ADDRESS:
 CITY, STATE, ZIP CODE:

PAGE 1 OF 2

WELL/PROJECT NO. #1
 LEASE: **MARR**
 COUNTY/PARISH: **RAVINGS**
 STATE: **KS**
 CITY: **KS**
 DATE: **6-8-14**
 OWNER: **Same**
 ORDER NO. **Location**
 DELIVERED TO: **Location**
 SHIPPED VIA: **CT**
 RIG NAME/NO.: **White Kitch Drilg.**
 CONTRACTOR: **White Kitch Drilg.**
 TICKET TYPE: SERVICE
 SALES
 WELL TYPE: **OR**
 WELL CATEGORY: **Development**
 JOB PURPOSE: **5 1/2" 2-Stage Logging**
 WELL PERMIT NO.:
 WELL LOCATION: **Atwood, Ks - bu, Same**
 REFERRAL LOCATION:

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	DIS-AGREE	UN-DECIDED	PAGE TOTAL #1	UNIT PRICE	AMOUNT
		LOC	ACCT	DF										
575		1			MILEAGE # 112	140	MC					#1	6.00	840.00
579		1			Pump Cycle - 2 Stage	1	NBS	4453	R			#1	2000.00	2000.00
580		1			Additional Hours - Create	1	HRS					#1	200.00	200.00
221		1			Liquid Kcl	4	GL					#1	25.00	100.00
281		1			Mudflush	500	GL					#1	1.25	625.00
402		1			CEMENT	12	BA	5 1/2"				#1	70.00	840.00
403		1			Cement Baskets	3	EA					#2	300.00	900.00
407		1			Insert Float Size w/ Auto Fall	1	EA					#1	375.00	375.00
408		1			DV Tool - Pipe Set	1	EA	2810	R			#1	3550.00	3550.00
417		1			DV Latch Down Pipe - Baffle	1	EA					#1	200.00	200.00

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

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

DATE SIGNED 6-8-14
 TIME SIGNED 1030
 A.M. P.M.

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

SURVEY

AGREE UN-DECIDED DIS-AGREE

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?

WE UNDERSTOOD AND MET YOUR NEEDS?

OUR SERVICE WAS PERFORMED WITHOUT DELAY?

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?

ARE YOU SATISFIED WITH OUR SERVICE? YES NO

CUSTOMER DID NOT WISH TO RESPOND

TOTAL

PAGE TOTAL #1 9630.00

#2 16727.25

Subtotal 26357.25

TAX 7.9% 1,447.28

TOTAL 27,804.53

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

SWIFT OPERATOR: **Wayne Wilson**

APPROVAL: **Koger J. M. [Signature]**

Thank You!

TICKET 26279



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 26279

CUSTOMER: **BOWMAN OIL Co.** WELL: **MAYR #1** DATE: **6-8-14** PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY	U/M	UNIT PRICE	AMOUNT
		LOG	ACCT	DF						

375					EA-2	175	SKS	14.50	2537.50
330					SWIFT MULTI-DESIGN STAMPS	375	SKS	18.50	6937.50
276					FLOCELE	150	US	2.50	375.00
283					SALT	900	US	.20	180.00
284					CALCEAL	8	SKS	35.00	280.00
292					HAWK 322	125	US	8.00	1000.00
290					D-ADD	10	GAL	42.00	420.00

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	TIME	DESCRIPTION	QTY	U/M	UNIT PRICE	AMOUNT	MILEAGE CHARGE	MILEAGE TOTAL WEIGHT CHARGE	MILEAGE TOTAL WEIGHT	LOADED MILES	TON MILES	CUBIC FEET	SERVICE CHARGE
583														

CONTINUATION TOTAL

16727.25

JOB LOG

SWIFT Services, Inc.

DATE 6-8-14 PAGE NO.

CUSTOMER **BOWMAN OIL Co.** WELL NO. # **1** LEASE **MAYR** JOB TYPE **5 1/2" 2-STAGE LONGSTRENG** TICKET NO. **26279**

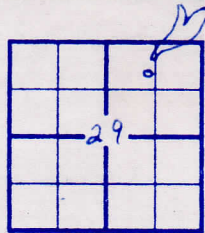
CHART NO.	TIME	RATE (BPM)	VOLUME (BBLS/GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1000							ON LOCATION
	1100							START 5 1/2" CASING TO WELL
								TD-4457 SET= 4453
								TP-4453 5 1/2" 14
								SJ-20'
								CENTRALIZERS - 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 38, 68
								CMT BSKTS - 19, 39, 69
								DV TOOL - 2810 TOP JT # 39
	1230							DROP BALL - CIRCULATE
	1325	6	12		✓		500	PUMP 500 GAL MUD FLUSH
	1327	6	20		✓		500	PUMP 20 BBS KCL-FLUSH
	1330	4 1/4	42		✓		300	MIX - 175 SKS EA-2 CMT = 15.4 PP6
	1342							WASH OUT PUMP - LINES
	1342							RELEASE 1ST STAGE LATCH DOWN PLUG
	1345	7	0		✓			DISPLACE PLUG (7 BPM / 105 BBS / 800 PSE)
	1400	6	108.2				1500	PLUG DOWN - PSE UP LATCH TO PLUG
	1405							OK RELEASE PSE - HELD
	1410							DROP DV OPENING PLUG
	1430				✓		1400	OPEN DV CIRCULATE
	1430	6	20		✓		400	PUMP 20 BBS KCL-FLUSH
	1435		7					PLUG RH (30 SKS)
	1438	6 1/4	191		✓		400	MIX - 345 SKS SMD = 11.2 PP6
	1458							WASH OUT PUMP - LINES
	1458							RELEASE DV CLOSING PLUG
	1500	5	0		✓			DISPLACE PLUG (5 BPM / 65 BBS / 600 PSE)
	1515	4	68.6				1750	PLUG DOWN - PSE UP CLOSE DV TOOL
	1520							OK RELEASE PSE - HELD
								CIRCULATES 40 SKS CEMENT TO PZT
								WASH TRUCK
	1600							JOB COMPLETE

THANK YOU
WAYNE, BRIAN, ROB, JOHN

GEOLOGIC
REPORT
LOG

API: 15-153-21,006-00-00

COMPANY The Bill Bowman
Oil Company
WELL Maxr #1
FIELD Wildcat
LOCATION 4527' FSL E 1458' FEL
SEC. 29 TWP. 3s RGE. 34w
COUNTY Rawlins
STATE Kansas



PRODUCTION Oil
ELEVATION KB 3055
DF _____
GL 3050
Drilling Measured From: Kelly Bushing
Samples Saved From 3250 To: TD
Drilling Time From 3250 To: TD
Samples Examined From: 3250 To: TD
Geological Supervision From 3250 To Total Depth
Wellsite Geologist Kegan J. Moore
Electrical Surveys Dual Induction
Porosity
Micro
Pioneer Energy Services

OPERATOR The Bill Bowman Oil Co.
CONTRACTOR White Knight Drilling
COMM: 6-2-14 COMP: 6-8-14
CASING RECORD
SURF: 8 5/8" @ 260' PROD: 5 1/2" @
TOTAL DEPTH DRILLERS: 4460'
TOTAL DEPTH LOG 4457'

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Anhydrite	2184 (+271)	2776	+279	+12
Base/Anhydrite	2824 (+231)	2822	+233	+6
Neva	3346 (+29)	3342	-287	+1
Foraker	3480 (-425)	3478	-423	+3
Tarkio	3571 (-516)	3568	-513	+4
Topeka	3700 (-655)	3718	-663-663	N/A
Heehner	3923 (-868)	3926	-871	+03
Lansing	3966 (-911)	3972	-917	+2
Base/Kansas City	4213 (-1158)	4214	-1159	+5
Marmaton	4252 (-1197)	4252	-1197	+6
Cherokee	4388 (-1333)	4392	-1337	+7

REFERENCE WELL FOR STRUCTURE Bill Bowman Oil Company
Simlinger #1, 2216' FSL E 3273' FEL Section
21-3s-34W, Rawlins County, Kansas

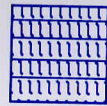
DRILL STEM TESTS

No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	IHH-FHH	RECOVERY
		NO DST'S RAN					

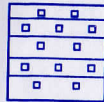
REMARKS AND RECOMMENDATIONS Based on oil shows and structural position 5 1/2" production casing was run and cemented in to further evaluate Kansas City zones.

Respectfully
Roger J. Mason

LEGEND



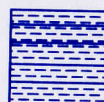
Anhydrite



Salt



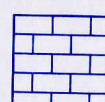
Sandstone



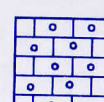
Shale



Carb sh



Limestone



Ool. Lime



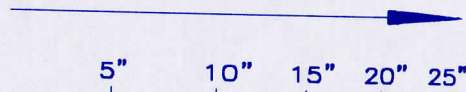
Chert



Dolomite

LOG 7710

DRILLING TIME IN MINUTES
PER FOOT
Rate of Penetration Decreases



DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
3300				
10				
20				
30				
40				
50				
60				

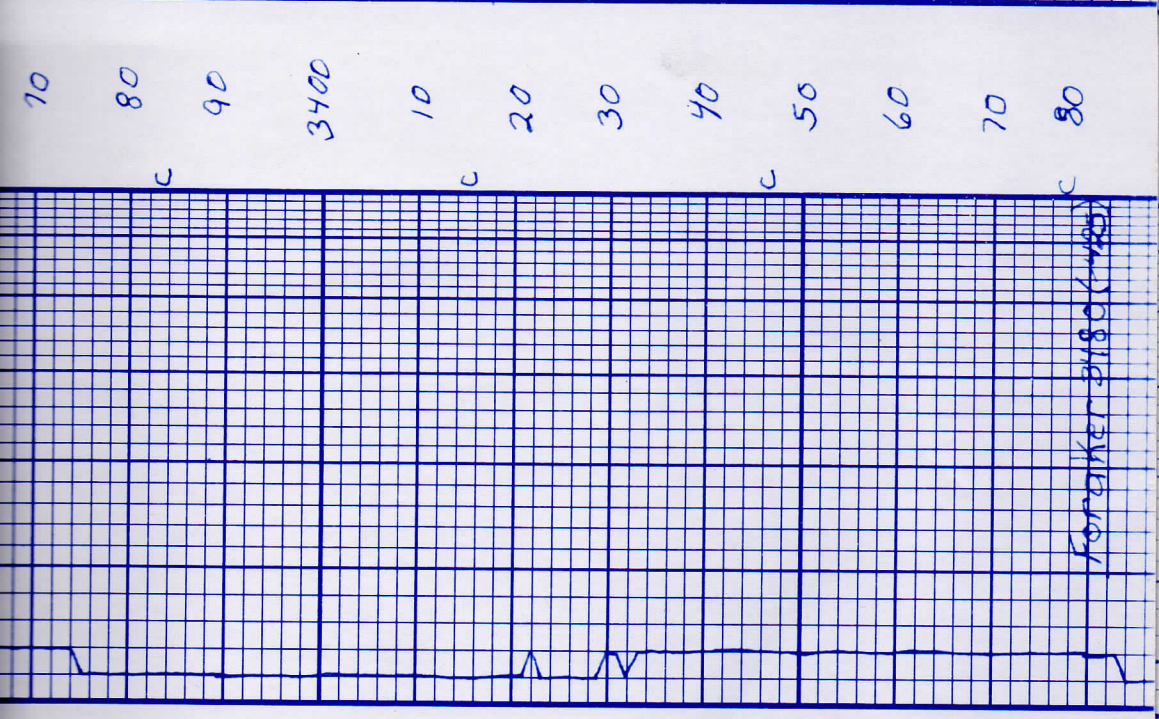
Neva 3346 (29)

LS: wht-bulk, fine d xln
good intax xln, few gr
xtls. No NS

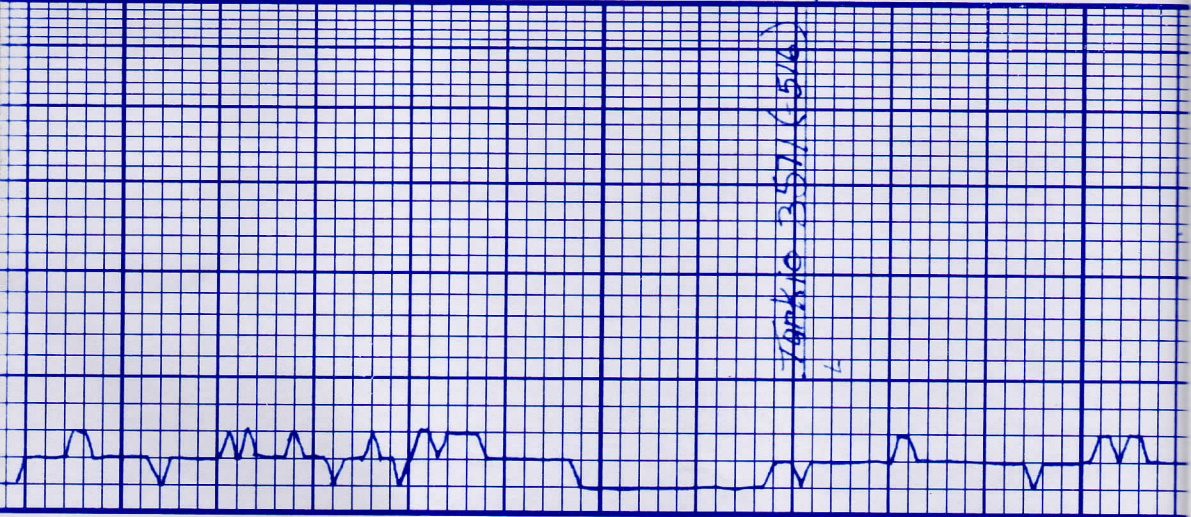
VIS 45
WT 8.5
LCM 2 1/2

LS: tan soft, friable x10 Fett No NS	70
SH: vani chd, med ply	80
	90
	3400
SH: S 9/9	10
LS: tan, friable x10, inter x10 B, few N's, some Fett	20
	30
	40
LS: white, friable soft, fett	50
	60
LS: S 9/9	70
LS: white, tan, friable x10 inter x10, No NS	80

VIS 51
WT 8.8
LCM 2 1/2



FORA KEM 21180 (4480)



90	SH: gry, med, pity
3500	LS: gry, f-med xln, in xln No NS
c 10	LS: wht - lt gry, f-med xln inter xln No NS
20	LS: sqa
30	
c 40	LS: wht - gry, some mthid fxln, No NS
50	SH: red, oranges, med, pity
60	
70	LS: tan - gry, f-med xln poor in xln No NS
80	LS: wht - lt gry, f-med xln, silty red sh.
90	LS: lt gry - tan, fxln, dns. No NS
c 3600	
10	

VIS 60
WT 8.9
LCM 2

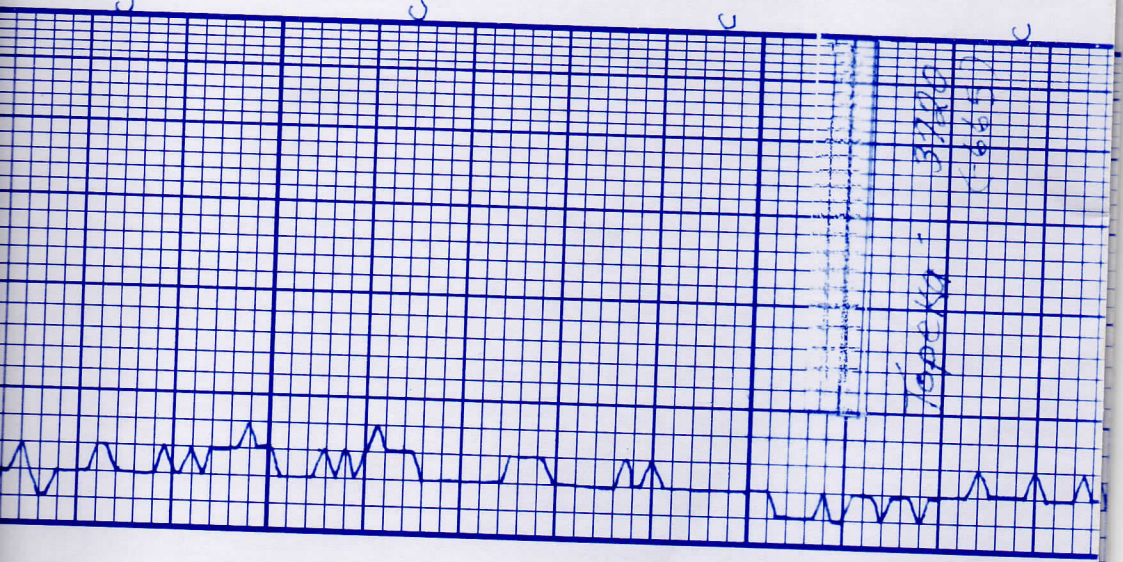
VIS 51
WT 9.1

VIS 47
WT 8.9

VIS 47
WT 8.9
LCM 2 1/2

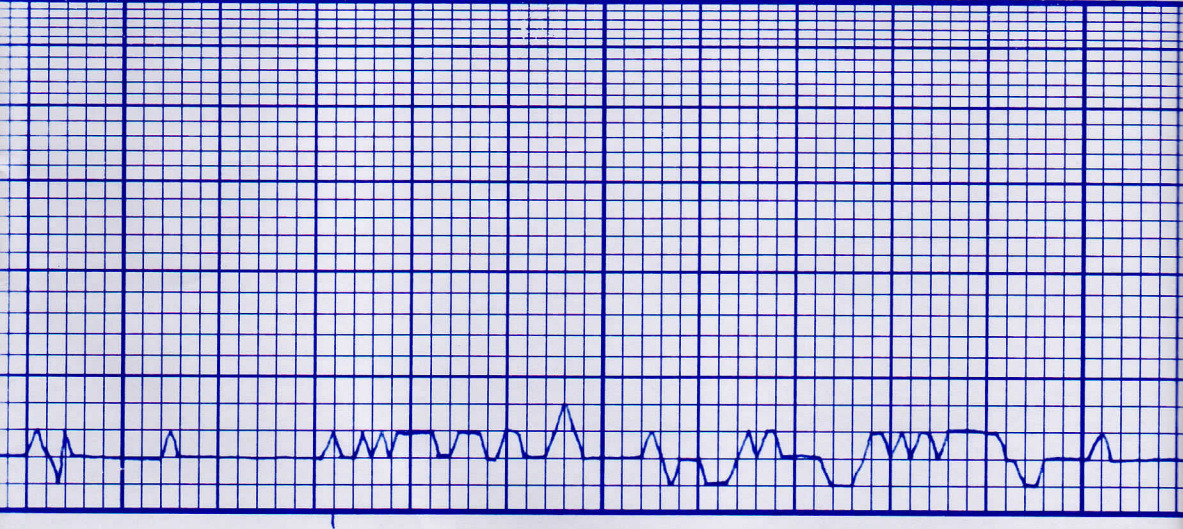
SH: red-gry, med, blk y
LS: wlt-tan, F, xln, intw xln
LS: wlt, F, med xln NO NS
SH: gray-brn
LS: gray-wlt, F, xln, dns brn
LS: wlt-lt yellow, F, med xln NO NS
SH: red-brn, slty, musty
LS: wlt-lt grn, F, med xln intxln NO NS

20
30
40
50
60
70
80
90
3700
10
20
30



LS: w/ht, med xln, int xln SH: red-brn, med.	LS: w/ht-tan, f-med xln, int xln FC, tarry bit	LS: w/ht-tan, f-med xln, int xln SL: dar, SL: SC	LS: w/ht-tan, f-med xln, int xln XH, few tarry pcs bit	SH: red, brn, med, p/ty.	LS: tan-w/ht, f-med xln int xln, NO NS FeH	LS: tan-w/ht, f-med xln, ch/ky, NO NS.	SH: vari clnd, med, p/ty	LS: w/ht-tan, f-med xln, int xln NO NS ch/ky
---	---	---	---	--------------------------	---	---	--------------------------	---

40
50
60
70
80
90
3800
10
20
30
40
50
60

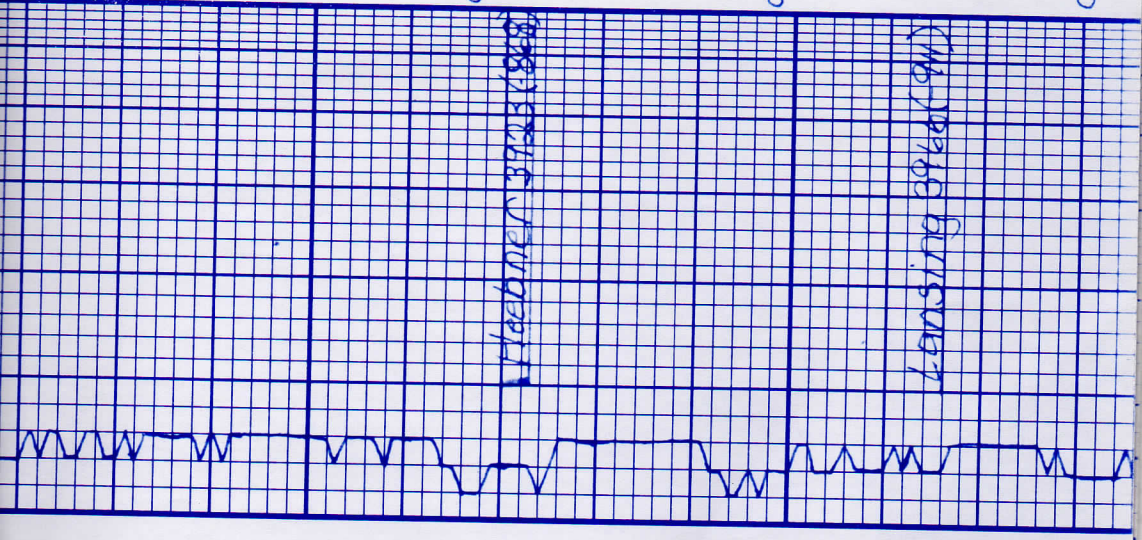


VIS 49
WT 9.0

VIS 45
WT 9.5
LCM 2

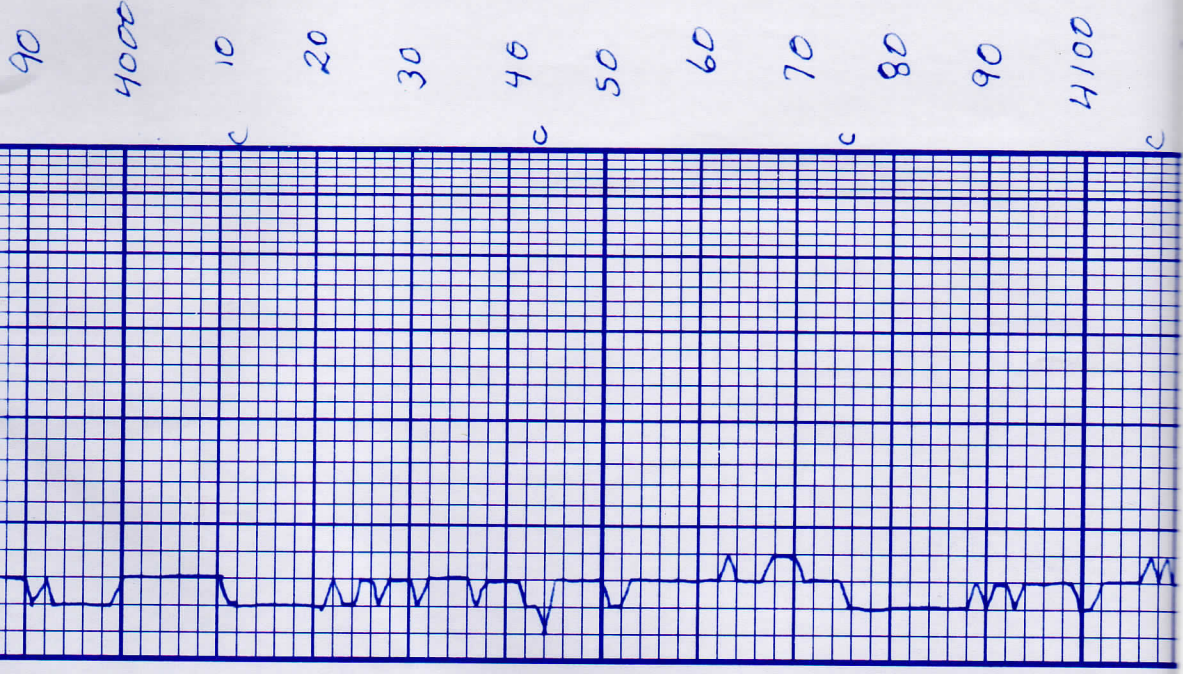
LS: gray - off wht, F-med xln NO NS	
LS: tan - gray, F-med xln int xln Ø Føt NO NS	
DK, carb SH	
LS: lt gray, F-med xln slip Ø, Asphaltine	0
SS: clr, f med grnd sub rounded, mod srtel NO NS	
SH: Vani clred	
LS: tan F-med xln, ista Xln Ø, pp Ø Fodor V Sl: SO	
LS: wht f xln dns V used pp Ø Fodor	

70
80
90
3900
10
20
30
40
50
60
70
80



VIS 46
WT 9.6
LCM 2

LS: wht-buff, f-med xln Gator, SFO	LS: wht, f-med xln, dns- vuggy PPQ, G: odor G: SFO	SH: vari clrd,	LS: wht-tan, f-med xln. inter xln, vuggy Fair odor, G: SFO	LS: wht, f-med xln, dns inter xln, NO NS	Blk, carb, snale	SH: vari clrd, med, plty	LS: tan, f-med xln inter xln, NO NS	SH: red, rust-brn	LS: wht, f, n xln, inter xln few vuggy, G: SFO	LS: wht, f-med xln, vuggy	LS: tan, f-med xln
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VIS 45
WT 10.0
LCM 2

VIS 40
WT 9.8

SH: Vari. clrd, med.

LS: wlt, fmed xln
intstain, barren

LS: wlt, fmed xln
intstain, barren
Lt stain, Asphaltine

SH: red-gny med, blk y.

LS: wlt, fmed xln
few vugs, Jarry / stain

SH: red-gny med, blk y.

LS: wlt, fmed xln
intstain, barren

LS: wlt, fmed xln
vsl: odor sl: 50

SH: gny-dark gny med.
plty-blky

20

30

40

50

60

70

80

90

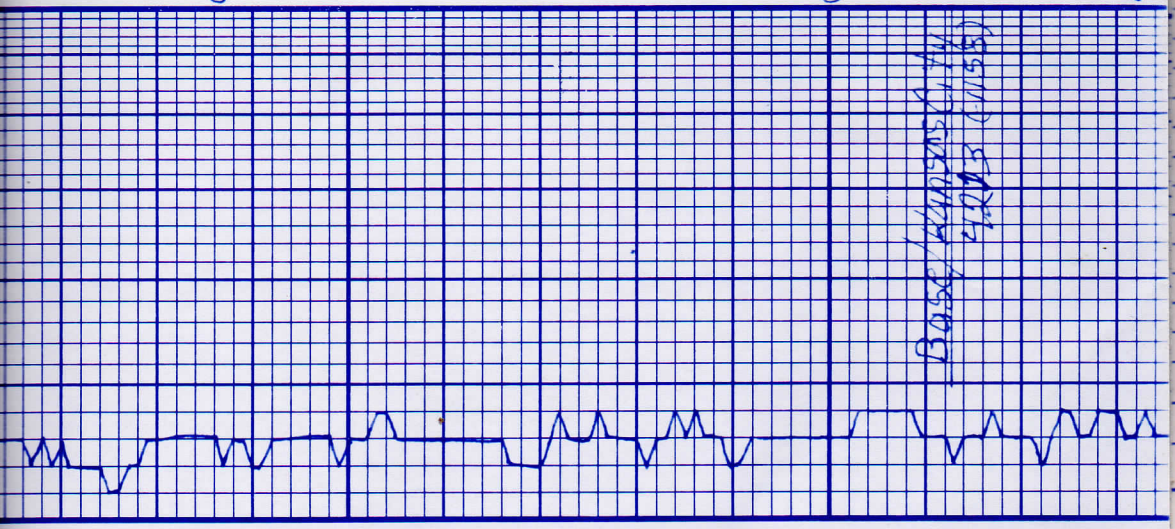
c 4200

10

20

30

Base / 4000 (1.74)
4000 (1.55)



VIS 41
WT 9.8

VIS 46
WT 10.2

VIS 46

LS: wkt, dis, F, xln
barren

LS: S 9/a

SH: red-gray med

LS: wkt. 17 gny, F, med xln.
SH: Vari clrd.

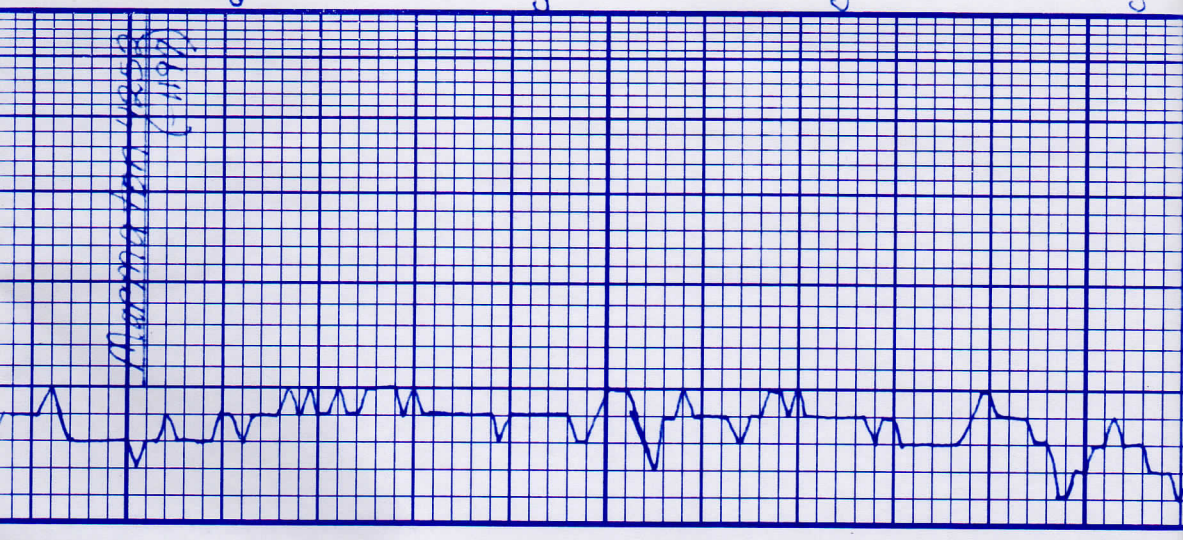
LS: wkt-tan, F-med xln
intoxln NO NS

SH: Vari clrd, med
biky

Blk carb SH

40
50
60
70
80
90
4300
10
20
30
40
50
10

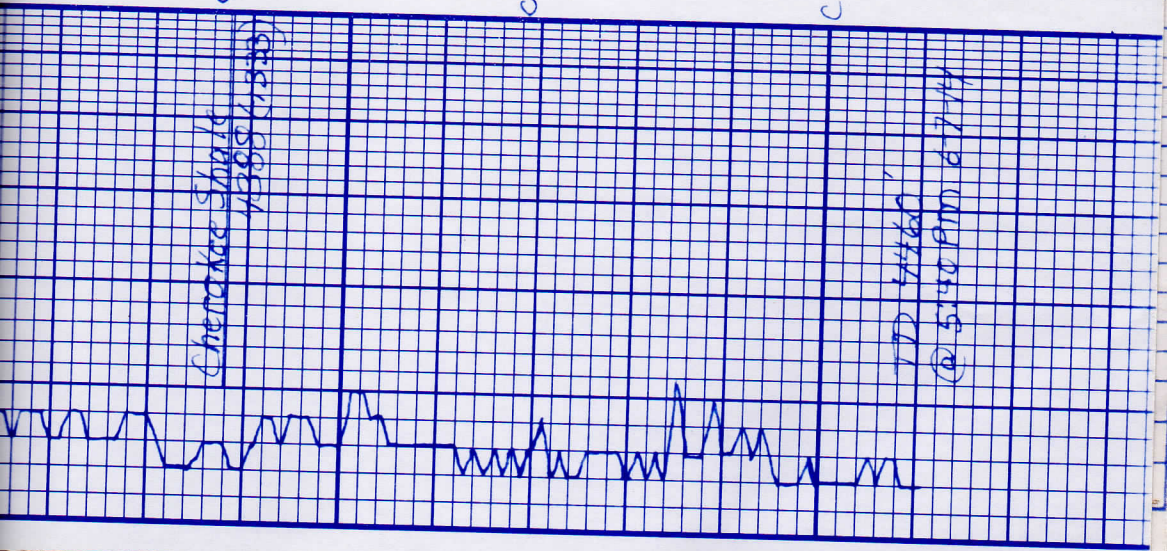
~~Ammonium Van (1998)~~
(1197)



W/ 10.0

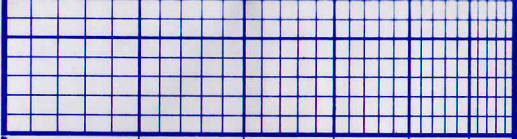
LS: wkt tan, f med xln NO NS	SH: red-brn mod blk y
Blk, tan to shale	
LS: wkt tan f med xln barren	
LS: wkt, f med xln, v. shaly w/ f. odor SFC	
LS: s g/y	
SH: gry-red, blk y	
LS: wkt tan, f med xln ind. sh. sli odor Asphaltic	
SH: var. clrd med	

70
80
90
4400
10
20
30
40
50
60



Chenokoa Shale
1988 (1988)

TD 34460
@ 5:40 PM 6-7-44



5" 10" 15" 20" 25"

DRILLING TIME Minutes/Foot

Rate of Penetration Decreases

DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS

CONTRACTOR White Knight Drllg LLC

LEASE Mayr IP Oil

ELEVATION 3055 KB RTD 4460

LOCATION 4527' FSL E 1458' FEL

SEC 29 TWP 3s RNG 34w

COUNTY Rawlins STATE Kansas