

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

RECEIVED
AUG 16 2002
8/16/2002
KCC WICHITA

API NO. 15- 051-24,535-0000 ORIGINAL
County ELLIS
-NE-SW-NE Sec. 6 Twp. 11 Rge. 20 X^E_W
3630 Feet from S (circle one) Line of Section
1650 Feet from E (circle one) Line of Section

Operator: License # 5259

Name: MAI OIL OPERATIONS, INC.

Address P.O. BOX 33

City/State/Zip RUSSELL, KS. 67665

Purchaser: NCRA

Operator Contact Person: ALLEN BANGERT

Phone (785) 483 2169

Contractor: Name: RAPID WELL SERVICE

License: _____

Wellsite Geologist: _____

Designate Type of Completion
New Well _____ Re-Entry Workover _____

Oil _____ SWD _____ SOW _____ Temp. Abd. _____
Gas ENHR _____ SIGW _____
Dry _____ Other (Core, WSW, Expl., Cathodic, etc) _____

If Workover:

Operator: MAI OIL OPERATIONS, INC.

Well Name: RICHARDS #3

Comp. Date 11-27-87 Old Total Depth 3658

Deepening _____ Re-perf. Conv. to Inj/SWD _____
Plug Back _____ PBDT _____
Commingled _____ Docket No. E-28,024
Dual Completion _____ Docket No. _____
Other (SWD or Inj?) Docket No. _____

8-14-2002 8-14-2002 8-14-2002
Spud Date Date Reached TD Completion Date

Footages Calculated from Nearest Outside Section Corner:
NE, (SE) NW or SW (circle one)

Lease Name RICHARDS Well # 3

Field Name MENDOTA

Producing Formation TOPEKA, LKC, ARBUCKLE

Elevation: Ground 2036 KB 2041

Total Depth 3658' PBDT 3655'

Amount of Surface Pipe Set and Cemented at 258 Feet

Multiple Stage Cementing Collar Used? _____ Yes _____ No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from 1490

feet depth to SURFACE w/ 300 sx cmt.

Drilling Fluid Management Plan Workover EA B. 90-07
(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 No. _____

Quarter _____ Sec. _____ Twp. _____ S Rng. _____ E/W

County _____ Docket No. _____

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

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.

Signature Allen Bangert

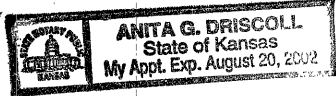
Title PRODUCTION SUPERINTENDENT Date 8-15-2002

Subscribed and sworn to before me this 15 day of AUGUST

19 2002
Notary Public Anita G. Driscoll

Date Commission Expires 8-20-2002

K.C.C. OFFICE USE ONLY
F NO Letter of Confidentiality Attached
C Wireline Log Received
C Geologist Report Received
Distribution
KCC SWD/Rep _____ NGPA
KGS _____ Plug _____ Other
(Specify)



Operator Name MAI OIL OPERATIONS, INC. Lease Name RICHARDS Well # 3

Sec. 6 Twp. 11 Rge. 20 East West County ELLIS

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem 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 during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken (Attach Additional Sheets.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run (Submit Copy.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No List All E.Logs Run: <u>GAMMA RAY-NEUTRON</u>	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample Name Top Datum <p style="text-align:center">SEE ATTACHMENT</p>
--	---

CASING RECORD <input type="checkbox"/> New <input checked="" 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
SURFACE	12 1/4"	8 5/8"	20#	258'	60-40POZ	165	2%GEL 3%CC
PRODUCTION	7 7/8"	5 1/2"	14#	3657 1/2'	COMMON	100	10%salt

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				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) Depth
4	3648-52, 3643-56'	1500gal 15% FE
3	3497-3501', 3483-87', 3463-66', 3408-11', 3236-40', 3107-11'	6500gal 15&20% NE&CRA

TUBING RECORD		Size Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No
		2 3/8" DOULINED 3060'	3063'	
Date of First, Resumed Production, SWD or Inj.		Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
AS SOON AS APPROVED				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

Disposition of Gas: **METHOD OF COMPLETION** Production Interval

Vented Sold Used on Lease Open Hole Perf. Dually Comp. Commingled

(If vented, submit ACO-18.) Other (Specify) _____

15-051-24535-00-01

ORIGINAL

WORK ORDER CONTRACT AND PRE-TREATMENT DATA

Halliburton Company
OKLAHOMA 73536

ATTACH TO INVOICE & TICKET NO. 418970

WELL NO. Hays, KS

DATE 11-27-87

HALLIBURTON SERVICES YOU ARE HEREBY REQUESTED TO FURNISH EQUIPMENT AND SERVICEMEN TO DELIVER AND OPERATE

THE SAME AS AN INDEPENDENT CONTRACTOR TO: Maai Operations (CUSTOMER) AND DELIVER AND SELL PRODUCTS, SUPPLIES, AND MATERIALS FOR THE PURPOSE OF SERVICING

LEASE NO. LEASE Richards SEC. 6 TWP. 11 RANGE 20

D. 15115 COUNTY Trego STATE Ks OWNED BY Same

THE FOLLOWING INFORMATION WAS FURNISHED BY THE CUSTOMER OR HIS AGENT

FORMATION TYPE
FORMATION FROM TO
CORKER: TYPE SET AT
DEPTH 3658 MUD WEIGHT
HOLE
PROD: OIL BPD, H2O BPD, GAS MCF
SENT PROD: OIL BPD, H2O BPD, GAS MCF

	NEW USED	WEIGHT	SIZE	FROM	TO	MAX. ALLOW. PSI
CASING	U		5 1/2	GL	3658	
LINER						
TUBING						
OPEN HOLE	RECEIVED			3658	3658	SHOTS/FT.
PERFORATIONS	AUG 16 2002					
PERFORATIONS	8-16-2002					
PERFORATIONS	KCC WICHITA					

PREVIOUS TREATMENT: DATE TYPE MATERIALS

TREATMENT INSTRUCTIONS: TREAT THRU TUBING ANNULUS CASING TUBING/ANNULUS HYDRAULIC HORSEPOWER ORDERED
CMT 5 1/2 in Long String w/ 100 SKS standard 10% salt

CUSTOMER OR HIS AGENT WARRANTS THE WELL IS IN PROPER CONDITION TO RECEIVE THE PRODUCTS, SUPPLIES, MATERIALS, AND SERVICES

THIS CONTRACT MUST BE SIGNED BEFORE WORK IS COMMENCED

In consideration, the above-named Customer agrees:

To pay Halliburton in accord with the rates and terms stated in Halliburton's current price lists.

Halliburton shall not be responsible for and Customer shall secure Halliburton against any liability for damage to property of Customer and of the well owner (if different from Customer), unless caused by the willful misconduct or gross negligence of Halliburton, this provision applying to but not limited to subsurface damage and surface damage arising from subsurface damage.

Customer shall be responsible for and secure Halliburton against any liability for reservoir loss or damage, or property damage resulting from subsurface pressure, losing control of the well and/or a well blowout, unless such loss or damage is caused by the willful misconduct or gross negligence of Halliburton.

Customer shall be responsible for and secure Halliburton against any and all liability of whatsoever nature for damages as a result of subsurface trespass, or an action in the nature thereof, arising from a service operation performed by Halliburton hereunder.

Customer shall be responsible for and secure Halliburton against any liability for injury to or death of persons, other than employees of Halliburton, or damage to property (including, but not limited to, injury to the well), or any damages whatsoever, irrespective of cause, growing out of or in any way connected with the use of radioactive material in the well hole, unless such damage shall be caused by the willful misconduct or gross negligence of Halliburton.

Halliburton makes no guarantee of the effectiveness of the products, supplies or materials, nor of the results of any treatment or service.

Customer shall, at its risk and expense, attempt to recover any Halliburton equipment, tools or instruments which are lost in the well and if such equipment, tools or instruments are not recovered, Customer shall pay Halliburton its replacement cost unless such loss is due to the sole negligence of Halliburton. If Halliburton equipment, tools or instruments are damaged in the well, Customer shall pay Halliburton the lesser of its replacement cost or the cost of repairs unless such damage is caused by the sole negligence of Halliburton. In the case of equipment, tools or instruments for marine operations, Customer shall, in addition to the foregoing, be fully responsible for loss of or damage to any of Halliburton's equipment, tools or instruments which occurs at any time after delivery to Customer at the landing until returned to the landing, unless such loss or damage is caused by the sole negligence of Halliburton.

Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, Halliburton is unable to guarantee the accuracy of any chart interpretation, research analysis, job recommendation or other data furnished by Halliburton. Halliburton personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Customer agrees that Halliburton shall not be responsible for any damages arising from the use of such information except where due to Halliburton's gross negligence or willful misconduct in the preparation or furnishing of it.

Halliburton warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the sale or use of any products, supplies or materials is expressly limited to the replacement of such products, supplies or materials on their return to Halliburton or, at Halliburton's option, to the allowance to the Customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, punitive or consequential damages.

Invoices payable NET by the 20th of the following month after date of invoice. Upon Customer's default in payment of Customer's account by the last day of the month following the month in which the invoice is dated, Customer agrees to pay interest thereon after default at the highest lawful contract rate applicable but never to exceed 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all collection costs and attorney fees in the amount of 20% of the amount of the unpaid account.

This contract shall be governed by the law of the state where services are performed or equipment or materials are furnished.

Halliburton shall not be bound by any changes or modifications in this contract, except where such change or modification is made in writing by a duly authorized executive officer of Halliburton.

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMER'S AGENT

SIGNED [Signature] CUSTOMER
DATE 11-27-87

TIME 1:00 A.M. P.M.

That the Fair Labor Standards Act of 1938, as amended, has been complied with in connection of goods and/or with respect to services furnished under this contract.



15-051-24535-00-01

ORIGINAL

WORK ORDER CONTRACT AND PRE-TREATMENT DATA

ATTACH TO INVOICE & TICKET NO. 651041

FORM 1908 R-4

A Division of Halliburton Company DUNCAN, OKLAHOMA 73536

DISTRICT Wagon Wheel DATE 3-7-02

YOU ARE HEREBY REQUESTED TO FURNISH EQUIPMENT AND SERVICEMEN TO DELIVER AND OPERATE THE SAME AS AN INDEPENDENT CONTRACTOR TO: MAE O'NEILL (CUSTOMER) AND DELIVER AND SELL PRODUCTS, SUPPLIES, AND MATERIALS FOR THE PURPOSE OF SERVICING

WELL NO. 2 LEASE REUBEN D2 SEC. 6 TWP. 11 RANGE 20

FIELD WAGON WHEEL COUNTY CLATSOP STATE OREGON OWNED BY Same

THE FOLLOWING INFORMATION WAS FURNISHED BY THE CUSTOMER OR HIS AGENT

FORMATION NAME _____ TYPE _____
FORMATION THICKNESS _____ FROM _____ TO _____
ACKER: TYPE R720 SET AT 23500
TOTAL DEPTH _____ MUD WEIGHT _____
CORE HOLE _____
INITIAL PROD: OIL _____ BPD, H2O _____ BPD, GAS _____ MCF
PRESENT PROD: OIL _____ BPD, H2O _____ BPD, GAS _____ MCF

	NEW USED	WEIGHT	SIZE	FROM	TO	MAX. ALLOW. P.S.I.
CASING			5 1/2			
LINER						
TUBING			2 3/4			
OPEN HOLE	RECEIVED					SHOTS/FT.
PERFORATIONS	AUG 16 2002					
PERFORATIONS	8-16-2002					
PERFORATIONS	KCC WICHITA					

PREVIOUS TREATMENT: DATE _____ TYPE _____ MATERIALS _____

TREATMENT INSTRUCTIONS: TREAT THRU TUBING ANNULUS CASING TUBING/ANNULUS HYDRAULIC HORSEPOWER ORDERED
Test RBP @3500 to 2000. Circ hole spot 25kts sand - perforate CSG
I 1490' circ. cmt to surface - squeeze using 200 Gals Floccle 21 and
200 sks Hgw. LT Cmt 1/8" floccle /sk + 100 gals 60/90 Per 29cc 39cc

CUSTOMER OR HIS AGENT WARRANTS THE WELL IS IN PROPER CONDITION TO RECEIVE THE PRODUCTS, SUPPLIES, MATERIALS, AND SERVICES

THIS CONTRACT MUST BE SIGNED BEFORE WORK IS COMMENCED

In consideration, the above-named Customer agrees:
1. To pay Halliburton in accord with the rates and terms stated in Halliburton's current price lists.
2. Halliburton shall not be responsible for and Customer shall secure Halliburton against any liability for damage to property of Customer and of the well owner (if different from Customer), unless caused by the willful misconduct or gross negligence of Halliburton, this provision applying to but not limited to subsurface damage and surface damage arising from subsurface damage.
3. Customer shall be responsible for and secure Halliburton against any liability for reservoir loss or damage, or property damage resulting from subsurface pressure, losing control of the well and/or a well blowout, unless such loss or damage is caused by the willful misconduct or gross negligence of Halliburton.
4. Customer shall be responsible for and secure Halliburton against any and all liability of whatsoever nature for damages as a result of subsurface trespass, or an action in the nature thereof, arising from a service operation performed by Halliburton hereunder.
5. Customer shall be responsible for and secure Halliburton against any liability for injury to or death of persons, other than employees of Halliburton, or damage to property (including, but not limited to, injury to the well), or any damages whatsoever, irrespective of cause, growing out of or in any way connected with the use of radioactive material in the well hole, unless such damage shall be caused by the willful misconduct or gross negligence of Halliburton.
6. Halliburton makes no guarantee of the effectiveness of the products, supplies or materials, nor of the results of any treatment or service.
7. Customer shall, at its risk and expense, attempt to recover any Halliburton equipment, tools or instruments which are lost in the well and if such equipment, tools or instruments are not recovered, Customer shall pay Halliburton its replacement cost unless such loss is due to the sole negligence of Halliburton. If Halliburton equipment, tools or instruments are damaged in the well, Customer shall pay Halliburton the lesser of its replacement cost or the cost of repairs unless such damage is caused by the sole negligence of Halliburton. In the case of equipment, tools or instruments for marine operations, Customer shall, in addition to the foregoing, be fully responsible for loss of or damage to any of Halliburton's equipment, tools or instruments which occurs at any time after delivery to Customer at the landing until returned to the landing, unless such loss or damage is caused by the sole negligence of Halliburton.
8. Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, Halliburton is unable to guarantee the accuracy of any chart interpretation, research analysis, job recommendation or other data furnished by Halliburton. Halliburton personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Customer agrees that Halliburton shall not be responsible for any damages arising from the use of such information except where due to Halliburton's gross negligence or willful misconduct in the preparation or furnishing of it.
9. Halliburton warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the sale or use of any products, supplies or materials is expressly limited to the replacement of such products, supplies or materials on their return to Halliburton or, at Halliburton's option, to the allowance to the Customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, punitive or consequential damages.
10. Invoices payable NET by the 20th of the following month after date of invoice. Upon Customer's default in payment of Customer's account by the last day of the month following the month in which the invoice is dated, Customer agrees to pay interest thereon after default at the highest lawful contract rate applicable but never to exceed 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all collection costs and attorney fees in the amount of 20% of the amount of the unpaid account.
11. This contract shall be governed by the law of the state where services are performed or equipment or materials are furnished.
12. Halliburton shall not be bound by any changes or modifications in this contract, except where such change or modification is made in writing by a duly authorized executive officer of Halliburton.

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMER'S AGENT.

SIGNED Alvin Bangert CUSTOMER
DATE 3-7-02

For the Fair Labor Standards Act of 1938, as amended, has been complied with

TIME _____ A.M. P.M.

15-051-24535-00-01

ORIGINAL

17, Russell, Kansas
 J-5861, Great Bend, Kansas

Phone Plainville 913-434-2812
 Phone Ness City 913-798-3843

New

ALLIED CEMENTING CO., INC.

N^o 1312

Home Office P. O. Box 31

Russell, Kansas 67665

Date	11-18-87	Sec.	6	Twp.	11 ³	Range	20 ^W	Called Out	3:00 P.M.	On Location	5:00 P.M.	Job Start	7:10 P.M.	Finish	7:30 P.M.	
Well No.	Richards	Well No.	3	Location	Palco (Boostenst.) 7S1/2W15 ² E			County	Ellis	State	Ks.					
Contractor	Revlin Dnlg.			Rig #1	Owner Same											
Job	Set Surface Pipe															
Pipe Size	12 1/4"		T.D.	261'												
Depth	8 7/8"		Depth	258'												
Charge To	Mai Operations															
Street	P. O. Box 33															
City	Russell,										State	Ks. 67665				
The above was done to satisfaction and supervision of owner agent or contractor																
Purchase Order No.	RECEIVED															
X	AUG 1, 6 2002															

EQUIPMENT

Emptrk	No.	Cementer	Gary H. Jim S.
191		Helper	
Emptrk	No.	Cementer	Randy P.
		Helper	
		Driver	
Bulktrk	#60	Driver	

DEPTH of Job		
Reference #	#1 Pumptruck-surface	\$360.00
	#8 1-8 7/8" surface plug	40.00
	#14 mileage @ 1.00/mi.	26.00
	Sub Total	\$426.00
	Tax	
	Total	

Remarks: Cement Circulated.

Amount Ordered	165 sks 60/40 poz 2 bag, 3 b.c.c.	
Consisting of		
Common	99 sks @ 5.00/sk.	495.00
Poz. Mix	66 sks @ 2.10/sk.	138.60
Gel.	3 sks @ 6.75/sk.	20.25
Chloride	5 sks @ 20.00/sk.	100.00
Quickset		
Handling	275 1/4/sk. (165 sks)	123.75
Mileage	203 1/4/sk./mi. (26 mi.)	128.70
Sub Total		1006.30
Total		
Floating Equipment	Thanks	

15-051-24535-00-01

ORIGINAL

RECEIVED

AUG 16 2002

KCC WICHITA

8/16/2002

ATTACHMENT

FORMATION TOPS
(Sample Tops)

<u>FORMATION</u>	<u>DEPTH</u>	<u>MINUS DATUMS</u>
*Anhydrite	1500	+541
*Base-Anhydrite	1553	+488
Howard	3077	-1036
Topeka	3100	-1059
Heebner	3287	-1246
Toronto	3308	-1267
Lansing-Kansas City	3324	-1283
Base-Kansas City	3543	-1502
Marmaton	3568	-1527
Conglomerate	3599	-1558
Simpson	3617	-1576
Arbuckle	3641	-1600
Rotary Total Depth	3658	-1617
*Drillers Tops		

15-051-24535-00-01

ORIGINAL
RECEIVED

AUG 16 2002
8/16/2002
KCC WICHITA

Mai Operations
One West Hills
5787 South Hampton, Suite 485
Dallas, Texas 75232

GEOLOGICAL REPORT:

Richards No. 3
NE-SW-NE, 6-10S-20W
Ellis County, Kansas

DRILLING CONTRACTOR:

Revlin Drilling Co., Rig No. 1
Russell, Kansas 67665

DRILLING COMMENCED:

November 18, 1987

DRILLING COMPLETED:

November 27, 1987

CASING RECORD:

8 5/8 set at 258' with 165 sx.
60/40 poz., 2% gel., 3% cc.
5 1/2 set at 3557 1/2 with 100 sx.
com. 10% salt 10 bbls. salt water
preflush.

SAMPLES:

10' intervals from 3050' to
3570' then 5' intervals from
3570' to 3658' R.T.D.

DRILLING TIME:

By Geolograph.
1' intervals plotted and re-
corded from 2900' to 3658' R.T.D.

DRILL STEM TEST:

5 by Swift Formation Testers
Great Bend, Kansas

LOGS:

No logs were run on the Richards
No. 3.

ELEVATION:

American Elevations
Kelly Bushing 2041'
Ground Level 2036'
Measurements from K.B.

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FORMATION TOPS
(Sample Tops)

<u>FORMATION</u>	<u>DEPTH</u>	<u>MINUS DATUMS</u>
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Howard	3077	-1036
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Marmaton	3568	-1527
Conglomerate	3599	-1558
Simpson	3617	-1576
Arbuckle	3641	-1600
Rotary Total Depth	3658	-1617
*Drillers Tops		

Lithology: Zones of Interest

Howard (Topeka) 3077 (-1036)

Topeka 3100 (-1059)

3102-09

LS; Buff, tight crystalline porosity with a trace of spotty stain. Trace of free oil and no odor.

3234-40

LS; Buff, crystalline to granular, porosity with scattered light stain. No free oil, but faint odor.

Received

8/16/2002

Lithology: Page 2

Toronto 3308 (-1267)
3309-12LS; Buff, fine crystalline, dense to
chalky. Trace of spotty stain.
Cherty. No free oil or odor.Lansing-Kansas City 3324 (-1283)
3325-27
A ZoneLS; Buff, dense to chalky. No free
oil or odor.

Tested by D.S.T. No. 1

3332-38
A₁ ZoneLS; Buff, fossiliferous and chalky.
No free oil or odor.

Tested by D.S.T. No. 1

3340-42
B ZoneLS; Buff, fine crystalline dense to
chalky. No free oil or odor.

Tested by D.S.T. No. 1

3362-65
C ZoneLS; Light gray, sucrosic and slightly
oolitic porosity with fair stain.
Slight show of free oil and no odor.

Tested by D.S.T. No. 1

3385-87
D ZoneLS; White to buff, fine crystalline,
dense to chalky. Trace of stain.
No free oil or odor.3407-12
F ZoneLS; White, chalky fossiliferous porosity,
slightly oolitic. Trace of spotty
stain. No free oil or odor.3419-27
G ZoneLS; White, chalky fossiliferous and oolitic
porosity. No free oil or odor.3460-64
H ZoneLS; Light gray to buff, fine crystalline
and dense. Fossiliferous. Cherty.
Trace of spotty stain. No free oil
or odor.

Tested by D.S.T. No. 2

Lithology: Page 4

Received
8/16/2002Arbuckle 3641 (-1600)
3142-45Dol; Buff, sucrosic, tight porosity with
light stain. Slight show of free
oil and faint odor.

Tested by D.S.T. No. 4

3547-51

Dol; Buff medium crystalline porosity with
scattered light to dark stain. Show
of free oil and fair odor.

Tested by D.S.T. No. 4

3651-53

Dol; Buff, medium crystalline porosity with
dark stain. Show of free oil and
fair odor.

Tested by D.S.T. No. 5

3654-58

Dol; Buff, fine crystalline and dense.
Trace of poor crystalline porosity
with scattered light spotty stain.
No free oil but good odor.

Tested by D.S.T. No. 5

Rotary Total Depth 3658 (-1617)