

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

API NO. 15- 135-24003-01-00
County Ness
SW NE SE Sec. 13 Twp. 20 Rge. 23 EW

Operator: License # 31961
Name: Buried Hills Production Company Inc.
Address 1000, 112 - 4th Avenue S.W.

2290 Feet from S/W (circle one) Line of Section
2250 Feet from E/W (circle one) Line of Section
Footages Calculated from Nearest Outside Section Corner:
NE, SE, NW or SW (circle one)

Purchaser:
Operator Contact Person: Bud Berger
Phone (316) 339-3848

Lease Name Whitley Well # 1 Hz
Field Name Riverside
Producing Formation Mississippian Osage

Contractor: Name: Nabors Drilling
License: 32105
Wellsite Geologist: Jeff Barkley, Duane Mordock
Kate Connolly

Elevation: Ground 2206 KB 2219
Total Depth 6795 feet MD PBTB 6795 feet MD

Designate Type of Completion
X New Well Re-Entry Workover
X Oil SMD X SLOW Temp. Abd.
Gas ENHR SIGW
Dry Other (Core, MSW, Expl., Cathodic, etc)

Amount of Surface Pipe Set and Cemented at 720 Feet
Multiple Stage Cementing Collar Used? Yes X No
If yes, show depth set Feet

If Workover/Reentry: Old Well Info as follows:
Operator:
Well Name:
Comp. Date Old Total Depth
Deepening Re-perf. Conv. to Inj/SMD
Plugging Back PBTB
Casing Docket No.
Dual Completion Docket No.
Other (SMD or Inj?) Docket No.
May 16, 1997 June 10, 1997
Spud Date Date Reached TD Completion Date

If Alternate II completion, cement circulated from
feet depth to w/ sx cmt.

Drilling Fluid Management Plan ALT 1 DW
(Data must be collected from the Reserve Pit) 9-22-97

Chloride content 42,000 ppm Fluid volume 1700 bbls
Dewatering method used None, Fluids Removed offsite
Location of fluid disposal if hauled offsite:

Operator Name Buried Hills Production Inc.
Lease Name Antrim Cossman #1 Hz License No. 31961
SW Quarter Sec. 18 Twp. 21 S Rng. 23 EW
County Hodgeman Docket No. 194835-C (C-28-084)

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 [Signature]
Title MANAGER PRODUCTION Date 1997-09-10
Subscribed and sworn to before me this 10 day of September, 19 97.
Notary Public [Signature]
Date Commission Expires at the pleasure of the Crown

K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Geologist Report Received
Distribution
 KCC SMD/Rep NGPA
 KGS Plug Other (Specify)

MICHAEL B. NIVEN

Operator Name Buried Hills Production Company Lease Name Whitley Well # 1 Hz
 Sec. 13 Twp. 20S Rge. 23 East West Inc. Ness County Ness

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 Yes No
 (Attach Additional Sheets.)
 Samples Sent to Geological Survey Yes No
 Cores Taken Yes No
 Electric Log Run Yes No
 (Submit Copy.)
 List All E.Logs Run:
 Cement Bond Log

Log Formation (Top), Depth and Datums Sample
 Name Top Datum

CASING RECORD

New 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 Casing	12 1/4"	9 5/8"	36 lb/ft	720'	0:1:0A	425	3% CaCl ₂
Intermediate	8 3/4"	7"	23 lb/ft	4524'	40/60 Pos	590	Gel 2%, Salt 10%, Halad .75% FWCA .05
Liner	6 1/8"	4 1/2"	11.6 lb/ft	4869'	N/A - Set with external packers		

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	N/A			
<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
	Open Hole Completion		

TUBING RECORD	Size	Set At	Packer At	Liner Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Not Applicable - tubing not run				
Date of First, Resumed Production, SMD or Inj.	Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)			
No Production obtained				
Estimated Production Per 24 Hours	Oil \emptyset Bbls.	Gas \emptyset Mcf	Water \emptyset Bbls.	Gas-Oil Ratio Gravity

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)
 METHOD OF COMPLETION: Open Hole Perf. Dually Comp. Commingled
 Production Interval: Other (Specify) _____

ORIGINAL

INVOICE

28 1997



HALLIBURTON ENERGY SERVICES, INC.

REMIT TO: P.O. BOX 951046 DALLAS, TX 75395-1046 Corporate FIN 73-0271280

INVOICE NO. 95122 DATE 05/17/1997

ORIGINAL

WELL LEASE NO./PROJECT		WELL/PROJECT LOCATION		STATE	OWNER
WHITLEY 1		NESS		KS	SAME
SERVICE LOCATION		CONTRACTOR		JOB PURPOSE	TICKET DATE
HAYS		NABORS DRILLING 296		SHOWN BELOW	05/17/1997
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.
004666	BUJ BURGER		AFE # 5612	COMPANY TRUCK	2450

RECEIVED

KANSAS CORPORATION COMMISSION

BURIED HILLS PROD CO LTD 1000, 112 -4TH AVENUE S.W. T2P OH3 CALGARY, ALBERTA CANADA

CONSERVATION DIVISION WICHITA KS

DIRECT CORRESPONDENCE TO: 1102 E. 8TH HAYS KS 67601 913-625-3431

FROM: CONFIDENTIAL

REFERENCE NO.	DESCRIPTION	QUANTITY	UM	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT					
JOB PURPOSE - CEMENT SURFACE CASING					
000-117	MILEAGE CEMENTING ROUND TRIP	150	M1	3.20	480.00
		1	UNT		
001-016	CEMENTING CASING	721	FT	1,025.00	1,025.00
		1	UNT		
030-503	WOODEN PLUG	9	5/8 IN	110.00	110.00
		1	EA		
504-308	CEMENT - STANDARD	425	SK	10.83	4,602.75
509-406	ANHYDROUS CALCIUM CHLORIDE	13	SK	46.90	609.70
507-244	DYE HALLIBURTON	10	LB	6.00	60.00
500-207	BULK SERVICE CHARGE	476	CFT	1.55	737.80
500-306	MILEAGE CMTG MAT DEL OR RETURN	1625.625	TMI	1.18	1,918.24

JOB PURPOSE SUBTOTAL

9,543.49

INVOICE SUBTOTAL

9,543.49

VENDOR # 50257 DISCOUNT - (BID)

LOCATION # _____ INVOICE BID AMOUNT

AFE/LEASE # _____ * KANSAS STATE SALES TAX

G/L ACCOUNT _____ * HAYS CITY SALES TAX

PAID CHQ # #1107

970612

APPROVED _____

PAID

BAC # _____

PTY/AFE/LSE # 5612

G/L account 2200-325

Offset account _____

Voucher registry: Y / N

APPROVED: [Signature]

3,053.90-

6,489.59

267.85

54.67

INVOICE TOTAL - PLEASE PAY THIS AMOUNT =====>

\$6,812.11

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TICKET #	976122	TICKET DATE	5-17-97
BDA / STATE	MidCont. MO	COUNTY	NESS
PSL DEPARTMENT	CMT	ORIGINAL	
CUSTOMER REP / PHONE	Bud. Burger		
API / UWI #	13524003-01-00		
DEPARTMENT	CMT	JOB PURPOSE CODE	010

REGION	North America	NW/COUNTRY	MidCont. USA
MBU ID / EMP #	HA0101 E1609	EMPLOYEE NAME	DAVE Ash
LOCATION	HAYS NESS COSS25	COMPANY	Buried Hills Production
TICKET AMOUNT		WELL TYPE	01
WELL LOCATION	S.E. Ness City Ks.	DEPARTMENT	CMT
LEASE / WELL #	Whitley #1	SEC / TWP / RNG	13-200-23w

CONFIDENTIAL

HES EMP NAME/EMP#/(EXPOSURE HOURS) HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS) HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS) HRS	HES EMP NAME/EMP#/(EXPOSURE HOURS) HRS
D. Ash E1609	M. Kelia 41511	S. Engel 50482	

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESS. (psi)		JOB DESCRIPTION / REMARKS
				T	C	Tbg	Csg	
	1330							Called out
	1630							Load EQU.
	1842							On location, safety meeting, Di. v. Tech. Setup
	2015							Start 972 Csg run to 721'
	2239							Break Circ. with rig
	2247	3	3					Test Pumping lines to 2000 PSI
	2247							START Dig FROM: CONFIDENTIAL
	2249	20	20			100		Start spacer
	2250	0	0					end spacer
	2314	5 1/2	90			375		Start CMT 425 SKS @ 156 wpt 112 yds
								end CMT
								Drop Plug
	2315	0				0		Start Disp.
	2329	558	55.8			400		end Disp.
	2334	568	55.8			800		Load Plug
								30 BBL CMT to Pit 142 SKS ✓
	2350							WASH P.T.
	0020							BACK UP
	0045							DO Tickets
	0100							JOB complete Thank You
								DAVE, MEL, Scott

RECEIVED
KANSAS CORPORATION COMMISSION

SEP 17 1997

CONSERVATION DIVISION
WICHITA KS



TICKET CONTINUATION

FIELD COPY

TICKET No. 196122

HALLIBURTON ENERGY SERVICES

FORM 1911 R-10

Trk. 3859-7613

CUSTOMER Buried Hills Production	WELL #1 Whitley	DATE 5-17-97	PAGE 2	OF 3
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PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
504-308		1			Standard Cement	430				10.83	4,662.75
509-406		1			Calcium Chloride Blended	13				46.90	609.70
507-244		1			Halliburton Cement Dye on side	10	lb			6.00	60.00
500-207		1			SERVICE CHARGE					1.55	737.80
500-306		1			MILEAGE CHARGE					1.18	1,918.24
					TOTAL WEIGHT	43,350					
					LOADED MILES		75				
					TON MILES			1,625.625			

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KANSAS CORPORATION COMMISSION

SEP 11 1997

CONSERVATION DIVISION
WICHITA, KS

CONFIDENTIAL
SEP 10 1997

CONFIDENTIAL
FROM CONFIDENTIAL

ORIGINAL

RELEASED
MAY 06 2000

No. B 339215

CONTINUATION TOTAL	8,199.24
	7,928.49



CHARGE TO
Burd Hills Production
ADDRESS
1000 - 112 4AVE S.W
CITY, STATE, ZIP CODE
Calgary Alberta T2P 0H3

CUSTOMER COPY
TICKET
No. **196122 - 3**
PAGE 1 OF 2

SERVICE LOCATIONS 1. <i>Hav 16 035525</i>	WELL/PROJECT NO. <i>#1</i>	LEASE <i>Whitley</i>	COUNTY/PARISH <i>Ness</i>	STATE <i>Nc</i>	CITY/OFFSHORE LOCATION	DATE <i>5-17-97</i>	OWNER
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTRACTOR <i>Kobco Drilling</i>	RIG NAME/NO <i>#296</i>	SHIPPED VIA <i>CT</i>	DELIVERED TO <i>Wells, Inc</i>	ORDER NO <i>AFR # 5612</i>
3.	WELL TYPE <i>01</i>	WELL CATEGORY <i>01</i>	JOB PURPOSE <i>010</i>	WELL PERMIT NO <i>135-24003-01-00</i>	WELL LOCATION <i>13-200-23w</i>		
4.	REFERRAL LOCATION <i>32</i>	INVOICE INSTRUCTIONS					

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
<i>000-117</i>	ORIGINAL	<i>1</i>		<i>32</i>	<i>MILEAGE 53557 RTM</i>	<i>1.50</i>	<i>mi</i>	<i>11</i>		<i>3.20</i>	<i>480.00</i>
<i>001-016</i>		<i>1</i>		<i>32</i>	<i>Pump Charge</i>	<i>721</i>	<i>FT</i>	<i>1</i>	<i>unit</i>	<i>1,025.00</i>	<i>1,025.00</i>
<i>030-503</i>		<i>1</i>		<i>32</i>	<i>WOOD TOP Plug wood</i>	<i>1</i>	<i>cs</i>	<i>9 5/8</i>	<i>IN</i>	<i>110.00</i>	<i>110.00</i>

RELEASED
MAY 06 2000
FROM CONFIDENTIAL
CONFIDENTIAL

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 KANSAS CORPORATION COMMISSION
 SEP 11 1997
 CONSERVATION DIVISION
 WICRITA, KS

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

X *Burd Bp*
DATE SIGNED *5-17-97* TIME SIGNED *5:00* A.M. P.M.

do do not require IPC (Instrument Protection). Not offered

SUB SURFACE SAFETY VALVE WAS: <input type="checkbox"/> PULLED & RETURN <input type="checkbox"/> PULLED <input type="checkbox"/> RUN	SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL <i>1,615.00</i>
TYPE LOCK	DEPTH	OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?			FROM CONTINUATION PAGE(S) <i>7928.4</i>
BEAN SIZE	SPACERS	WE UNDERSTOOD AND MET YOUR NEEDS?			
TYPE OF EQUALIZING SUB.	CASING PRESSURE	OUR SERVICE WAS PERFORMED WITHOUT DELAY?			
TUBING SIZE	TUBING PRESSURE	WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?			
	WELL DEPTH	ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO			SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE <i>9543.4</i>
TREE CONNECTION	TYPE VALVE	<input checked="" type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			

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

CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT) <i>Burd Burger</i>	CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) <i>X Burd Bp</i>	HALLIBURTON OPERATOR/ENGINEER <i>DAVE A. Ah</i>	EMP # <i>E1609</i>	HALLIBURTON APPROVAL
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ORIGINAL



REMIT TO: P.O. BOX 951046 DALLAS, TX 75395-1046 Corporate FIN 73-0271280

INVOICE

HALLIBURTON ENERGY SERVICES, INC.

INVOICE NO	DATE
196499	06/04/1997

WELL LEASE NO./PROJECT		WELL/PROJECT LOCATION		STATE	OWNER
WHITLEY 1		NESS		KS	SAME
SERVICE LOCATION		CONTRACTOR		JOB PURPOSE	TICKET DATE
HAYS		NABORS DRILLING		SHOWN BELOW	06/04/1997
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO
004666	BUD BORGER		AFF 5612	COMPANY TRUCK	2534

ORIGINAL

BURIED HILLS PROD CO LTD 1000, 112 -4TH AVENUE S.W. T2P OH3 CALGARY, ALBERTA CANADA

DIRECT CORRESPONDENCE RELEASED 1102 E. 8TH HAYS KS 67601 913-625-3431 MAY 06 2000

CONFIDENTIAL

FROM CONFIDENTIAL

REFERENCE NO.	DESCRIPTION	QUANTITY	UM	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT					
JOB PURPOSE - CEMENT PRODUCTION CASING					
000-117	MILEAGE CEMENTING ROUND TRIP	150 MI		3.20	480.00
		1 UNT			
001-016	CEMENTING CASING	4524 FT		2,038.00	2,038.00
		1 UNT			
030-016	TOP PLUG	7 IN		99.00	99.00
		1 EA			
030-017	BOTTOM PLUG	7 IN		160.00	160.00
		1 EA			
320	BASKET-CMT- 7"CSG X 19"OD-SLIP-	3 EA		116.00	348.00
	806.71445				
018-315	MUD FLUSH	500 GAL		.75	375.00
314-163	CLAYFIX II	2 GAL		30.50	61.00
507-785	WG-17 LXP, PER GALLON	5 GAL		73.65	368.25
504-136	CEMENT - 40/60 POZMIX STANDARD	590 SK		8.14	4,802.60
506-121	HALLIBURTON-GEL 2%	900 LB		.00	N/C
507-277	HALLIBURTON-GEL BENTONITE	6 SK		21.40	128.40
509-406	ANHYDROUS CALCIUM CHLORIDE	3 SK		46.90	140.70
509-968	SALT	3200 LB		.17	544.00
507-775	HALAD-322	125 LD		7.70	962.50
500-207	BULK SERVICE CHARGE	655 CFT		1.55	1,015.25
500-306	MILEAGE CMTG MAT DEL OR RETURN	1997.175 TMI		1.18	2,356.67
JOB PURPOSE SUBTOTAL					13,879.37
INVOICE SUBTOTAL					13,879.37
DISCOUNT-(BID)					3,886.20-
INVOICE BID AMOUNT					9,993.17

RECEIVED KANSAS CORPORATION COMMISSION

SEP 11 1997

CONSERVATION DIVISION WICHITA, KS

***** CONTINUED ON NEXT PAGE *****

TERMS: If Customer does not have an approved open account with Halliburton, all sums due are payable in cash at the time of performance of services or delivery of equipment, products or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, Customer agrees to pay attorney fees of 20% of the unpaid account, plus all collection and court costs.

ORIGINAL
INVOICE

RECEIVED
JUN 16 1997

HALLIBURTON
HALLIBURTON ENERGY SERVICES, INC.

REMIT TO:
P.O. BOX 951046
DALLAS, TX 75395-1046
Corporate FIN 73-0271280

INVOICE NO. 196499
DATE 06/04/199

WELL LEASE NO./PROJECT		WELL/PROJECT LOCATION		STATE	OWNER
WHITLEY 1		NESS		KS	SAME
SERVICE LOCATION		CONTRACTOR		JOB PURPOSE	TICKET DATE
HAYS		NABORS DRILLING		SHOWN BELOW	06/04/199
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.
004666	BJD BORGER		AFE 5612	COMPANY TRUCK	2534

ORIGINAL DIRECT CORRESPONDENCE TO:
BURIED HILLS PROD CO LTD
1000, 112 - 4TH AVENUE S.W.
T2P OH3
CALGARY, ALBERTA CANADA

1102 E. 8TH
HAYS KS 67601
913-625-3431

CONFIDENTIAL

REFERENCE NO.	DESCRIPTION	QUANTITY	UM	UNIT PRICE	AMOUNT
	*-KANSAS STATE SALES TAX				353.26
	*-HAYS CITY SALES TAX				72.09

RELEASED
MAY 05 2000
FROM CONFIDENTIAL

SEP 10
CONFIDENTIAL

RECEIVED
KANSAS CORPORATION COMMISSION
SEP 11 1997
CONSERVATION DIVISION
WICHITA, KS

RELEASED
MAY 06 2000
FROM CONFIDENTIAL

VENDOR # 50257
LOCATION # _____
AFE/LEASE # 5612
G/L ACCOUNT 2200-325
PAID CHQ # 1127 970110
APPROVED [Signature]

ENTERED
by: [Signature]
vchr # 506106-014

PAID

INVOICE TOTAL - PLEASE PAY THIS AMOUNT =====> \$10,418.52

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HALLIBURTON ENERGY SERVICES

HAL-1908-P

CHARGE TO: **BUREAU 1122 PRODUCTION**
 ADDRESS: **1000-112 4 AVE S.W.**
 CITY, STATE, ZIP CODE: **CALGARY, ALBERTA T2P 0H3**

RE: **CUSTOMER COPY**

TICKET

No.

196499 - 6

FROM CONFIDENTIAL

PAGE: **2**

SERVICE LOCATIONS 1. 1122, KS	WELL/PROJECT NO. 1	LEASE WINTER	COUNTY/PARISH NESS	STATE KS	CITY/OFFSHORE LOCATION	DATE 6-4-97	OWNER SAME
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE	NITROGEN JOB? <input type="checkbox"/> YES	CONTRACTOR NADORS DRILLING	RIG NAME/NO * 296	SHIPPED VIA 53242	DELIVERED TO LOUTON	ORDER NO. AFR # 5612
3.	<input type="checkbox"/> SALES	<input checked="" type="checkbox"/> NO	WELL TYPE 01	WELL CATEGORY 01	JOB PURPOSE 035	WELL PERMIT NO. 15135240030000	WELL LOCATION 13-203-23W
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS					

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	OF							
000-117		1			MILEAGE	150	ME	1		3.20	480.00
001-016		1			PUMP SERVICE	4524	FT	6		2038.00	2038.00
030-016		1			TOP PLUG	1	EA	7		99.00	99.00
030-017		1			BOTTOM PLUG	1	EA	7		160.00	160.00
320	806.71445	1			CONCT BASKETS	3	EA	7		116.00	348.00
018-315		1			MUDFLUSH	500	GAL			75	375.00
314-163		1			CUMEX II	2	GAL			30.50	61.00
507-785		1			WG-17 EXP	5	GAL			73.65	368.25

CONFIDENTIAL

RECEIVED
KANSAS CORPORATION COMMISSION
SEP 17 1997
CONSERVATION DIVISION
WICHITA KS

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

SUB SURFACE SAFETY VALVE WAS: <input type="checkbox"/> PULLED & RETURN <input type="checkbox"/> PULLED <input type="checkbox"/> RUN		SURVEY		AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	3929 2
TYPE LOCK	DEPTH	OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					FROM CONTINUATION PAGE(S)	9955 12
BEAN SIZE	SPACERS	WE UNDERSTOOD AND MET YOUR NEEDS?						
TYPE OF EQUALIZING SUB.	CASING PRESSURE	OUR SERVICE WAS PERFORMED WITHOUT DELAY?						
TUBING SIZE	TUBING PRESSURE	WELL DEPTH	WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?					
DATE SIGNED 6-4-97	TIME SIGNED 0800	<input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO		SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE			13820 3
<input type="checkbox"/> do <input type="checkbox"/> do not require IPC (Instrument Protection). <input type="checkbox"/> Not offered		TREE CONNECTION		TYPE VALVE		<input checked="" type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND		

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

CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT) BUD BORGER	CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) X Bud Borger	HALLIBURTON OPERATOR/ENGINEER WAYNE WILSON	EMP # 84377	HALLIBURTON APPROVAL
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JOB SUMMARY 4239-1

REGION North America	NVA/COUNTRY MEXICO	TICKET # 196499	TICKET DATE 6-4-97
MBU ID / EMP # NA0101 B9377	EMPLOYEE NAME WAYNE WILSON	BDA / STATE KANSAS	COUNTY WESS
LOCATION HAYS, KS	COMPANY BURIED HOLE PRODUCTION	PSL DEPARTMENT CEMENT	CUSTOMER REP / PHONE RUD BURGER
TICKET AMOUNT 13726.37	WELL TYPE CI	API / UWI # 15135240030000	JOB PURPOSE CODE 035
WELL LOCATION SE/WESS CITY, KS	DEPARTMENT CEMENT	SEC / TWP / RNG 13-20S-23W	
LEASE / WELL # WINDIE #2			

HES EMP NAME/EMP#(EXPOSURE HOURS) HRS	HES EMP NAME/EMP#(EXPOSURE HOURS) HRS	HES EMP NAME/EMP#(EXPOSURE HOURS) HRS	HES EMP NAME/EMP#(EXPOSURE HOURS) HRS
WILSON B9377	DEAN WITTEL H1682	KORBE H3115	FULK J0763
	RELEASED		

ORIGINAL

HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES
39604	160	53292	160	3860	160	4444-5070	160

FROM CONFIDENTIAL CONFIDENTIAL

MAY 06 2000

Form Name _____ Type: _____
 Form Thickness _____ From _____ To _____
 Packer Type _____ Set At _____
 Bottom Hole Temp. _____ Pressure _____
 Misc. Data _____ Total Depth _____

TYPE AND SIZE	QTY	MAKE
Float Collar		
Float Shoe		
Guide Shoe		
Centralizers		
Bottom Plug SW	1	HOWCO
Top Plug SW	1	"
Head PC	1	"
Packer		
Other		

Treat Fluid _____	Density _____	Lb/Gal _____
Disp. Fluid _____	Density _____	Lb/Gal _____
Prop. Type _____	Size _____	Lb. _____
Acid Type _____	Gal. _____	% _____
Surfactant _____	Gal. _____	In _____
NE Agent _____	Gal. _____	In _____
Fluid Loss _____	Gal/Lb _____	In _____
Gelling Agent _____	Gal/Lb _____	In _____
Fric. Red. _____	Gal/Lb _____	In _____
Breaker _____	Gal/Lb _____	In _____
Blocking Agent _____	Gal/Lb _____	
Perpac Balls _____	Qty. _____	
Other		
Other		
Other		
Other		

DATE TIME	CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
	6-3 2200	6-4 0200	6-4 0300	6-4 1230

	NEW/USED	WEIGHT	SIZE	FROM	TO	MAX ALLOW
Casing	N	23	7"	KB	4524	
Liner						
Liner						
Tbg/D.P.						
Tbg/D.P.						
Open Hole			8 3/4'	4524	4835	SHOTS/FT.
Perforations						
Perforations						
Perforations						

HOURS ON LOCATION		OPERATING HOURS		DESCRIPTION OF JOB
DATE	HOURS	DATE	HOURS	
6-4	10 1/2	6-4	3	CEMENT CASING
SEP 7 1997				
TOTAL		TOTAL		

KANSAS CORPORATION COMMISSION
 SEP 7 1997
 CONSERVATION DIVISION
 WICHITA

ORDERED	HYDRAULIC HORSEPOWER Avail.	Used
TREATED	AVERAGE RATES IN BPM Disp.	Overall
FEET 46.12	CEMENT LEFT IN PIPE Reason	SHOE JT

STAGE	SACKS	CEMENT	BULK/SKS	ADDITIVES	YIELD	LBS/GAL
1D	390	40/60	B	4% TOTAL GEL, 10% SALT, 1% CC	1.45	13.67
TL	200	40/60	B	3/4% HAUSD-322, 2% TOTAL GEL, 10% SALT, .05% FWCA-WG17	1.28	14.2

Circulating Breakdown _____ Displacement _____ Preflush: Gal (BBI) 12/20 Type MUDFLUSH/CLAYEX
 Average _____ Maximum _____ Load & Bkdn: Gal - BBI Pad: BBI - Gal
 Shut In: Instant _____ 5 Min _____ 15 Min _____ Treatment Gal - BBI Disp (BBI) Gal 176
 Total Volume Gal - BBI 100.7 - 45.6 = 146.3

Frac Ring #1 | Frac Ring #2 | Frac Ring #3 | Frac Ring #4
 THE INFORMATION STATED HEREIN IS CORRECT | CUSTOMER'S REPRESENTATIVE SIGNATURE
 Rud Burger

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CONFIDENTIAL ORIGINAL

SEP 11 1997

CONSERVATION DIVISION
WICHITA, KS

Daily Operations Report

15-135-24003-0000

DATE: JULY 16 97
DAY: 1
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' PBD: 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4524.7' - 6795'
TYPE OF JOB: OPEN HOLE CLEAN OUT AND
 EVALUATION
PRESENT ACTIVITY: RUNNING IN HOLE WITH
 HOLLIER BASKET
RIG TIME: 4 TOTAL: 4
SUPERVISOR: RON ZUTZ
PHONE: 403-350-1081

<u>DAILY COST SUMMARY</u>	
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION	100
SERVICE RIG	450
TRANSPORTATION	300
TRUCKING	200
RENTALS	600
<u>DAILY COST: 1650</u>	
<u>PREVIOUS COST:</u>	
<u>CUMMULATIVE COST: 1650</u>	

SEP 10
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OPERATION:

MOVED IN AND RIGGED UP SERVICE RIG. FOUND WELL DEAD. REMOVED WELLHEAD AND INSTALLED MANUAL BOPS. MADE UP 5 5/8" MILL SHOE WITH 2 SETS OF HOLLIER JUNK CATCHER FINGERS ON 28' OF 4 1/2" WASH PIPE AND CROSSOVERS TO 2 7/8" EUE TUBING. RAN IN HOLE WITH 97 JOINTS 2 7/8" TUBING. SECURED WELL AND SHUT DOWN FOR NIGHT.

RELEASED

MAY 06 2000

FROM CONFIDENTIAL

ORIGINAL

CONFIDENTIAL

Daily Operations Report

REVISED

DATE: JULY 17 97
DAY: 2
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' **PBD:** 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4524.7' - 6795'
TYPE OF JOB: OPEN HOLE CLEAN OUT AND EVALUATION
PRESENT ACTIVITY: POOH WITH JUNK BASKET
RIG TIME: 12 **TOTAL:** 16
SUPERVISOR: RON ZUTZ
PHONE: 403-350-1081

<u>DAILY COST SUMMARY</u>	
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION	500
SERVICE RIG	1400
TRANSPORTATION	200
TANK TRUCK	150
RENTALS	200
PUMP TRUCK SWIFT	800
DAILY COST:	3250
PREVIOUS COST:	1650
CUMMULATIVE COST:	4900

RELEASED
 MAY 06 2000
 FROM CONFIDENTIAL

OPERATION:

FOUND WELL DEAD. CONTINUED RUNNING IN HOLE WITH 2 7/8" TUBING AND HOLLIER JUNK BASKET. TAGGED FILL AT 4499'. PICKED UP AND RIGGED IN SWIFT PUMER TO CIRCULATE DOWN ANNULUS. FILLED HOLE WITH 25 BBLs MUD. UNABLE TO ESTABLISH CIRCULATION. WELL FEEDING AT 3 BBL/MIN AT 600 PSL. STOPPED PUMPING. PULLED 30 JOINTS TUBING AND TUBING STARTED TO PULL WET. HOOKED UP SWIFT PUMPER TO TUBING AND ATTEMPTED TO CLEAR JUNK BASKET. PRESSURED UP TO 1000 PSI WITH NO BLEED OFF. DUG DITCH AND PIT AND PULLED TUBING WET. FOUND 4" HOLLIER JUNK BASKET PLUGGED WITH FIST SIZED ROCK AND APPROXIMATELY 1 QUART OF SMALLER ROCK. CLEANED OUT BASKET. RAN IN HOLE WITH HOLLIER. RIGGED UP TO CIRCULATE. FILLED HOLE WITH 25 BBL MUD AND ESTABLISHED CIRCULATION. LOWERED TUBING TO 4505' KB AND TUBING PLUGGED UP AGAIN. PUMPED DOWN TUBING NO PROBLEM. ESTABLISHED CIRCULATION DOWN ANNULUS FOR 30 SECONDS AND TUBING PLUGGED UP AGAIN. SUSPECT ANOTHER LARGE ROCK IS BRIDGING OFF ACROSS THE 4 1/2" X 2 7/8" SWEDGE BUT IS INSIDE THE BASKET. RIGGED OUT PUMPER. PULLED 20 JOINTS 2 7/8" TUBING TO GET BASKET IN VERTICAL AND SECURED WELL. SDFN.

NOTE: FORMATION APPEARS TO FEED WHILE STAGNANT AND ESTABLISHES A FLUID LEVEL AT 650'. FORMATION ALSO FEEDS READILY 3 BBLs/MIN AT 600 PSL LOST APPROXIMATELY 55 BBL MUD TO FORMATION DURING DAY.

Daily Operations Report

DATE: JULY 18 97
DAY: 3
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' **PBTD:** 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4524.7' - 6795'
TYPE OF JOB: OPEN HOLE CLEAN OUT AND EVALUATION
PRESENT ACTIVITY: POOH WITH JUNK BASKET
RIG TIME: 12 **TOTAL:** 28
SUPERVISOR: RON ZUTZ
PHONE: 403-350-1081

DAILY COST SUMMARY

<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION	500
SERVICE RIG	1400
RENTALS	200
TANK TRUCK	400
PUMP TRUCK SWIFT	800

DAILY COST: 2900

PREVIOUS COST: 4900

CUMMULATIVE COST: 7800

RELEASED

MAY 06 2000

FROM CONFIDENTIAL

OPERATION:

FOUND WELL DEAD. PULLED OUT OF HOLE WITH 2 7/8" TUBING. FOUND JUNK BASKET FULL OF FORMATION ROCKS RANGING IN SIZE FROM SAND SIZED PEBBLES TO LARGE 2" TO 3" ROCKS. LOTS OF SMALL, PEA SIZED PEBBLES. REDRESSED HOLLIER BASKET AND RAN IN HOLE ON 2 7/8" TUBING. STARTED CIRCULATING AT 4480' KB. CIRCULATED DOWN TO 4505' KB AND RECOVERED LOTS OF SMALL PEA SIZED ROCKS. COULD NOT GET PAST 4505'. CIRCULATED AND WORKED TUBING FOR 3 HOURS. SET UP TO 8000 # ON BRIDGE. ROTATED TUBING WITH TONGS. JUNK BASKET FINALLY FELL THRU TO 4511.53'. TUBING PLUGGED OFF. COULD NOT RE-ESTABLISH CIRCULATION. PULLED OUT OF HOLE WITH TUBING AND JUNK BASKET. FOUND JUNK BASKET COMPLETELY FULL OF DEBRI VARRING IN SIZE FROM SAND TO PEBBLES TO LARGE CHUNKS UP TO 2". ALSO RECOVERED A 8" X 6" PIECE OF FLAT RUBBER. APPEARS TO BE FROM THE ECP PACKER BLADDER. FLUSHED OUT BASKET AND RAN BACK IN HOLE WITH 121 JOINTS 2 7/8" TUBING. TUBING END AT 3877' KB. LOST APPROXIMATELY 260 BBLs OF WATER TO HOLE WHILE CIRCULATING. SECURED WELL AND SDFN.

Daily Operations Report

DATE: JULY 19 97
DAY: 4
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' **FHTD:** 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4524.7' - 6795'
TYPE OF JOB: OPEN HOLE CLEAN OUT AND
 EVALUATION
PRESENT ACTIVITY: POOH WITH JUNK BASKET
RIG TIME: 13 **TOTAL: 41**
SUPERVISOR: RON ZUTZ
PHONE: 403-350-1081

DAILY COST SUMMARY

AFE#:
AMOUNT:

<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION	500
SERVICE RIG	1600
RENTALS	200
TANK TRUCK	300
PUMP TRUCK SWIFT	800

DAILY COST: 3400

PREVIOUS COST: 7800

CUMMULATIVE COST: 11200

RELEASED
 MAY 06 2000
 FROM CONFIDENTIAL

OPERATION:

FOUND WELL DEAD. RAN IN HOLE TO 4480'. RIGGED UP TO CIRCULATE. FILLED HOLE WITH 25 BBLs WATER AND ESTABLISHED CIRCULATION. TUBING STARTED TO PLUG UP WITHIN 5 MINUTES WITHOUT LOWERING TUBING. DEBRI APPEARS TO BE BEING WASHED INTO TUBING. WORKED TUBING DOWN TO 4510' AND TUBING BECAME COMPLETELY PLUGGED. UNABLE TO CLEAR SAME. PULLED OUT OF HOLE AND FOUND JUNK BASKET FULL OF ROCKS RANGING IN SIZE FROM SAND SIZED PEBBLES TO 2" -3" ACROSS. TOOK REPRESENTATIVE SAMPLES AND SENT TO GEOLOGISTS AT DRILLING SITE. FLUSHED OUT BASKET AND RAN IN HOLE TO 4480'. RIGGED UP TO CIRCULATE. ESTABLISHED CIRCULATION WITH 25 BBLs WATER. CIRCULATED FOR 20 MINUTES AND RECOVERED SMALL PEBBLES. LOWERED TUBING TO 4495' AND TUBING STARTED TO PLUG UP. LOWERED TUBING TO 4511' AND TUBING BECAME COMPLETELY PLUGGED AGAIN. PULLED OUT OF HOLE AND LAID DOWN TUBING ONTO HIGHBOY. FOUND JUNK BASKET FULL OF SIMILAR DEBRI. BROKE DOWN TOOLS. REMOVED BOPS AND INSTALLED WELL HEAD. RIGGED OUT SERVICE RIG.

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SEP 11 1997

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ORIGINAL

Daily Operations Report

CONSERVATION DIVISION
WICHITA KS

15-135-24003-0100

DATE: SEPT 08 97
DAY: 7
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' PBTD: 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4960.2' - 6795'
TYPE OF JOB: COMPLETION
PRESENT ACTIVITY: RIH W/ 4 1/2" PACKER
RIG TIME: 13 TOTAL: 76
SUPERVISOR: RON ZUTZ/ RON SCHRAEDER
PHONE: 403-350-1081/ 316-772-6020

DAILY COST SUMMARY

<u>AFEN:</u>	<u>AMOUNT:</u>
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION ZUTZ	400
SUPERVISION SCHRAEDER	400
TANK TRUCK SCHWIN	200
SERVICE RIG EXPRESS	1700
GABEL FLUID LEVEL	100

DAILY COST: 2800
PREVIOUS COST: 28600
CUMMULATIVE COST: 30400

SEP 10
 CONFIDENTIAL

OPERATION:

FOUND WELL DEAD. SHOT STATIC FLUID LEVEL IN CASING AT 32 JOINTS (1008'). RIGGED UP AND RAN IN AND TAGGED INITIAL FLUID LEVEL IN TUBING AT 1300'. RIGGED OUT SWAB EQUIPEMENT. UNSET PACKER AND LOWERED TUBING 9 JOINTS. SET PACKER AT 6013' KB. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL AT 1200'. PULLED 31 SWABS AND RECOVERED 166 BBLs OF FLUID IN 6 HOURS. STABILIZED FLUID LEVEL 3500'. SHOT FLUID LEVEL IN CASING AT 106 JOINTS (3340'). RECOVERED 74.05 BBLs OIL AND 92.35 BBLs WATER. WATER WAS GRAY AT START AND CLEARED UP BY END OF SWABBING. AVERAGE OIL CUT 44%. CUT AT STABILIZED RATE 70%. CUMMULATIVE OIL RECOVERED 693.61 BBLs. CUMMULATIVE WATER RECOVERED 635.60 BBLs. RIGGED OUT SWAB EQUIPEMENT. UNSET PACKER PULLED 8 JOINTS AND GOT HUNG UP. COULD LOWER PACKER BUT COULD NOT PULL A DEFINITE SPOT. SUSPECT SLIPS CATCHING ON CASING COLLAR. WORKED PACKER UP TO 20000# OVER STRING AND PACKER PULLED FREE. PULLED OUT OF HOLE WITH TUBING AND PACKER. ALL IN GOOD SHAPE. SECURED WELL AND SDEN.

RELEASED

SEP 06 2000

FROM: CONFIDENTIAL

SWAB REPORT

WELL NAME MAXX WHITLEY HZ #1 **DATE** SEPT 08 97
SERVICE RIG EXPRESS # 4 **DAY** 7.00
FLUID TO RECOVER _____ **LOCATION** _____

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER		OIL CUT %	BBLs OIL		BBLs WATER	
			THIS RUN	CUMM BBLs		THIS RUN	CUMM.	THIS RUN	CUMM.
26	3500	4200	4.18	146.97	68	2.84	59.19	1.34	87.78
27	3500	4200	3.76	150.73	83	3.12	62.31	0.64	88.42
28	3500	4200	4.18	154.91	77	3.22	65.53	0.96	89.38
29	3500	4200	3.97	158.88	75	2.98	68.50	0.99	90.38
30	3500	4200	4.18	163.06	80	3.34	71.85	0.84	91.21
31	3500	4200	3.34	166.40	66	2.20	74.05	1.14	92.35

P02

09/08/97 19:14

RON_ZUTZ

403 346 7540

FROM CONFIDENTIAL

MAY 06 2000

RELEASED

CONFIDENTIAL

SWAB REPORT

WELL NAME MAXX WHITLEY HZ # 1
 SERVICE RIG EXPRESS # 4
 FLUID TO RECOVER _____

FROM CONFIDENTIAL
 MAY 0 6 2000
 RELEASED

DATE SEPT 08 97
 DAY 7.00
 LOCATION _____

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER THIS RUN BBLs	CUMM BBLs RECOVERD	OIL CUT %	BBLS OIL RECOVER THIS RUN	BBLS OIL CUMM.	BBLS WATER RECOVER THIS RUN	BBLS WATER CUMM.
1	1200	2300	5.84	5.84	100	5.84	5.84	0.00	0.00
2	1550	2650	5.84	11.68	33	1.93	7.77	3.91	3.91
3	1700	2800	7.52	19.20	10	0.75	8.52	6.77	10.68
4	1850	2950	6.26	25.46	17	1.06	9.58	5.20	15.88
5	2000	3100	5.43	30.89	2	0.11	9.89	5.32	21.20
6	2100	3200	6.26	37.15	38	2.38	12.07	3.88	25.08
7	2300	3400	5.84	42.99	18	1.05	13.12	4.79	29.87
8	2450	3550	7.10	50.09	10	0.71	13.83	6.39	36.26
9	2550	3650	6.68	56.77	11	0.73	14.57	5.95	42.20
10	2650	3750	6.68	63.45	12	0.80	15.37	5.88	48.08
11	2750	3850	6.68	70.13	15	1.00	16.37	5.68	53.76
12	2850	3950	6.26	76.39	11	0.69	17.08	5.57	59.33
13	2950	4050	6.26	82.65	13	0.81	17.87	5.45	64.78
14	3050	4150	6.26	88.91	8	0.50	18.37	5.76	70.54
15	3100	4200	5.43	94.34	18	0.98	19.35	4.45	74.99
16	3150	4250	5.43	99.77	38	2.06	21.41	3.37	78.36
17	3200	4200	5.43	105.20	55	2.99	24.40	2.44	80.80
18	3300	4200	5.01	110.21	72	3.61	28.01	1.40	82.20
19	3200	4200	5.84	116.05	100	5.84	33.85	0.00	82.20
20	3200	4200	4.80	120.85	80	3.84	37.69	0.96	83.16
21	3300	4200	4.39	125.24	80	3.51	41.20	0.88	84.04
22	3350	4200	5.01	130.25	82	4.11	45.31	0.90	84.94
23	3350	4200	4.39	134.64	100	4.39	49.70	0.00	84.94
24	3400	4200	4.39	139.03	100	4.39	54.09	0.00	84.94
25	3450	4200	3.76	142.79	60	2.26	56.34	1.50	88.45

403 346 7540

RON_ZUTZ

09/08/97 19:15

P03

Daily Operations Report

DATE: SEPT 07 97
DAY: 6
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' **PETD:** 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4960.2' - 6795'
TYPE OF JOB: COMPLETION
PRESENT ACTIVITY: LOWERING PACKER
RIG TIME: 10 **TOTAL:** 63
SUPERVISOR: RON ZUTZ/ RON SCHRAEDER
PHONE: 403-350-1081/ 316-772-6020

DAILY COST SUMMARY

<u>AFW:</u>	
<u>AMOUNT:</u>	
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION ZUTZ	400
SUPERVISION SCHRADER	400
TANK TRUCK SCHWIN	400
SERVICE RIG EXPRESS	1300
GABEL FLUID LEVEL	100

DAILY COST:	2600
PREVIOUS COST:	26000
CUMMULATIVE COST:	28600

OPERATION:

FOUND WELL WITH TUBING PRESSURE TSTM. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL AT 950'. SHOT FLUID LEVEL ON CASING. FLUID DOWN 31 JOINTS. FLUID LEVEL AT 930'. PULLED 37 SWABS AND RECOVERED 187.9 BBLS FLUID IN 8 HOURS. AVERAGE WITHDRAWAL RATE 23.4 BBLS/HOUR. CASING ON VACUUM WHILE SWABBING. STABILIZED WITHDRAWAL RATE ABOUT 15 BBL/HOUR WITH A FLUID LEVEL AT 3500'. RECOVERED 118.96 BBLS OF OIL AND 68.94 BBLS OF GRAY SALTY WATER. UNABLE TO DETERMINE SALINITY. AVERAGE OIL CUT 63%. STABILIZED CUTS BY END OF DAY RUNNING AT 40% OIL. CUMMULATIVE OIL RECOVERED 619.56 BBLS. CUMMULATIVE WATER AND MUD RECOVERED 543.35 BBLS.

RELEASED

SEP 06 2000

FROM CONFIDENTIAL

SWAB REPORT

WELL NAME MAXX WHITLEY HZ # 1
 SERVICE RIG EXPRESS # 4
 FLUID TO RECOVER _____

DATE SEPT 07 97
 DAY 6.00
 LOCATION _____

FROM CONFIDENTIAL
 MAY 0 6 2000
 RELEASED

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER THIS RUN BBLs	CUMM BBLs RECOVERED	OIL CUT %	BBLs OIL RECOVER THIS RUN	BBLs OIL CUMM.	BBLs WATER RECOVER THIS RUN	BBLs WATER CUMM.
1	950	2050	6.26	6.26	100	6.26	6.26	0.00	0.00
2	1300	2400	6.26	12.52	100	6.26	12.52	0.00	0.00
3	1500	2600	6.26	18.78	81	5.07	17.59	1.19	1.19
4	1700	2800	6.26	25.04	70	4.38	21.97	1.88	3.07
5	1950	3050	6.26	31.30	35	2.19	24.16	4.07	7.14
6	2150	3250	6.68	37.98	18	1.20	25.37	5.48	12.61
7	2250	3350	6.26	44.24	17	1.06	26.43	5.20	17.81
8	2400	3500	6.68	50.92	15	1.00	27.43	5.68	23.49
9	2500	3600	5.84	56.76	14	0.82	28.25	5.02	28.51
10	2600	3700	6.26	63.02	20	1.25	29.50	5.01	33.52
11	2700	3800	6.26	69.28	18	1.13	30.63	5.13	38.65
12	2800	3900	6.68	75.96	30	2.00	32.63	4.68	43.33
13	2800	3900	6.68	82.64	58	3.87	36.51	2.81	46.13
14	2800	4000	7.10	89.74	81	5.75	42.26	1.35	47.48
15	2950	4050	7.10	96.84	97	6.89	49.15	0.21	47.70
16	3050	4150	5.84	102.68	95	5.55	54.69	0.29	47.99
17	3200	4200	5.43	108.11	95	5.16	59.85	0.27	48.26
18	3300	4200	4.59	112.70	97	4.45	64.30	0.14	48.40
19	3300	4200	5.01	117.71	96	4.81	69.11	0.20	48.60
20	3350	4200	4.18	121.89	98	4.10	73.21	0.08	48.68
21	3400	4200	4.18	126.07	95	3.97	77.18	0.21	48.89
22	3450	4200	4.18	130.25	96	4.01	81.19	0.17	49.06
23	3450	4200	3.76	134.01	98	3.68	84.88	0.08	49.13
24	3450	4200	4.59	138.60	91	4.18	89.06	0.41	49.54
25	3450	4200	3.34	141.94	84	2.81	91.86	0.53	50.08

P03

09/07/97 20:24

RON_ZUTZ

403 346 7540

☺

Daily Operations Report

DATE: SEPT 06 97
DAY: 5
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' **PBTD:** 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4960.2' - 6795'
TYPE OF JOB: COMPLETION
PRESENT ACTIVITY: SWABBING
RIG TIME: 11 **TOTAL:** 53
SUPERVISOR: RON ZÜTZ/ RÖN SCHRAEDER
PHONE: 403-350-1081/ 316-772-6020

DAILY COST SUMMARY

<u>AFE#:</u>	
<u>AMOUNT:</u>	
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION ZUTZ	400
SUPERVISION SCHRADER	400
TANK TRUCK SCHWIN	300
SERVICE RIG EXPRESS	1600
GABEL FLUID LEVEL	100

DAILY COST: 2800

PREVIOUS COST: 23200

CUMMULATIVE COST: 26000

RELEASED

MAY 0 6 2000

FROM CONFIDENTIAL

OPERATION:

FOUND TUBING PRESSURE TSTM. CASING DEAD. UNSET UNI 6 PACKER AND PULLED OUT OF HOLE. PACKER IN GOOD CONDITION. RAN IN WITH 2 JOINTS 2 3/8", 4 1/2" UNI 6 PACKER WITH ON OFF CONNECTOR, 43 JOINTS 2 3/8" TUBING AND 137 JOINTS 2 7/8" TUBING. SET PACKER IN BLANK JOINT OF 4 1/2" CASING ABOVE EXTERNAL CASING PACKER AT 5661.96'. BLANK CASING AND ECP RUNS FROM 5650.22' - 5757.98'. SET TUBING IN SLIPS WITH 10000 # TENSION ON PACKER. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL AT 500'. PULLED 12 SWABS AND RECOVERED 64.74 BBLs FLUID. RECOVERED APPROX. 30 BBLs OF OIL AND THEN WELL SWABBED BACK 36 BBLs OF STRAIGHT HEAVY MUD. NO OIL, NO WATER. WELL THEN WENT BACK TO CLEAN OIL. CASING WENT ON VACUUM THRU OUT. APPEARS AS IF COMMUNICATION EXISTS AROUND UNI 6 PACKER OR ECP. UNSET UNI 6 PACKER AND LOWERED TUBING 2 JOINTS. RESET UNI 6 PACKER AT 5724' KB. LANDED TUBING IN SLIPS WITH 10000# TENSION ON PACKER. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL AT 2000'. PULLED AN ADDITIONAL 8 SWABS AND RECOVERED 52.2 BBLs OF FLUID APPROXIMATELY 80 % OIL AND 10 % MUD. MUD VOLUME WAS DECLINING TOWARDS END OF DAY. SHOT FLUID LEVEL ON CASING WHILE SWABBING AND FOUND FLUID LEVEL AT 62 JOINTS (1920'). SHOT ANOTHER 1 HOUR LATER AND FOUND FLUID LEVEL 82 JOINTS (2540'). COMMUNICATION STILL EXISTS AROUND ECP. TOTAL FLUID RECOVERED TODAY 136.94 BBLs. OIL RECOVERED 83.87 BBLs. MUD AND WATER RECOVERED 53.07 BBLs. CUMMULATIVE OIL PRODUCED 500.6 BBLs. CUMMULATIVE WATER AND MUD RECOVERED 474.41 BBLs.

SWAB REPORT

WELL NAME MAXX WHITLEY HZ # 1
 SERVICE RIG EXPRESS # 4
 FLUID TO RECOVER _____

DATE SEPT 06 97
 DAY 5.00
 LOCATION _____

FROM: CONFIDENTIAL
 DATE: 06 2000
 RELEASED

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER THIS RUN BBLs	CUMM BBLs RECOVERED	OIL CUT %	BBLs OIL RECOVER THIS RUN	BBLs OIL CUMM.	BBLs WATER RECOVER THIS RUN	BBLs WATER CUMM.	
1	500	1600	6.26	6.26	100	6.26	6.26	0.00	0.00	
2	1200	2300	7.93	14.19	100	7.93	14.19	0.00	0.00	
3	2000	3100	7.52	21.71	75	5.64	19.83	1.88	1.88	
4	2450	3550	7.52	29.23	50	3.76	23.59	3.78	5.64	
5	2000	3100	9.60	38.83	0	0.00	23.59	9.60	15.24	
6	2000	3100	7.93	46.76	0	0.00	23.59	7.93	23.17	
7	1900	3000	6.68	53.44	0	0.00	23.59	6.68	29.85	
8	1850	2950	6.68	60.12	0	0.00	23.59	6.68	36.53	
9	1850	2950	6.26	66.38	16	1.00	24.59	5.26	41.79	
10	2000	3100	6.26	72.64	82	5.13	29.72	1.13	42.92	
11	2150	3250	6.26	78.90	100	6.26	35.98	0.00	42.92	
12	2100	3200	5.84	84.74	100	5.84	41.82	0.00	42.92	
LOWERED PACKER TO 5724'										
1	2000	3100	5.84	90.58	95	5.55	47.37	0.29	43.21	
2	2150	3250	5.84	96.42	88	5.14	52.51	0.70	43.91	
3	2300	3400	6.26	102.68	85	5.32	57.83	0.94	44.85	
4	2600	3700	6.68	109.36	88	5.88	63.71	0.80	45.65	
5	2850	3950	7.10	116.46	83	4.47	68.18	2.63	48.28	
6	2850	3950	7.52	123.98	66	4.96	73.15	2.56	50.83	
7	2850	3950	6.68	130.66	90	6.01	79.16	0.67	51.50	
8	2900	4000	6.28	136.94	75	4.71	83.87	1.57	53.07	

Daily Operations Report

DATE: SEPT 05 97
DAY: 4
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' **PBTD:** 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4960.2' - 6795'
TYPE OF JOB: COMPLETION
PRESENT ACTIVITY: SWABBING
RIG TIME: 11 **TOTAL:** 42
SUPERVISOR: RON ZUTZ/ RON SCHRAEDER
PHONE: 403-350-1081/ 316-772-6020

<u>DAILY COST SUMMARY</u>	
<u>AFE#:</u>	
<u>AMOUNT:</u>	
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION ZUTZ	400
SUPERVISION SCHRADER	400
TANK TRUCK SCHWIN	400
SERVICE RIG EXPRESS	1400
DAILY COST: 2600	
PREVIOUS COST: 21600	
CUMMULATIVE COST: 23200	

RELEASED

MAY 06 2000

FROM CONFIDENTIAL

OPERATION:

FOUND WELL WITH TUBING PRESSURE TSTM. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL 900'. PULLED 40 SWABS AND RECOVERED 186 BBLs FLUID IN 9 HOURS OF SWABBING. AVERAGE FLUID INFLOW 20 BBLs/HOUR. STABILIZED SWABBING FLUID LEVEL 3600'. FLUID INFLOW WITH STABILIZED FLUID LEVEL 16 BBLs/HOUR. RECOVERED 126.53 BBLs OF OIL AND 59.97 BBLs OF MUDDY WATER. WATER SALINITY 15000 PPM. AVERAGE OIL CUT 68%. CUMMULATIVE OIL PRODUCED 363.66 BBLs. CUMMULATIVE WATER PRODUCED 421.34 BBLs.

SWAB REPORT

DATE SEPT 05 97
 DAY 4.00
 WELL NAME MAXX WHITLEY HZ # 1
 SERVICE RIG EXPRESS # 4
 LOCATION _____
 FLUID TO RECOVER _____

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER THIS RUN BBLs	CUMM BBLs RECOVERED	OIL CUT %	BBLs OIL RECOVER THIS RUN	BBLs OIL CUMM.	BBLs WATER RECOVER THIS RUN	BBLs WATER CUMM.
26	3500	4200	4.58	131.34	52	2.39	86.65	2.20	44.69
27	3700	4200	3.76	135.10	54	2.03	88.68	1.73	46.42
28	3750	4200	2.09	137.19	58	1.21	89.89	0.88	47.30
29	3650	4200	2.92	140.11	82	2.39	92.28	0.53	47.83
30	3600	4200	4.18	144.29	83	3.47	95.75	0.71	48.54
31	3600	4200	4.59	148.88	75	3.44	99.19	1.15	49.69
32	3550	4200	4.18	153.06	64	2.68	101.87	1.50	51.19
33	3500	4200	4.18	157.24	72	3.01	104.88	1.17	52.36
34	3550	4200	4.18	161.42	82	3.43	108.31	0.75	53.11
35	3550	4200	4.18	165.60	70	2.93	111.23	1.25	54.37
36	3550	4200	4.18	169.78	70	2.93	114.16	1.25	55.62
37	3550	4200	4.18	173.96	76	3.18	117.34	1.00	56.62
38	3550	4200	4.18	178.14	76	3.18	120.51	1.00	57.63
39	3550	4200	4.18	182.32	74	3.09	123.61	1.09	58.71
40	3550	4200	4.18	186.50	70	2.93	126.53	1.25	59.97

RELEASED
 MAY 06 2000
 FROM CONFIDENTIAL

P08

09/07/97 20:27

RON_ZUTZ

403 346 7540

MAY 06 2000

Daily Operations Report FROM CONFIDENTIAL

DATE: SEPT 04 97
DAY: 3
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' PBTD: 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4960.2' - 6795'
TYPE OF JOB: COMPLETION
PRESENT ACTIVITY: SWABBING
RIG TIME: 11 TOTAL: 31
SUPERVISOR: RON ZUTZ/ RON SCHRAEDER
PHONE: 403-350-1081/ 316-772-6020

DAILY COST SUMMARY

<u>AFE#:</u>	
<u>AMOUNT:</u>	
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION ZUTZ	400
SUPERVISION SCHRAEDER	400
TANK TRUCK SCHWIN	400
SERVICE RIG EXPRESS	1400

<u>DAILY COST:</u>	2600
<u>PREVIOUS COST:</u>	19000
<u>CUMMULATIVE COST:</u>	21600

OPERATION:

FOUND WELL WITH TUBING PRESSURE TSTM. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL AT 900'. PULLED 48 SWABS AND RECOVERED 218.63 BBLS FLUID IN 9 HOURS OF SWABBING. AVERAGE FLUID INFLOW 24.2 BBLS/HOUR. LOWEST SWABBING FLUID LEVEL 3700'. RECOVERED 125.93 BBLS OIL AND 92.70 BBLS OF MUD AND WATER. AVERAGE CUT 57% OIL. AT BEGINING OF DAY MUD WAS 15% - 27% OF SAMPLES. THIS REDUCED AS THE DAY PROGRESSED TO ABOUT 5% OF SAMPLES. OIL CUTS ALSO GRADUALLY IMPROVED THRU OUT DAY TO AVERAGE 65% BY END OF DAY. FLUID LEVELS VARIED AS WELL WAS CLEANING UP. CUMMULATIVE OIL PRODUCED 237.13 BBLS AND 361.37 BBLS OF WATER.

NOTE: WATER SAMPLE FROM YESTERDAY HAD A SALINITY OF 30000 PPM.

SWAB REPORT

WELL NAME MAXX WHITLEY HZ # 1
 SERVICE RIG EXPRESS # 4
 FLUID TO RECOVER _____

DATE SEPT 04 97
 DAY 3.00
 LOCATION _____

FROM CONFIDENTIAL
 MAY 0 6 2000
 RELEASED

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER THIS RUN BBLs	CUMM BBLs RECOVERD	OIL CUT %	BBLs OIL RECOVER THIS RUN	BBLs OIL CUMM.	BBLs WATER RECOVER THIS RUN	BBLs WATER CUMM.
26	3700	4200	2.92	122.21	60	1.75	60.28	1.17	61.93
27	3700	4200	3.34	125.55	60	2.00	82.28	1.34	63.27
28	3700	4200	2.92	128.47	65	1.90	64.18	1.02	64.29
29	3750	4200	2.92	131.39	24	0.70	64.88	2.22	66.51
30	3450	4200	5.83	137.22	65	3.79	68.67	2.04	68.55
31	3750	4200	3.34	140.56	72	2.40	71.07	0.94	69.49
32	3450	4200	4.18	144.74	73	3.05	74.13	1.13	70.62
33	3500	4200	3.76	148.50	66	2.48	76.61	1.28	71.89
34	3400	4200	5.01	153.51	66	3.31	79.91	1.70	73.60
35	3500	4200	3.34	156.85	79	2.64	82.55	0.70	74.30
36	3500	4200	4.59	161.44	67	3.08	85.63	1.51	75.81
37	3500	4200	5.01	166.45	67	3.36	88.98	1.65	77.47
38	3400	4200	4.59	171.04	80	3.67	92.65	0.92	78.38
39	3500	4200	4.59	175.63	72	3.30	95.96	1.29	79.67
40	2600	3700	7.10	182.73	95	6.75	102.71	0.38	80.02
41	3200	4200	7.10	189.83	47	3.34	106.04	3.78	83.79
42	3700	4200	2.50	192.33	60	1.50	107.54	1.00	84.79
43	3550	4200	3.76	196.09	72	2.71	110.25	1.05	85.84
44	3550	4200	4.59	200.68	67	3.08	113.33	1.51	87.35
45	3450	4200	5.01	205.69	67	3.36	116.68	1.65	89.01
46	3500	4200	3.76	209.45	75	2.82	119.50	0.94	89.95
47	3500	4200	4.59	214.04	68	3.12	122.62	1.47	91.42
48	3500	4200	4.59	218.63	72	3.30	125.93	1.29	92.70

403 346 7540
 RON_ZUTZ
 09/04/97 21:53
 P02

SWAB REPORT

WELL NAME MAXX WHITLEY HZ # 1
 SERVICE RIG EXPRESS # 4
 FLUID TO RECOVER _____

DATE SEPT 04 97
 DAY 3.00
 LOCATION _____

RELEASED
 MAY 06 2000
 FROM CONFIDENTIAL

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER THIS RUN BBLs	CUMM BBLs RECOVERED	OIL CUT %	BBLs OIL RECOVER THIS RUN	BBLs OIL CUMM.	BBLs WATER RECOVER THIS RUN	BBLs WATER CUMM.
1	900	2000	7.10	7.10	100	7.10	7.10	0.00	0.00
2	1500	2600	5.83	12.93	75	4.37	11.47	1.46	1.46
3	2200	3300	7.50	20.43	6	0.45	11.92	7.05	8.51
4	2750	3850	7.50	27.93	28	2.10	14.02	5.40	13.91
5	3000	4100	7.10	35.03	12	0.85	14.87	6.25	20.16
6	3200	4300	5.83	40.86	62	3.61	18.49	2.22	22.37
7	3350	4200	5.00	45.86	44	2.20	20.69	2.80	25.17
8	3450	4200	5.00	50.86	47	2.35	23.04	2.65	27.82
9	3500	4200	5.00	55.86	53	2.65	25.69	2.35	30.17
10	3550	4200	3.34	59.20	43	1.44	27.13	1.90	32.07
11	3600	4200	4.17	63.37	36	1.50	28.63	2.67	34.74
12	3600	4200	4.17	67.54	42	1.75	30.38	2.42	37.16
13	3650	4200	4.17	71.71	41	1.71	32.09	2.48	39.62
14	3650	4200	3.76	75.47	42	1.58	33.67	2.18	41.80
15	3650	4200	3.34	78.81	41	1.37	35.04	1.97	43.77
16	3650	4200	3.34	82.15	47	1.57	36.61	1.77	45.54
17	3650	4200	4.17	86.32	47	1.96	38.57	2.21	47.75
18	3650	4200	3.34	89.66	53	1.77	40.34	1.57	49.32
19	2700	3800	5.83	95.49	80	4.66	45.00	1.17	50.49
20	3250	4200	5.42	100.91	55	2.98	47.98	2.44	52.93
21	3600	4200	3.76	104.67	41	1.54	49.52	2.22	55.15
22	3650	4200	3.76	108.43	47	1.77	51.29	1.99	57.14
23	3650	4200	3.76	112.19	72	2.71	54.00	1.05	58.19
24	3700	4200	2.92	115.11	62	1.81	55.81	1.11	59.30
25	3700	4200	4.18	119.29	65	2.72	58.52	1.46	60.77

403 346 7540
 RON_ZUTZ
 09/04/97 21:52
 P01

MAY 06 2000

Daily Operations Report FROM CONFIDENTIAL

DATE: SEPT 03 97
DAY: 2
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' **PBTD:** 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4960.2' - 6795'
TYPE OF JOB: COMPLETION
PRESENT ACTIVITY: SWABBING
RIG TIME: 11 **TOTAL:** 20
SUPERVISOR: RON ZUTZ/ RON SCHRAEDER
PHONE: 403-350-1081

<u>DAILY COST SUMMARY</u>	
<u>AFE#:</u>	
<u>AMOUNT:</u>	
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION ZUTZ	400
SUPERVISION SCHRAEDER	400
TANK TRUCK SCHWIN	200
SERVICE RIG EXPRESS	1400
TUBING EST ONLY	13200
DAILY COST: 15600	
PREVIOUS COST: 3400	
CUMMULATIVE COST: 19000	

OPERATION:

FOUND WELL WITH TUBING PRESSURE TSTM. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL AT 1200'. PULLED 53 SWABS AND RECOVERED 315.20 BBLs FLUID IN 9 HOURS OF SWABBING. AVERAGE FLUID INFLOW 35 BBL/ HOUR. SWABBING FLUID LEVEL 3500'. RECOVERED 63.29 BBLs OF OIL AND 251.91 BBLs WATER AND MUD. AVERAGE CUT 20%. MUD WAS HEAVY AT BEGINING OF DAY AND GRADUALLY THINNED OUT TO MUDDY WATER BY END OF DAY. CONTINUED TOGET FLOATING MUD ON OIL. GOT OCCASIONAL SLUGS OF STRAIGHT MUD THRU OUT DAY. WELL APPEARS TO BE CLEANING UP. CUMMULATIVE OIL PRODUCED 111.2 BBLs. CUMMULATIVE WATER PRODUCED 268.67 BBLs WATER.

SWAB REPORT

WELL NAME MAXX WHITLEY HZ # 1
 SERVICE RIG EXPRESS # 4
 FLUID TO RECOVER _____

DATE SEPT 03 97
 DAY 2.00
 LOCATION _____

ROM CONFIDENTIAL
 MAY 06 2000
 RELEASED

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER THIS RUN BBLs	CUMM BBLs RECOVERD	OIL CUT %	BBLs OIL RECOVER THIS RUN	BBLs OIL CUMM.	BBLs WATER RECOVER THIS RUN	BBLs WATER CUMM.
26	3350	4200	6.26	174.34	16	1.00	28.30	5.26	146.04
27	3400	4200	5.00	179.34	20	1.00	29.30	4.00	150.04
28	3250	4200	6.68	186.02	10	0.67	29.97	6.01	156.05
29	3400	4200	6.26	192.28	24	1.50	31.47	4.78	160.81
30	3450	4200	5.83	198.11	0	0.00	31.47	5.83	166.64
31	3400	4200	5.00	203.11	0	0.00	31.47	5.00	171.64
32	3450	4200	5.83	208.94	19	1.11	32.58	4.72	176.36
33	3450	4200	5.00	213.94	26	1.30	33.88	3.70	180.06
34	3450	4200	5.00	218.94	30	1.50	35.38	3.50	183.56
35	3450	4200	5.00	223.94	34	1.70	37.08	3.30	186.86
36	2300	4200	7.92	231.86	15	1.19	38.27	6.73	193.59
37	2850	4200	7.10	238.96	18	1.28	39.55	5.82	199.41
38	3200	4200	4.58	243.54	19	0.87	40.42	3.71	203.12
39	3350	4200	4.58	248.12	14	0.84	41.06	3.94	207.06
40	3400	4200	4.58	252.70	26	1.19	42.25	3.39	210.45
41	3400	4200	5.00	257.70	30	1.50	43.75	3.50	213.95
42	3450	4200	5.42	263.12	35	1.90	45.65	3.52	217.47
43	3450	4200	5.00	268.12	20	1.00	46.65	4.00	221.47
44	3450	4200	4.58	272.70	28	1.28	47.93	3.30	224.77
45	3500	4200	5.00	277.70	28	1.40	49.33	3.60	228.37
46	3500	4200	5.00	282.70	28	1.40	50.73	3.60	231.97
47	3400	4200	4.58	287.28	29	1.33	52.06	3.25	235.22
48	3500	4200	4.17	291.45	27	1.13	53.18	3.04	238.27
49	3500	4200	5.00	296.45	27	1.35	54.53	3.65	241.92
50	3500	4200	4.58	301.03	62	2.84	57.37	1.74	243.66

P03

09/03/97 18:33

RON_ZUTZ

403 346 7540

SWAB REPORT

DATE SEPT 03 97
 DAY 2.00
 WELL NAME MAXX WHITLEY HZ # 1
 SERVICE RIG EXPRESS # 4
 LOCATION _____
 FLUID TO RECOVER _____

RELEASED
 MAY 06 2000
 FROM CONFIDENTIAL

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER		OIL CUT %	BBLs OIL		BBLs WATER	
			THIS RUN	CUMM BBLs RECOVERD		THIS RUN	CUMM.	THIS RUN	BBLs WATER CUMM.
1	1200	2300	7.10	7.10	50	3.55	3.55	3.55	3.55
2	2000	3100	7.50	14.60	0	0.00	3.55	7.50	11.05
3	2500	3600	8.35	22.95	24	2.00	5.55	6.35	17.40
4	2850	3950	7.10	30.05	5	0.36	5.91	6.75	24.14
5	3050	4150	6.68	36.73	5	0.33	6.24	6.35	30.49
6	3150	4250	6.26	42.99	5	0.31	6.56	5.95	36.43
7	3200	4200	6.26	49.25	11	0.69	7.24	5.57	42.01
8	3200	4200	7.50	56.75	11	0.83	8.07	6.68	48.68
9	3250	4200	6.26	63.01	8	0.50	8.57	5.76	54.44
10	3300	4200	6.26	69.27	12	0.75	9.32	5.51	59.95
11	3300	4200	6.66	75.93	10	0.67	9.99	5.99	65.94
12	3300	4200	6.66	82.59	13	0.87	10.85	5.79	71.74
13	3300	4200	6.66	89.25	12	0.80	11.65	5.86	77.60
14	3300	4200	5.83	95.08	18	1.05	12.70	4.78	82.38
15	3350	4200	6.26	101.34	14	0.88	13.58	5.38	87.76
16	3350	4200	6.68	108.02	16	1.07	14.65	5.61	93.37
17	3350	4200	6.26	114.28	16	1.00	15.65	5.26	98.63
18	2200	4200	8.76	123.04	55	4.82	20.47	3.94	102.57
19	2800	4200	8.35	131.39	12	1.00	21.47	7.35	109.92
20	3100	4200	6.68	138.07	10	0.67	22.14	6.01	115.93
21	3300	4200	5.42	143.49	18	0.98	23.11	4.44	120.38
22	3350	4200	5.00	148.49	21	1.05	24.16	3.95	124.33
23	2900	4200	7.50	155.99	15	1.13	25.29	6.38	130.70
24	3200	4200	6.26	162.25	21	1.31	26.60	4.95	135.65
25	3300	4200	5.83	168.08	12	0.70	27.30	5.13	140.78

P04

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Daily Operations Report

DATE: SEPT 02 97
DAY: 1
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' PBD: 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4960.2' - 6795'
TYPE OF JOB: COMPLETION
PRESENT ACTIVITY: SWABBING
RIG TIME: 9 TOTAL: 9
SUPERVISOR: RON ZUTZ/ RON SCHRAEDER
PHONE: 403-350-1081

DAILY COST SUMMARYAFE#:AMOUNT:

<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION ZUTZ	400
SUPERVISION SCHRAEDER	400
RENTALS	800
TRUCKING GABEL	400
TRUCKING WAGNER	300
SERVICE RIG EXPRESS	1100

DAILY COST: 3400

PREVIOUS COST:

CUMMULATIVE COST: 3400

OPERATION:

FOUND WELL DEAD. INSTALLED TUBING SPOOL. INSTALLED BOPS. MADE UP AND RAN IN WITH 2 JOINTS 2 3/8" TUBING, 1- 4 1/2" GUIBERSON UNI 6 PACKER WITH ON-OFF, 4 - JOINTS 2 3/8" TUBING AND 137 JOINTS 2 7/8" TUBING. SET PACKER AT 4475.55' KB. TAIL PIPE AT 4537.7'. CLOSED RAMS AND SET TUBING IN SLIPS WITH 3000# TENSION ON PACKER. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL AT 400'. PULLED 9 SWABS AND RECOVERED 64.67 BBLs FLUID, 47.91 BBLs OIL AND 16.76 BBLs MUD AND WATER. FINAL SWABBING FLUID LEVEL 3250'. LAST SWAB RECOVERED 100% OIL FLECKED MUD. SECURED WELL AND SDPN.

SWAB REPORT

WELL NAME MAXX WHITLEY HZ #1
 SERVICE RIG EXPRESS #4
 FLUID TO RECOVER _____

DATE SEPT 02 97
 DAY 1.00
 LOCATION _____

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER		OIL CUT %	BBLs OIL		BBLs WATER	
			THIS RUN	CUMM BBLs		RECOVER THIS RUN	CUMM.	RECOVER THIS RUN	BBLs WATER CUMM.
1	400	1500	8.35	8.35	100	8.35	8.35	0.00	0.00
2	1300	2400	7.92	16.27	100	7.92	16.27	0.00	0.00
3	2050	3150	7.50	23.77	100	7.50	23.77	0.00	0.00
4	2450	3550	6.68	30.45	66	4.41	28.18	2.27	2.27
5	2650	3750	7.10	37.55	100	7.10	35.28	0.00	2.27
6	2900	4000	7.92	45.47	100	7.92	43.20	0.00	2.27
7	3100	4200	7.10	52.57	40	2.84	46.04	4.26	6.53
8	3200	4300	6.68	59.25	28	1.87	47.91	4.81	11.34
9	3250	4350	5.42	64.67	0	0.00	47.91	5.42	16.76

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SEP 11 1997

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CONSERVATION DIVISION
WICHITA, KS

15-135-24003-0100

Daily Operations Report

DATE: SEPT 09 97
DAY: 8
WELL NAME: MAXX WHITLEY # 1
LOCATION: NE NE SE 13-20S-23W
TOTAL DEPTH: 6795' **FBTD:** 6795'
FORMATION: OSAGE
PERFORATIONS: OPEN HOLE 4960.2' - 6795'
TYPE OF JOB: COMPLETION
PRESENT ACTIVITY: POOH /W TUBING AND PACKER
RIG TIME: 11 **TOTAL:** 87
SUPERVISOR: RON ZUTZ/ RON SCHRAEDER
PHONE: 403-350-1081/316-772-6020

<u>DAILY COST SUMMARY</u>	
<u>AFES:</u>	
<u>AMOUNT:</u>	
<u>TYPE OF SERVICE</u>	<u>AMOUNT</u>
SUPERVISION ZUTZ	400
SUPERVISION SCHRAEDER	400
SERVICE RIG EXPRESS	1600
GABEL FLUID LEVEL	100
<hr/>	
DAILY COST:	2500
PREVIOUS COST:	30400
CUMMULATIVE COST:	32900

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OPERATION:

FOUND WELL DEAD. RAN IN HOLE WITH 4 1/2" GUBIBERSON UNI 6 PACKER ON 2 7/8" TUBING. SET PACKER IN TOP OF LINER AT 4475' KB. LANDED TUBING IN SLIPS WITH 10000 # TENSION ON PACKER. RIGGED UP TO SWAB. RAN IN AND TAGGED INITIAL FLUID LEVEL AT 1000'. PULLED 34 SWABS AND RECOVERED 151.78 BBLs OF FLUID. FLUID LEVEL STABILIZED AT 3550' PULLING 4 SWABS PER HOUR AND RECOVERING 16.5 BBLs/HOUR. STABILIZED CUTS ABOUT 50%. RECOVERED 70.77 BBLs OIL AND 81.01 BBLs WATER. AVERAGE CUT 46.6 %. CUMMULATIVE OIL RECOVERED 764.68 BBLs. CUMMULATIVE WATER RECOVERED 716.61. LAID DOWN SWAB EQUIPEMENT. UNSET PACKER AND OULLED PACKER OUT OF LINER. SECURED WELL AND SDFN.



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SWAB REPORT

CONSERVATION DIVISION
WICHITA, KS

FROM CONFIDENTIAL

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WELL NAME MAXX WHITLEY HZ #1
SERVICE RIG EXPRESS #4
FLUID TO RECOVER _____

DATE SEPT 09 97
DAY 8.00
LOCATION _____

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER THIS RUN BBLs	CUMM BBLs RECOVERED	OIL CUT %	BBLs OIL RECOVER THIS RUN	BBLs OIL CUMM.	BBLs WATER RECOVER THIS RUN	BBLs WATER CUMM.
1	1000	2100	6.05	6.05	100	6.05	6.05	0.00	0.00
2	2000	3100	8.14	14.19	60	4.88	10.93	3.26	3.26
3	2700	3800	6.89	21.08	15	1.03	11.97	5.86	9.11
4	3300	4200	6.01	27.09	27	1.62	13.59	4.39	13.50
5	3600	4200	3.76	30.85	20	0.75	14.34	3.01	16.51
6	3700	4200	3.76	34.61	28	0.98	15.32	2.78	19.29
7	3450	4200	4.80	39.41	24	1.15	16.47	3.65	22.94
8	3500	4200	4.59	44.00	50	2.30	18.77	2.30	25.23
9	3500	4200	4.59	48.59	44	2.02	20.79	2.57	27.80
10	3500	4200	4.38	52.97	52	2.28	23.08	2.10	29.91
11	3350	4200	5.01	57.98	40	2.00	25.07	3.01	32.91
12	3700	4200	2.71	60.69	80	1.63	26.69	1.08	34.00
13	3500	4200	5.01	65.70	28	1.40	28.10	3.61	37.60
14	3600	4200	4.18	69.88	57	2.38	30.48	1.80	39.40
15	3550	4200	4.18	74.06	37	1.55	32.03	2.63	42.03
16	3550	4200	3.97	78.03	48	1.91	33.93	2.08	44.10
17	3550	4200	4.59	82.62	52	2.39	36.32	2.20	46.30
18	3550	4200	3.78	86.38	50	1.88	38.20	1.88	48.18
19	3550	4200	4.18	90.56	43	1.80	40.00	2.38	50.56
20	3550	4200	3.97	94.53	60	2.38	42.38	1.59	52.15
21	3550	4200	4.59	99.12	47	2.16	44.54	2.43	54.58
22	3550	4200	3.34	102.46	50	1.87	46.21	1.87	56.25
23	3550	4200	4.39	106.85	51	2.24	48.44	2.15	58.41
24	3550	4200	4.39	111.24	45	1.98	50.42	2.41	60.82
25	3550	4200	3.76	115.00	45	1.69	52.11	2.07	62.89

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SWAB REPORT

DATE SEPT 09 97
 DAY 8.00
 WELL NAME MAXX WHITLEY HZ #1 LOCATION _____
 SERVICE RIG EXPRESS #4 _____
 FLUID TO RECOVER _____

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 SEP 11 1997
 CONSERVATION DIVISION
 WICHITA, KS

SWAB NO.	FLUID LEVEL	SWAB DEPTH	RECOVER		OIL CUT %	BBLs OIL RECOVER		BBLs WATER RECOVER	
			THIS RUN	CUMM BBLs RECOVERD		THIS RUN	CUMM.	THIS RUN	BBLs WATER CUMM.
26	3550	4200	4.39	119.39	48	2.11	54.22	2.28	65.17
27	3550	4200	3.76	123.15	51	1.92	56.14	1.84	67.01
28	3550	4200	4.39	127.54	53	2.33	58.46	2.06	69.08
29	3550	4200	3.55	131.09	53	1.88	60.34	1.67	70.75
30	3550	4200	4.39	135.48	48	2.11	62.45	2.28	73.03
31	3550	4200	3.97	139.45	50	1.99	64.44	1.99	75.01
32	3550	4200	4.39	143.84	50	2.20	66.63	2.20	77.21
33	3550	4200	4.18	148.02	54	2.26	68.89	1.92	79.13
34	3550	4200	3.76	151.78	50	1.88	70.77	1.88	81.01

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BURRIED HILLS PRODUCTION CO. INC.

MAXX PETROLEUM LTD.

RIVERSIDE FIELD PROSPECT

NO. 1 HZ WHITLEY

SEC 13, T20S, R23W

NESS COUNTY, KANSAS

RECEIVED
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CONSERVATION DIVISION
WICHITA, KS

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STRIP LOGS (WITH DRILL TIME AND LITHOLOGY) ATTACHED

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Sperry-Sun Drilling Services Survey Data

Customer : Burried Hills Production Company Inc.
 Platform : Whitley #1
 Slot/Well : #1 /Whitley # 1
 Calculation Method: Minimum Curvature.

Target Data
 Angle Deg: 90° +/- 1.5°
 Direction Deg: 90° East
 TVD 4320' - 4331'

Survey No.	Measured Depth	Angle Deg	Direction Deg	TVD	Sea-Level Datum	Northings Feet	Easting Feet	Vertical Section	Dog Leg
	0.00	0.00	0.00	0.00	2219.40	0.00 N	0.00 E	0.00	0.00
1	825.34	0.60	49.20	825.32	1394.08	2.82 N	3.27 E	3.27	0.07
2	1367.19	0.50	51.80	1367.15	852.25	6.14 N	7.28 E	7.28	0.02
3	1961.33	0.60	356.10	1961.27	258.13	10.85 N	9.10 E	9.10	0.09
4	2451.35	0.40	358.40	2451.27	-231.87	15.12 N	8.88 E	8.88	0.04
5	3064.49	0.50	356.60	3064.39	-844.99	19.93 N	8.66 E	8.66	0.02
6	3519.62	0.60	11.20	3519.50	-1300.10	24.25 N	9.01 E	9.01	0.04
7	3692.78	0.40	109.10	3692.65	-1473.25	24.94 N	9.75 E	9.75	0.44
8	3724.50	0.30	51.20	3724.37	-1504.97	24.95 N	9.92 E	9.92	1.10
9	3756.37	1.70	83.30	3756.24	-1536.84	25.06 N	10.46 E	10.46	4.56
10	3788.08	3.30	86.00	3787.92	-1568.52	25.18 N	11.84 E	11.84	5.06
11	3819.85	4.80	89.60	3819.61	-1600.21	25.25 N	14.08 E	14.08	4.79
12	3851.61	6.90	93.60	3851.20	-1631.80	25.14 N	17.31 E	17.31	6.73
13	3882.71	9.80	95.70	3881.97	-1662.57	24.76 N	21.81 E	21.81	9.37
14	3913.86	12.60	98.30	3912.52	-1693.12	24.01 N	27.81 E	27.81	9.13
15	3945.58	15.00	103.00	3943.32	-1723.92	22.58 N	34.24 E	35.24	8.35
16	3977.30	17.70	103.70	3973.76	-1754.36	20.52 N	43.92 E	43.92	8.53
17	4011.24	21.20	103.30	4005.76	-1786.36	17.88 N	54.91 E	54.91	10.32
18	4042.96	24.40	103.70	4034.99	-1815.59	15.01 N	66.86 E	66.86	10.10
19	4074.63	28.50	104.50	4063.34	-1843.94	11.57 N	80.54 E	80.54	12.99
20	4106.40	32.20	105.20	4090.75	-1871.35	7.45 N	96.05 E	96.05	11.70
21	4138.14	36.70	104.40	4116.92	-1897.52	2.87 N	113.40 E	113.40	14.25
22	4169.84	40.10	102.80	4141.76	-1922.36	1.75 S	132.54 E	132.54	11.17
23	4201.54	43.00	99.10	4165.49	-1946.09	5.72 S	153.18 E	153.18	11.98
24	4233.23	46.10	96.10	4188.07	-1968.67	8.64 S	175.21 E	175.21	11.82
25	4264.78	49.20	93.40	4209.32	-1989.92	10.56 S	198.44 E	198.44	11.68
26	4296.48	52.90	92.30	4229.25	-2009.85	11.78 S	223.06 E	223.06	11.98
27	4328.15	57.20	91.90	4247.39	-2027.99	12.73 S	248.99 E	248.99	13.62
28	4360.63	61.40	91.70	4263.96	-2044.56	13.60 S	276.90 E	276.90	12.94
29	4392.38	64.90	92.40	4278.30	-2058.90	14.62 S	305.20 E	305.20	11.20

MAXX Petroleum Ltd.

Riverside Prospect
No. 1 HZ Whitley

June 11, 1997

Survey No.	Measured Depth	Angle Deg	Direction Deg	TVD	Sea-Level Datum	Northings Feet	Easting Feet	Vertical Section	Dog Leg
70	5778.31	89.90	89.10	4324.24	-2104.84	1.38 S	1683.41 E	1683.41	0.63
71	5809.95	90.00	89.10	4324.27	-2104.87	0.88 S	1715.04 E	1715.04	0.32
72	5841.72	90.10	88.80	4324.24	-2104.84	0.30 S	1746.81 E	1746.81	1.00
73	5873.49	89.30	90.40	4324.41	-2105.01	0.08 S	1778.58 E	1778.58	5.63
74	5905.17	89.20	90.20	4324.82	-2105.42	0.24 S	1810.25 E	1810.25	0.71
75	5936.88	89.20	90.50	4325.27	-2105.87	0.44 S	1841.96 E	1841.96	0.95
76	5968.64	87.70	90.70	4326.13	-2106.73	0.77 S	1873.70 E	1873.70	4.76
77	6000.37	86.00	90.40	4327.87	-2108.47	1.08 S	1905.38 E	1905.38	5.44
78	6032.09	86.40	90.70	4329.97	-2110.57	1.38 S	1937.03 E	1937.03	1.58
79	6063.83	88.80	90.10	4331.30	-2111.90	1.60 S	1968.74 E	1968.74	7.79
80	6095.60	90.60	89.80	4331.47	-2112.07	1.57 S	2000.51 E	200.51	5.74
81	6127.29	90.70	90.00	4331.11	-2111.71	1.52 S	2032.20 E	2032.20	0.71
82	6159.02	91.00	89.90	4330.64	-2111.24	1.49 S	2063.92 E	2063.92	1.00
83	6190.72	90.90	89.80	4330.11	-2110.71	1.41 S	2095.62 E	2095.62	0.45
84	6222.46	89.60	90.80	4329.97	-2110.57	1.57 S	2127.36 E	2127.36	5.17
85	6254.11	90.80	90.80	4329.86	-2110.46	2.01 S	2159.00 E	2159.00	3.79
86	6285.82	92.00	91.10	4329.09	-2109.69	2.54 S	2190.70 E	2190.70	3.90
87	6317.56	91.00	91.50	4328.26	-2108.86	3.26 S	2222.42 E	2222.42	3.39
88	6349.31	90.10	90.80	4327.95	-2108.55	3.90 S	2254.16 E	2254.16	3.59
89	6381.15	89.70	90.70	4328.01	-2108.61	4.31 S	2286.00 E	2286.00	1.29
90	6412.76	89.80	90.20	4328.15	-2108.75	4.56 S	2317.61 E	2317.61	1.61
91	6444.51	90.10	89.60	4328.17	-2108.77	4.51 S	2349.36 E	2349.36	2.11
92	6476.18	90.60	89.00	4327.98	-2108.58	4.12 S	2381.02 E	2381.02	2.47
93	6507.95	91.10	89.60	4327.51	-2108.11	3.73 S	2412.79 E	2412.79	2.46
94	6359.70	89.90	88.90	4327.23	-2107.83	3.32 S	2444.53 E	2444.53	4.38
95	6571.42	89.80	89.30	4327.31	-2107.91	2.82 S	2476.25 E	2476.25	1.30
96	6603.19	90.00	89.30	4327.37	-2107.97	2.43 S	2508.02 E	2508.02	0.63
97	6634.91	90.50	89.50	4327.23	-2107.83	2.10 S	2539.73 E	2539.73	1.70
98	6666.71	90.30	90.20	4327.01	-2107.61	2.01 S	2571.53 E	2571.53	2.29
99	6698.56	90.90	90.50	4326.67	-2107.27	2.21 S	2603.38 E	2603.38	2.11
100	6730.14	91.20	90.10	4326.10	-2106.70	2.37 S	2634.96 E	2634.96	1.58
101	6749.18	90.20	90.50	4325.86	-2106.46	2.47 S	2653.99 E	2653.99	5.66
102	*6795.18	90.10	90.10	4325.74	-2106.34	2.71 S	2699.99 E	2699.99	0.90

The Dogleg Severity Is In Degrees Per 100.00 Feet.

N/E Coordinate Values Given Relative To Well System Reference Point.

TVD Coordinate Values Given Relative To Well Head.

The Vertical Section Origin Is Well Head.

The Vertical Section Was Computed Along 90.00 (True).

MAXX Petroleum Ltd.

Riverside Prospect

June 11, 1997

No. 1 HZ Whitley

FORMATION TOPS

Buried Hills Production Company Inc.
No. 1 HZ Whitley
NE NE SW Sec 13, T20S, R23W
Ness County, Kansas

	G.L. 2204' K.B. 2219.4'	Comparison Well NE SW 13-20S-23W K.B. 2211' Surface +2206'	Drill Time And Samples K.B. 2219' Surface +2206'
Tertiary			
Cretaceous			
Cenomanian			
Greenhorn	NL	ND	
Graneros	NL	ND	
Albian			
Dakota	NL	ND	
Kiowa	NL	ND	
Cheyenne	NL	ND	
Permian			
Glaudalupian			
White Horse	680' +1426'	684' +1535'	
Leonardian			
Nipewalla Gr.			
Blaine	785' +1426'	786' +1432'	
Cedar Hills	870' +1341'	876' +1343'	
Sumner Gr.			
Stone Corral	1403' +808'	1417' +802'	
Ninnescah	1446' +765'	1451' +768'	
Hutchinson	1800' +411'	1796' +423'	
Wolfcampian			
Chase Gr.			
Herington	2280' -69'	2284' -65'	
Gage Shale	2367' -156'	2378' -159'	
Council Grove Gr.			
Neva	2790' -579'	2800' -581'	
Red Eagle	2870' -659'	2872' -653'	
Pennsylvanian			
Virgilian			
Douglas Gr.			
Heebner	3644' -1433'	3652' -1433'	
Toronto	3658' -1447'	3662' -1443'	
MAXX Petroleum Ltd.		Riverside Prospect No. 1 HZ Whitley	June 11, 1997

Buried Hills Production Company Inc
No. 1 HZ Whitley
NE NE SW Sec. 13, T20S, R23W
Ness County, Kansas

Sample examination commenced at 3550 feet and continued to a total depth at 6795 feet. Samples are lagged. A twenty foot sample interval was used from 3550 feet to 3900 feet. A ten foot sample interval was used from 3900 feet to 6795 feet.

- 3550 - 3570 Limestone (95%), buff, white, wackestone, packstone. Shale (5%), black, gray. Note: Drilling with water, cuttings are very small in size, abundant sandstone cavings from Cedar Hills.
- 3570 - 3590 Limestone (95%), buff, white, wackestone, packstone. Shale (5%), black, gray. Sample 50% cavings from Cedar Hills.
- 3590 - 3610 Limestone (100%), buff, white, wackestone, packstone. Shale (5%), black, gray. Sample 30% cavings from Cedar Hills.
- 3610 - 3630 Limestone (100%), buff, white, wackestone, packstone. Shale (trace), black, dark brown, gray.
- 3630 - 3650 Limestone (100%), buff, white, wackestone, packstone. Shale (trace), black, very dark brown, gray.
- Heebner 3652' -1433'**
- 3650 - 3670 Limestone (90%), buff, white, wackestone, packstone, some mudstone. Shale (10%), black, very dark brown, gray.
- Toronto 3662' -1443'**
- 3670 - 3690 Limestone (95%), buff, tan, white, packstone, wackestone, mudstone. Shale (5%), gray, trace black.
- Lansing 3699' -1480'**
- 3690 - 3710 Limestone (80%), buff, tan, light grayish tan, wackestone, mudstone. Shale (20%), gray, black. Chert (trace), gray. Sample caught before trip for Directional Tools at 3730'.
- 3710 - 3730 No Sample.
- 3730 - 3750 Limestone (95%), buff, white, tan, wackestone, mudstone. Shale (5%), gray, black. Sample 35% red shale and sandstone cavings.
- 3750 - 3770 Limestone (95%), buff, white, tan, wackestone, mudstone. Shale (5%), gray, black. Sample 50% red shale and sandstone cavings.

- 4010 - 4020 Limestone (80%), buff, tan, wackestone, mudstone. Shale (20%), gray, black, greenish gray. Sample is 90% cavings.
- 4020 - 4030 No Sample.
- 4030 - 4040 Limestone (90%), white, buff, wackestone, mudstone, some white dolomitic limestone. Shale (10%), black, gray, greenish gray. Sample is 50% cavings. Attempt is being made to mud up hole.
- 4040 - 4050 Limestone (80%), white, buff, wackestone, mudstone, some white medium grained oolitic packstone with oomoldic porosity. Shale (20%), gray, black, greenish gray. Sample is 75% cavings.
- 4050 - 4060 Limestone (80%), buff, tan, wackestone, mudstone. Shale (20%), gray, black, greenish gray. Poor sample quality.
- 4060 - 4070 Limestone (85%), buff, tan, wackestone, mudstone. Shale (15%), gray, black, greenish gray. Poor sample quality.
- 4070 - 4080 Limestone (70%), buff, light tan, wackestone, mudstone, trace medium grained oolitic packstone with oomoldic porosity.
- 4080 - 4090 Limestone (80%), buff, tan, light gray, wackestone, mudstone, some medium grained oolitic packstone with oomoldic porosity. Shale (20%), gray, greenish gray, black. Chert (trace), light gray, white. Sample is 60% cavings.
- 4090 - 4100 Limestone (70%), buff, tan, light gray, wackestone, mudstone, trace medium grained oolitic packstone with oomoldic porosity. Shale (30%), gray, greenish gray. Sample is 70% cavings.
- 4100 - 4110 Limestone (90%), buff, tan, light gray, wackestone, some mudstone. Shale (10%), gray, greenish gray, black. Chert (trace), white, light gray, tan. Sample is 50% cavings.
- 4110 - 4120 Limestone (95%), buff, tan, light gray, wackestone, mudstone. Shale (5%), black, gray, greenish gray. Sample is 50% cavings.
- 4120 - 4130 Limestone (80%), buff, tan, light gray, wackestone, mudstone. Shale (20%), gray, greenish gray. Chert (trace), white, tan, light gray. Sample is 60% cavings.
- 4130 - 4140 Limestone (90%), buff, tan, white, wackestone, mudstone. Shale (10%), gray, greenish gray. Chert (trace), white, buff, light gray.
- 4140 - 4150 Limestone (80%), buff, tan, white, wackestone, mudstone. Shale (20%), gray, greenish gray, black. Chert (trace), white, tan, buff.
- 4150 - 4160 Limestone (80%), buff, tan, white, wackestone, mudstone. Shale (20%), gray, greenish gray, black. Chert (trace), white, tan, buff.
- 4160 - 4170 Limestone (80%), buff, fine crystalline. Shale (20%), gray, greenish gray, black, trace light red, purple, light green.

- 4395 - 4400 Shale (70%), gray, greenish gray, black. Limestone (30%), buff, tan, wackestone, mudstone. Trip Sample.
- 4400 - 4410 Shale (65%), gray, greenish gray, black, light green, maroon, maroon-green mottled, red, red-gray mottled. Limestone (35%), tan, buff, wackestone, mudstone. Poor sample quality.
- 4410 - 4420 Shale (85%), gray, greenish gray, maroon, dark red, light green, purple, maroon-green mottled, light green, black. Limestone (15%), buff, tan, mudstone, wackestone. Sandstone (trace), light gray, fine-very fine grained, clay matrix. Poor sample quality.
- 4420 - 4430 Shale (75%), gray, greenish gray, maroon, light green, red, black, purple, purple shale is sandy. Limestone (25%), buff, tan, mudstone, wackestone. Sandstone (trace), light gray, purple, medium-very fine grained, clay matrix.. Chert (trace), white, light gray. Poor sample quality.
- 4430 - 4440 Shale (60%), gray, greenish gray, maroon, light green, bright kelly green, red, black. Limestone (15%), buff, tan, wackestone, mudstone. Dolomite (15%), light gray fine crystalline, trace vuggy porosity, light brown oil stain, yellow fluorescence, good cut good residual ring. Sandstone (10%), white, unconsolidated, coarse-fine grained, some clusters with clay matrix. Chert (trace), white, light yellow.
- 4440 - 4450 Shale (60%), gray, greenish gray, maroon, purple, maroon-green mottled, bright kelly green, red, black. Limestone (10%), buff, tan, mudstone, wackestone. Dolomite (20%), white, tan, fine crystalline, trace dolomite with dark brown oil stain, yellow fluorescence, good cut, good residual ring, some white dolomite with black organic staining. Sandstone (10%), white, tan, fine-very fine grained, some very coarse grained, clay matrix. Chert (trace), white, tan, light gray, light yellow.
- 4450 - 4460 Shale (60%), gray, greenish gray, maroon, purple, black, ochre, ochre-green mottled, red-green mottled, purple shale is sandy. Dolomite (30%), light tan, buff, fine crystalline, trace dolomite with poor vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Limestone (10%), buff, light tan, mudstone, wackestone. Chert (trace), white, light gray, tan.
- 4460 - 4470 Shale (65%), gray, greenish gray, maroon, purple, black, red, ochre, light green, bright kelly green, some shale is sandy. Dolomite (30%), buff, light tan, fine crystalline, trace dolomite with poor vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Limestone (5%), buff, white, wackestone, mudstone. Chert (trace), tan, white, light gray, light yellow, dark red. Sandstone (trace), white, light gray, granule-fine grained, unconsolidated, some clusters. Poor sample quality.

Warsaw 4478', 4308' -2089'

- 4520 - 4530 Shale (90%), gray, greenish gray, light green, green, bright green, red, black, maroon, ochre, purple, mottled varicolored shales, some sandy shale. Dolomite (10%), white, buff, tan, fine crystalline, trace dolomite with poor-fair vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Chert (trace), white, light gray. Very poor sample quality.
- 4530 - 4540 Shale (80%), gray, greenish gray, light green, green, bright green, red, black, maroon, ochre, purple, mottled varicolored shales, some sandy shale. Dolomite (10%), white, buff, tan, fine crystalline, trace dolomite with poor-fair vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Chert (trace), white, light gray. Sandstone (trace), white, coarse-fine grained. Very poor sample quality.
- 4540 - 4550 Shale (75%), gray, greenish gray, light green, green, bright green, red, black, maroon, ochre, purple, mottled varicolored shales, some sandy shale. Dolomite (25%), white, buff, tan, fine crystalline, trace dolomite with poor-fair vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Chert (trace), white, tan, orange, light gray. Very poor sample quality.
- Osage 4550', 4321.55' -2102.15'**
- 4550 - 4560 Shale (65%), gray, greenish gray, light green, green, bright green, red, black, maroon, ochre, purple, mottled varicolored shales, some sandy shale. Dolomite (35%), white, buff, tan, fine crystalline, trace dolomite with poor-fair vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Chert (trace), white, tan, orange, light gray. Very poor sample quality.
- 4560 - 4570 Shale (60%), gray, greenish gray, light green, green, bright green, red, black, maroon, ochre, purple, mottled varicolored shales, some sandy shale. Dolomite (35%), white, buff, tan, fine crystalline, trace dolomite with poor-fair vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Chert (5%), white, tan, light gray. Very poor sample quality. Beginning to mud up hole.
- 4570 - 4580 Shale (55%), gray, greenish gray, light green, green, bright green, red, black, maroon, ochre, purple, mottled varicolored shales, some sandy shale. Dolomite (35%), white, buff, tan, fine crystalline, trace dolomite with poor-fair vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Chert (10%), white, tan, light gray. Very poor sample quality.
- 4580 - 4590 Shale (35%), gray, greenish gray, light green, green, bright green, red, black, maroon, ochre, purple, mottled varicolored shales, some sandy shale. Dolomite (35%), white, buff, tan, fine crystalline, trace dolomite with poor-fair vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Chert (30%), white, tan, light gray. Sample quality improving.

- 4690 - 4700 Chert (70%), white, light gray. Dolomite (30%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4700 - 4710 Chert (85%), white, light gray. Dolomite (15%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4710 - 4720 Chert (85%), white, light gray. Dolomite (15%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4720 - 4730 Chert (90%), white, light gray. Dolomite (10%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4730 - 4740 Chert (90%), white, light gray. Dolomite (10%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4740-4750 Chert (95%), white, light gray. Dolomite (5%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4750-4760 Chert (75%), white, light gray. Dolomite (25%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4760 - 4770 Chert (80%), white, light gray. Dolomite (20%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4770 - 4780 Chert (90%), white, light gray. Dolomite (10%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4780 - 4790 Chert (85%), white, light gray. Dolomite (15%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring.
- 4790 - 4800 Chert (90%), white, light gray. Dolomite (10%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (trace), bright green, some green-white mottled, sandy.
- 4800 - 4810 Chert (95%), white, light gray. Dolomite (5%), tan, buff, fine crystalline, sucrosic, some vuggy porosity, most of crystalline dolomite and all of sucrosic dolomite has brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (trace), bright green, some green-white mottled, sandy.

- 4900 - 4910 Dolomite (95%), white, buff, fine crystalline, sample has some yellow fluorescence, brown oil stain, good batch cut, good residual ring, cuttings are to small for visual porosity determination. Chert (5%), white, light gray. Shale (trace), light green, sandy.
- 4910 - 4920 Dolomite (95%), white, buff, fine crystalline, sample has some yellow fluorescence, brown oil stain, good batch cut, good residual ring, cuttings are to small for visual porosity determination. Chert (5%), white, light gray. Shale (trace), light green, sandy.
- 4920 - 4930 Dolomite (90%), white, buff, fine crystalline, sample has some yellow fluorescence, brown oil stain, good batch cut, good residual ring, cuttings are to small for visual porosity determination. Chert (10%), white, light gray. Shale (trace), light green, sandy.
- 4930 - 4940 Dolomite (90%), white, buff, fine crystalline, sample has some yellow fluorescence, brown oil stain, good batch cut, good residual ring, cuttings are to small for visual porosity determination. Chert (10%), white, light gray. Shale (trace), light green, sandy.
- 4940 - 4950 Dolomite (90%), white, buff, fine crystalline, sample has some yellow fluorescence, brown oil stain, good batch cut, good residual ring, cuttings are to small for visual porosity determination. Chert (10%), white, light gray. Shale (trace), light green, sandy.
- 4950 - 4960 Dolomite (90%), white, buff, fine crystalline, sample has some yellow fluorescence, brown oil stain, good batch cut, good residual ring, cuttings are to small for visual porosity determination. Chert (10%), white, light gray. Shale (trace), light green, sandy.
- 4960 - 4970 Dolomite (90%), white, buff, fine crystalline, sample has some yellow fluorescence, brown oil stain, good batch cut, good residual ring, cuttings are to small for visual porosity determination. Chert (10%), white, light gray. Shale (trace), light green, sandy.
- 4970 - 4980 Dolomite (80%), white, buff, fine crystalline, sample has some yellow fluorescence, brown oil stain, good batch cut, good residual ring, cuttings are to small for visual porosity determination. Chert (10%), white, light gray. Shale (10%), light to bright green.
- 4980 - 4990 Dolomite (70%), white, buff, fine crystalline, increase from above in yellow fluorescence, increase to 10% of dolomite with brown oil stain, some with fast streaming cut, good residual ring, some micro-sucrosic porosity and earthy appearance to oil stained dolomite. Chert (20%), white, light gray, some with spotty light brown oil stain and fast cut. Shale (10%), light to bright green, sandy.

- 5060 - 5070 Dolomite (45%), brown, white, buff, fine crystalline, continued increase in above in yellow fluorescence, 50% of dolomite with light to dark brown oil stain, most with fast streaming cut, good residual ring, increase in micro-sucrosic porosity and earthy appearance to oil stained dolomite. Chert (45%), light brown, white, light gray, some with spotty light brown oil stain and fast cut. Shale (10%), light to bright green, sandy.
- 5070 - 5080 Chert (50%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (40%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, light to heavy brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (10%), light to bright green, some slightly dolomitic, sandy.
- 5080 - 5090 Chert (50%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (40%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, light to heavy brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (10%), light to bright green, some slightly dolomitic, sandy.
- 5080 - 5090 Chert (55%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (45%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (10%), light to bright green, often mottled, some slightly dolomitic, sandy.
- 5090 - 5100 Chert (55%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (45%) tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (10%), light to bright green, often mottled, some slightly dolomitic, sandy.
- 5100 - 5110 Chert (55%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (45%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (10%), light to bright green, often mottled, some slightly dolomitic, sandy.
- 5110 - 5120 Chert (55%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (45%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (10%) light to bright green, often mottled, some slightly dolomitic, sandy.

- 5200 - 5210 Chert (50%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (45%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5210 - 5220 Chert (50%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (45%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5220 - 5230 Chert (45%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (50%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5230 - 5240 Chert (40%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (50%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (10%), light to bright green, sandy.
- 5240 - 5250 Chert (35%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (55%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (10%), light to bright green, sandy.
- 5250 - 5260 Chert (60%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (35%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5260 - 5270 Chert (65%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (30%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%) light to bright green, sandy.
- 5270 - 5280 Chert (55%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (40%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green.

- 5360 - 5370 Chert (50%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (45%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5370 - 5380 Chert (45%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (50%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5380 - 5390 Chert (60%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (35%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5390 - 5400 Chert (65%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (30%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5400 - 5410 Chert (60%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (35%) tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5410 - 5420 Chert (60%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (35%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5420 - 5430 Chert (55%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (40%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.
- 5430 - 5440 Chert (55%), white, light gray, light brown, some with fluorescence and spotty light brown stain. Dolomite (40%), tan, buff, white, scattered patches of micro-sucrosic porosity, some with pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, most with fast streaming cut, good residual ring. Shale (5%), light to bright green, sandy.

- 5510-5520 Chert (55%), white, light gray, tan. Dolomite (40%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy.
- 5520 - 5530 Chert (30%), white, light gray, tan. Dolomite (65%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy.
- 5530 - 5540 Chert (30%), white, light gray, tan. Dolomite (65%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy.
- 5540 - 5550 Chert (45%), white, light gray, tan. Dolomite (50%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy. Cuttings are very small in size. Visual porosity is an estimation.
- 5550 - 5560 Chert (40%), white, light gray, tan. Dolomite (55%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy.
- 5560 - 5570 Chert (40%), white, light gray, tan. Dolomite (55%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy.
- ~~5570~~ 5580 Chert (45%), white, light gray, tan. Dolomite (50%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy.
- 5580 - 5590 Chert (45%), white, light gray, tan. Dolomite (50%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy.
- 5590 - 5600 Chert (45%), white, light gray, tan. Dolomite (50%), tan, buff, white, fine crystalline, fine sucrosic, some dolomite with vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, mottled green and white, dolomitic, sandy. Cuttings are very small in size. Visual porosity is an estimation.

- 5700 - 5710 Chert (45%), white, light gray, tan. Dolomite (45%), tan, buff, white, very fine crystalline, patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, mottled green and white, dolomitic, sandy. Cuttings are very small in size.
- 5710 - 5720 Chert (45%), white, light gray, tan. Dolomite (45%), tan, buff, white, very fine crystalline, patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, mottled green and white, dolomitic, some very slightly sandy. Cuttings are very small in size.
- 5720 - 5730 Chert (45%), white, light gray, tan. Dolomite (45%), tan, buff, white, very fine crystalline, less common patches of micro-sucrosic porosity from previous samples, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, mottled green and white, dolomitic, some very slightly sandy. Cuttings are very small in size.
- 5730 - 5740 Chert (50%), white, light gray, tan. Dolomite (40%), tan, buff, white, very fine crystalline, scattered patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, mottled green and white, dolomitic, some very slightly sandy. Cuttings are very small in size.
- 5740 - 5750 Chert (45%), white, light gray, tan. Dolomite (45%), tan, buff, white, very fine crystalline, scattered patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, mottled green and white, dolomitic, some very slightly sandy. Cuttings are very small in size.
- 5750 - 5760 Chert (50%), white, light gray, tan. Dolomite (40%), tan, buff, white, very fine crystalline, scattered patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, mottled green and white, dolomitic, some very slightly sandy. Cuttings are very small in size.
- 5760 - 5770 Chert (55%), white, light gray, tan. Dolomite (35%), tan, buff, white, very fine crystalline, scattered patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, mottled green and white, dolomitic, some very slightly sandy. Cuttings are very small in size.
- 5770 - 5780 Chert (55%), white, light gray, tan. Dolomite (35%), tan, buff, white, very fine crystalline, scattered patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, mottled green and white, dolomitic, some very slightly sandy. Cuttings are very small in size.

- 5850 - 5860 Chert (50%), white, light gray, tan. Dolomite (45%), tan, buff, white, very fine crystalline, scattered patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, often mottled green and white, dolomitic, some very slightly sandy.
- 5860 - 5870 Chert (50%), white, light gray, tan. Dolomite (40%), tan, buff, white, very fine crystalline, scattered patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, often mottled green and white, dolomitic, some very slightly sandy.
- 5870 - 5880 Chert (50%), white, light gray, tan, some with black dead oil stain. Dolomite (40%), tan, buff, white, very fine crystalline, scattered patches of micro-sucrosic porosity, rare pin-point vuggy porosity, variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, light gray, often mottled green and white, dolomitic, some very slightly sandy.
- 5880 - 5890 Chert (65%), white, buff, tan, some with black bitumen staining, no fluorescence but good cut. Dolomite (30%), tan, buff, white, very fine crystalline, some fine sucrosic, some dolomite with vuggy porosity, light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, light gray, some green and white mottled, sandy.
- 5890 - 5900 Chert (50%), white, buff, tan, some with black bitumen staining, no fluorescence but good cut. Dolomite (45%), tan, buff, white, very fine crystalline, some fine sucrosic, some dolomite with vuggy porosity, light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, light gray, some green-white and green-gray mottled, sandy.
- 5900 - 5910 Chert (65%), white, buff, tan, trace orange, some with black bitumen staining, no fluorescence but good cut. Dolomite (30%), tan, buff, white, very fine crystalline, some fine sucrosic, some dolomite with vuggy porosity, light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, light gray, some green-white and green-gray mottled, sandy, sand grains are unconsolidated coarse grained-granule, rounded, subrounded, some are etched.

- 5970 - 5980 Chert (70%), white, buff, tan, trace orange, some with black bitumen staining, no fluorescence but good cut. Dolomite (25%), tan, buff, white, very fine crystalline, trace fine sucrosic, some dolomite with vuggy porosity, some dolomite with light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, light gray, some green-white and green-gray mottled, sandy.
- 5980-5990 Chert (80%), white, buff, tan, some with black bitumen staining, no fluorescence but good cut. Dolomite (15%), tan, buff, white, very fine crystalline, trace fine sucrosic, some dolomite with vuggy porosity, some dolomite with light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (5%), light green, light gray, some green-white and green-gray mottled, sandy.
- 5990 - 6000 Chert (75%), white, buff, tan, trace orange, some with black bitumen staining, no fluorescence but good cut. Dolomite (15%), tan, buff, white, very fine crystalline, trace fine sucrosic, some dolomite with vuggy porosity, some dolomite with light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (10%), light green, light gray, some green-white and green-gray mottled, sandy.
- 6000 - 6010 Chert (75%), white, buff, tan, trace orange, some with black bitumen staining, no fluorescence but good cut. Dolomite (15%), tan, buff, white, very fine crystalline, trace fine sucrosic, some dolomite with vuggy porosity, some dolomite with light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (10%), light green, light gray, some green-white and green-gray mottled, sandy.
- 6010 - 6020 Chert (75%), white, buff, tan, trace orange, some with black bitumen staining, no fluorescence but good cut. Dolomite (15%), tan, buff, white, very fine crystalline, trace fine sucrosic, some dolomite with vuggy porosity, some dolomite with light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (10%), light green, light gray, some green-white and green-gray mottled, sandy. Shale (trace) dark red, karst ?.
- 6020 - 6030 Chert (70%), white, buff, tan, some with black bitumen staining, no fluorescence but good cut. Dolomite (20%), tan, buff, white, very fine crystalline, trace fine sucrosic, some dolomite with vuggy porosity, some dolomite with light-dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (10%), light green, light gray, some green-white and green-gray mottled, sandy, trace dark red shale.

- 6090 - 6100 Chert (60%), white, buff, tan, trace red, some with black bitumen staining, no fluorescence but good cut. Dolomite (30%), tan, buff, white, very fine crystalline, trace fine sucrosic, some dolomite with vuggy porosity, some dolomite with light to dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (10%), light green, light gray, some green-white and green-gray mottled, sandy.
- 6100 - 6110 Chert (55%), white, buff, tan, trace red and orange, some with black bitumen staining, no fluorescence but good cut. Dolomite (30%), tan, buff, white, very fine crystalline, trace fine sucrosic, rare dolomite with vuggy porosity, some dolomite with light to dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (15%), light green, light gray, light tan, some green-white and green-gray mottled, some sandy.
- 6110 - 6120 Chert (55%), white, buff, tan, trace red and orange, some with black bitumen staining, no fluorescence but good cut. Dolomite (30%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with light to dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (15%), light green, light gray, light tan, some green-white and green-gray mottled, some sandy.
- 6120 - 6130 Chert (55%), white, buff, tan, trace red and orange, some with black bitumen staining, no fluorescence but good cut. Dolomite (30%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with light to dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (15%), light green, light gray, light tan, some green-white and green-gray mottled, some sandy.
- 6130 - 6140 Chert (55%), white, buff, tan, trace red and orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, increase in dolomite with light to dark brown oil stain, yellow fluorescence, good cut good residual ring, sucrosic dolomite has even brown stain, yellow fluorescence, good cut, good residual ring. Shale (10%), light green, light gray, light tan, some green-white and green-gray mottled, some sandy.
- 6140 - 6150 Chert (60%), white, buff, tan, trace red and orange, trace with black bitumen staining, no fluorescence but good cut, trace with spotty light brown stain. Dolomite (30%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with variable light to dark brown oil stain, yellow fluorescence, good cut good residual ring. Shale (10%), light green, light gray, light tan, some green-white and green-gray mottled, some sandy.

- 6210 - 6220 Chert (60%), white, buff, tan, trace red and orange, trace with black bitumen staining, no fluorescence but good cut, trace with spotty light brown stain. Dolomite (25%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with variable light to dark brown oil stain, yellow fluorescence, good cut good residual ring. Shale (15%), light green, light gray, light tan, rare pink and red, some green-white and green-gray mottled, some sandy.
- 6220 - 6230 Chert (60%), white, buff, tan, trace red and orange, trace with black bitumen staining, no fluorescence but good cut, trace with spotty light brown stain. Dolomite (30%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with variable light to dark brown oil stain, yellow fluorescence, good cut good residual ring. Shale (10%), light green, light gray, light tan, rare pink and red, some green-white and green-gray mottled, some sandy.
- 6230 - 6240 Chert (60%), white, buff, tan, trace red and orange, trace with black bitumen staining, no fluorescence but good cut, trace with spotty light brown stain. Dolomite (25%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with variable light to dark brown oil stain, yellow fluorescence, good cut good residual ring. Shale (15%), light green, light gray, light tan, rare pink and red, some green-white and green-gray mottled, some sandy.
- 6240 - 6250 Chert (60%), white, buff, tan, trace red and orange, trace with black bitumen staining, no fluorescence but good cut, trace with spotty light brown stain. Dolomite (25%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with variable light to dark brown oil stain, yellow fluorescence, good cut good residual ring. Shale (15%), light green, light gray, light tan, rare pink and red, some green-white and green-gray mottled, some sandy.
- 6250 - 6260 Chert (60%), white, buff, tan, trace red and orange, trace with black bitumen staining, no fluorescence but good cut, trace with spotty light brown stain. Dolomite (30%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with variable light to dark brown oil stain, yellow fluorescence, good cut good residual ring. Shale (10%), light green, light gray, light tan, rare pink and red, some green-white and green-gray mottled, some sandy.
- 6260 - 6270 Chert (60%), white, buff, tan, trace red and orange, trace with black bitumen staining, no fluorescence but good cut, trace with spotty light brown stain. Dolomite (30%), tan, buff, white, very fine crystalline, trace very fine to micro-sucrosic, rare dolomite with vuggy porosity, most dolomite with variable light to dark brown oil stain, yellow fluorescence, good cut good residual ring. Shale (10%), light green, light gray, light tan, rare pink and red, some green-white and green-gray mottled, some sandy.

- 6320 - 6330 Chert (75%), white, buff, tan, trace with black bitumen staining, no fluorescence but good cut. Dolomite (20%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray some green-gray mottled, some sandy.
- 6330 - 6340 Chert (75%), white, buff, tan, trace orange and red, trace with black bitumen staining, no fluorescence but good cut. Dolomite (20%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%); light green, light gray some green-gray mottled, some sandy.
- 6340 - 6350 Chert (70%), white, buff, tan, trace orange and red, trace with black bitumen staining, no fluorescence but good cut. Dolomite (20%); tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring, increase in dolomite with oil staining from last sample. Shale (5%), light green, light gray, some green-gray mottled, trace red shale, some sandy.
- 6350 - 6360 Chert (65%), white, buff, tan, trace orange and red, trace with black bitumen staining, no fluorescence but good cut. Dolomite (30%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, trace red shale, some sandy.
- 6360 - 6370 Chert (75%), white, buff, tan, trace yellow, trace with black bitumen staining, no fluorescence but good cut. Dolomite (20%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6370 - 6380 Chert (70%), white, buff, tan, trace yellow, trace with black bitumen staining, no fluorescence but good cut. Dolomite (20%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, light gray, some green-gray mottled, some sandy.
6380. - 6390 Chert (75%), white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (20%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.

- 6470 - 6480 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (10%), light green, light gray, some green-gray mottled, some sandy.
- 6480 - 6490 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6490 - 6500 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (40%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6500 - 6510 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (40%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6510 - 6520 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (40%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6520 - 6530 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (40%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6530 - 6540 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6540 - 6550 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.

- 6630 - 6640 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6640 - 6650 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6650 - 6660 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6660 - 6670 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6670 - 6680 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (40%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6670 - 6680 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (40%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6680 - 6690 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (40%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.
- 6690 - 6700 Chert (55%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (40%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.

6780 - 6790 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.

6790 - 6795 Chert (60%) white, buff, tan, trace orange, trace with black bitumen staining, no fluorescence but good cut. Dolomite (35%), tan, buff, white, very fine crystalline, sucrosic, trace vuggy porosity, all porosity with variable light to dark brown oil stain, yellow fluorescence, fast streaming cut, good residual ring. Shale (5%), light green, light gray, some green-gray mottled, some sandy.

Total Depth 6795', True Vertical Depth 4326' -2107'

KANSAS RIVERSIDE LITHOLOGY SUMMARY

Guidelines only

CEDAR HILLS

Siltstone to very fine grained aeolian sand. Excellent porosity, no shows. Occasional lost circulation. This is a water disposal zone in some areas and may flow. Tends to be a fast drilling break.

ANHYDRITE (STONE CORRAL FORMATION)

Approximately 20 foot bed of interbedded anhydrite and minor red shale. Tends to be a slow drilling break.

HEEBNER

Black to very dark brown shale. Radioactive response on logs. Good regional marker bed. Fast drill break.

TORONTO

Limestone - predominantly wackestone with pellets or fossil fragments. Generally tight but has occasional porous streak. No shows. Thin interbedded dark grey to grey green shales. Slow drill break usually.

LANSING

Limestone - tan to grey tan wackestone to occasional oolitic packstone with some oolmoldic porosity. Some chert. Oil productive in some areas. Some grey green to black interbedded shales. Some dark to black radioactive shale markers within this formation. Drill breaks depend upon porosity.

KANSAS CITY

Interbedded limestones and grey to green to black, occasionally radioactive, shales. Some chert. Has some oolitic and oolmoldic porosity, but generally non productive.

MARMATON

Limestone - tan, light grey, grey tan, wackestone and pelletoidal and fossiliferous fragmental packstone. Porosity varies from tight to good. Productive in Riverside field. Consists in this field of two benches separated by thin grey to black shale (8-10 feet thick). Drill break depends upon porosity. Below these two benches, the Basal Marmaton consists of interbedded generally tight limestones and grey green to black shales. Also contains some radioactive log marker beds.

PAWNEE

Usually massive lime mudstone (ca. 50-60 feet thick), generally buff to light tan, occasionally dolomitic. Non productive - no porosity or shows in this area. Slow drill break.