

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

Operator: License # 3581

Name: Red Oak Energy, Inc.

Address 200 W. Douglas, Suite 510

City/State/Zip Wichita, KS 67202

Purchaser: \_\_\_\_\_

Operator Contact Person: Kevin C. Davis

Phone (316) 265-9925

Contractor: Name: Murfin Drilling Company, Inc.

License: 30606

Wellsite Geologist: Scott Banks

Designate Type of completion  
 New Well  Re-Entry  Workover

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

If Workover/Re-Entry: old well info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Comp. Date \_\_\_\_\_ Old Total Depth \_\_\_\_\_

Deepening  Re-perf.  Conv. to Inj/SWD  
 Plug Back \_\_\_\_\_ PBTB  
 Commingled \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Dual Completion \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Other (SWD or Inj?) \_\_\_\_\_ Docket No. \_\_\_\_\_

10-11-97 10-21-97 ~~10-21-97~~ 11/7/97  
Spud Date Date Reached TD Completion Date

API NO. 15- 199-202570000

County Wallace

N/2 - SW - SW - Sec. 31 Twp. 15S Rge. 4E x W

990 Feet from S/N (circle one) Line of Section

510 Feet from E/W (circle one) Line of Section

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

Lease Name Unocal Well # 1-31

Field Name Wildcat

Producing Formation Morrow

Elevation: Ground 3803 KB 3813

Total Depth 5200' PBTB 5155

Amount of Surface Pipe Set and Cemented at 410 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set 1922 Feet

If Alternate II completion, cement circulated from 1922'

feet depth to Surface w/ 230 sx cmt.

Drilling Fluid Management Plan Att. 2, 4-29-98 v.c.  
(Data must be collected from the Reserve Pft)

Chloride content N/A ppm Fluid volume 500 bbls

Dewatering method used Evaporation

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name \_\_\_\_\_

Lease Name \_\_\_\_\_ License No. \_\_\_\_\_

\_\_\_\_ Quarter Sec. \_\_\_\_ Twp. \_\_\_\_ S Rng. \_\_\_\_ E/W

County \_\_\_\_\_ Docket No. \_\_\_\_\_

RECEIVED  
KANSAS CORPORATION COMMISSION

DEC 16 1997

CONSERVATION DIVISION  
WICHITA, KS

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, 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.

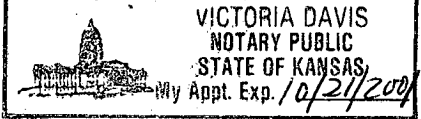
Signature Kevin C. Davis

Title Pres Date 12-16-97

Subscribed and sworn to before me this 16 day of Dec. '97  
1997

Notary Public Victoria Davis

Date Commission Expires October 21, 2001



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

SIDE TWO

Operator name Red Oak Energy, Inc.

Lease Name Unocal Well # 1-31

Sec. 31 Twp. 15S Rge. 41  
 East  
 West

County Wallace

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken (Attach Additional Sheets.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datums <input type="checkbox"/> Sample <table border="1"> <thead> <tr> <th>Name</th> <th>Top</th> <th>Datum</th> </tr> </thead> <tbody> <tr> <td>B/Anhydrite</td> <td>2758</td> <td>+1055</td> </tr> <tr> <td>Cherokee</td> <td>4730</td> <td>- 917</td> </tr> <tr> <td>Morrow SH</td> <td>4994</td> <td>-1181</td> </tr> <tr> <td>Morrow SS</td> <td>5050</td> <td>-1237</td> </tr> <tr> <td>Morrow LM</td> <td>5072</td> <td>=1259</td> </tr> </tbody> </table>	Name	Top	Datum	B/Anhydrite	2758	+1055	Cherokee	4730	- 917	Morrow SH	4994	-1181	Morrow SS	5050	-1237	Morrow LM	5072	=1259
Name	Top	Datum																			
B/Anhydrite	2758	+1055																			
Cherokee	4730	- 917																			
Morrow SH	4994	-1181																			
Morrow SS	5050	-1237																			
Morrow LM	5072	=1259																			
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																			
Cores Taken	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No																			
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No																			
List All E.Logs Run:	CDN - DIL - Bond log																				

CASING RECORD <u>  </u> New <u>  </u> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12 1/4"	8 5/8"	24	410'	60/40 Poz, 3% CC, 2& gel	275	
Production	7 7/8"	<del>4 1/2"</del> 5 1/2"	15.5	<del>5300'</del> 5155'	<del>XXXXXX</del> Class <del>XXXXXX</del> A	150 <del>236</del>	5% KCL

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top/Btm	Type of Cement	# Sacks Used	Type and Percent Additives
<input checked="" type="checkbox"/> Perforate <input checked="" type="checkbox"/> Protect Csg <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	1922	Midcon 2	230	2% Cacl

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	5050' - 58'	Natural	

TUBING RECORD	Size <u>2 7/8"</u> Set At <u>5059</u> Packer At <u>None</u>	Liner Run <u>  </u> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj.	Producing Method <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other	
Estimated Production Per 24 Hours	Oil <u>20</u> Bbls	Gas <u>2,543</u> Mcf
	Water Bbls	Gas-Oil Ratio Gravity

Disposition of Gas:  Vented  Sold  Used on Lease  Open Hole  Perf.  Dually Comp.  Commingled

(If vented, submit ACO-18.)

METHOD OF COMPLETION: 5050'-58'



**HALLIBURTON ENERGY SERVICES**  
HAL-1906-P

CHARGE TO: Red Oak Energy  
 ADDRESS: 200 W. Douglas Suite 510  
 CITY, STATE, ZIP CODE: Wichita, KS 67202-3005

CUSTOMER COPY

15-199-20257 No.

TICKET

197056 - 2

PAGE 1 OF 2

15-199-20257-00-00

SERVICE LOCATIONS 1. HAYS 25525	WELL/PROJECT NO. 1-31	LEASE UNOCA1	COUNTY/PARISH Wallace	STATE ks	CITY/OFFSHORE LOCATION Sharon Springs ks	DATE 10-21-97	OWNER JAMC
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTRACTOR Murfin Delg	RIG NAME/NO. 21	SHIPPED VIA CT	DELIVERED TO wellsite	ORDER NO.
3.	WELL TYPE 01	WELL CATEGORY 03	JOB PURPOSE 035	WELL PERMIT NO. nr 15-199-202570	WELL LOCATION 8-W125 Sharon Springs		
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS					

PRICE REFERENCE	SECONDARY REFERENCE/PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
000-117				31	MILEAGE	240	Mi			3.20	768.00
007-013	001-016				Pump Service	5200	ft			2184.00	2184.00
007-161					Pump Service Add. Stage	1	EA	1921	ft	1705.00	1705.00
26	847.6318				Insert float shoe	1	EA	5 1/2	in	385.00	385.00
27	815.19313				Auto-fill tube	1	EA	5 1/2	in	76.00	76.00
40	806.60022				Centralizers	10	EA	5 1/2	in	67.00	670.00
320	806.71430				Cement Basket	3	EA	5 1/2	in	116.00	348.00
71	813.56325				ESP cementer	1	EA	5 1/2	in	2695.00	2695.00
75	813.16511				latch down plug set - Free fall	1	EA	5 1/2	in	840.00	840.00
350	840.10802				Hawco weld. A	1	Lb			16.75	16.75
018-315					mud flush	500	gal			75	375.00
019-241					Rotating Cement Swivel	1	EA			300.00	300.00

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CONSERVATION DIVISION

**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.

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	10362.75
TYPE LOCK	DEPTH	OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?					FROM CONTINUATION PAGE(S)	9840.64
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	TIME SIGNED	TREE CONNECTION	TYPE VALVE	ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO			SUB-TOTAL	20203.39
<input type="checkbox"/> do <input type="checkbox"/> do not require IPC (Instrument Protection). <input type="checkbox"/> Not offered				<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND			APPLICABLE TAXES WILL BE ADDED ON INVOICE	

**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) David Kelly	CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) X David Kelly	HALLIBURTON OPERATOR/ENGINEER Gail Palmberg	EMP # 41489	HALLIBURTON APPROVAL
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HALLIBURTON ENERGY SERVICES

TICKET CONTINUATION

TICKET No. 197056

15-199-20257-00-00

truck# (s)		CUSTOMER			WELL		DATE		PAGE OF	
4444-5070		Red Oak			Unocal #131		10/21/97		2 2	
PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF		U/M	U/M			
504-308				31	Standard Cement	150	sk	\$10.83	\$1,624.50	
504-280					Mid Con II	250	sk	\$13.53	\$3,382.50	
509-406					Calcium Chloride	5	sk	\$46.90	\$234.50	
507-775					HALAD-322	106	lb	\$7.70	\$816.20	
507-210					Flocele	94	lb	\$1.90	\$178.60	
508-002					KCL	350	lb	\$0.41	\$143.50	
500-207					SERVICE CHARGE		CUBIC FEET	429	1.55	\$664.95
500-306					MILEAGE CHARGE	TOTAL WEIGHT	LOADED MILES	TON MILES		
					39,490	120	2369.400	1.18	\$2,795.89	

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CONSERVATION DIVISION  
WICHITA, KS

No. B 660175

CONTINUATION TOTAL \$ 9,840.64





JOB LOG 4239-5

TICKET #	197056	TICKET DATE	10-21-99
REGION	North America	NWA/COUNTRY	MIDCONTINENT
MBU ID / EMP #	AA0502 41489	EMPLOYEE NAME	GAIL Palmberg
LOCATION	NAYS 25525	COMPANY	Red Oak Energy
TICKET AMOUNT	20203	WELL TYPE	01
WELL LOCATION	8-W 12-3 Sharon Springs	DEPARTMENT	5005
LEASE / WELL #	UWOCAL 1-31	SEC / TWP / RNG	31-15s-41w
BDA / STATE	Ks	PSL DEPARTMENT	5001
COUNTY	WALLACE	CUSTOMER REP / PHONE	DAVE Pouley
		API / UWI #	API 15-199-202570-0000
		JOB PURPOSE CODE	035

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
Glatberg 1707	Br Chatham H7804		
M. Kadlin G1511			

ORIGINAL

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESS. (Psi)		JOB DESCRIPTION / REMARKS
				T	C	Tbg	Csg	
	0500							Called out
	1000							On location Rig laying down O.P. Discuss Job Set up Equipment
	1515							START 5 1/2 15 1/2" Csg Dve 1921' DROP BALL FOR INSERT CASING on bottom Rig up to circulate BALL THROUGH INSERT - circulate Rig up to pump truck
	1830	5	12			250		pump mud Flush
	1838	5				350		START mixing cement
			32					150 sbs 570 570 RCL 3 1/4% Natad - 322 CEMENT mixed
	1750	5 1/4						WASH out pump - line Release plug
	1715		125			1000		START displacement Plug down
								Release pressure - Float held
	1720					550		Drop Free Fall plug WASH up Equip
								Open DV TOOL CIRCULATE for 4 hrs
	2320	5 1/2				100		Rig up to start 2ND STAGE
								START mixing cement
								200 sbs micron II 270CC 3/8" Floccl @ 11.1 gal
								35 sbs micron II 270CC 3/8" Floccl @ 12.8 gal
	2315		120			100		Cement mixed
								Release Plug
	2355		46			1500		START displacement
	2400							Plug down
								Release Pressure DV closed
	0045							Wash up Rack up
								Job completed
								Dump emt on ground to plug rat hole's mouse hole

CEMENT D.I.D. - CIRCULATE RECEIVED  
 KANSAS CORPORATION COMMISSION

DEC 16 1997

Thank you

CONSERVATION DIVISION WICHITA KS

Lail M... & Ben

# ALLIED CEMENTING CO., INC.

8600

Federal Tax I.D.#

15-199-20257-00-00  
SERVICE POINT:

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

ORIGINAL

Oakley

DATE	10-12-97	SEC.	31	TWP.	15	RANGE	41	CALLED OUT		ON LOCATION	1:45 AM	JOB START		JOB FINISH	9:45 AM
LEASE	Unocal	WELL #	1-31	LOCATION	Weskan 3E-5 to C.L-1U-6M						COUNTY	Wallace	STATE	Kan	
OLD OR NEW	(Circle one)														

CONTRACTOR Murkin Drilling Co #14

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 388'

CASING SIZE 8 5/8 DEPTH 388'

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT 39.32

CEMENT LEFT IN CSG. 39'

PERFS. \_\_\_\_\_

DISPLACEMENT \_\_\_\_\_

OWNER Same

CEMENT AMOUNT ORDERED 275 SKS 6/40 per

3% CC - 2% Cel

COMMON	165 SKS	@	7.55	1,245.75
POZMIX	110 SKS	@	3.25	357.50
GEL	5 SKS	@	9.50	47.50
CHLORIDE	9 SKS	@	28.00	252.00
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	275 SKS	@	1.05	288.75
MILEAGE	4¢ per SK/mile			803.00
TOTAL				2,994.50

EQUIPMENT

PUMP TRUCK CEMENTER Walt

# 191 HELPER Dean

BULK TRUCK DRIVER JOFF

# 212

BULK TRUCK DRIVER \_\_\_\_\_

# \_\_\_\_\_

REMARKS:

Cement Drill Core ✓  
(in cellar)

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CONSERVATION DIVISION  
WICHITA, KS

*Thompson*

SERVICE

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE 470.00

EXTRA FOOTAGE 88' @ 4.14 36.08

MILEAGE 73-miles @ 2.83 208.05

PLUG 8 5/8 Surface @ 4.50 45.00

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL 759.13

CHARGE TO: Red Oak

STREET 200 W Douglas, St. # 510

CITY Wichita STATE Kan ZIP 67202

FLOAT EQUIPMENT

8 5/8

1- Baffle Plate @ 135.00

1- Centralizer @ 61.00

1- Thread Loc @ 30.00

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL 226.00

To Allied Cementing Co., Inc.  
You are hereby requested to rent cementing equipment and furnish cement and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

TAX \_\_\_\_\_

TOTAL CHARGE \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

SIGNATURE Matt Finnesy

Matt Finnesy  
PRINTED NAME

DST REPORT

15-199-20257-00-00

GENERAL INFORMATION

DATE : 10-20-1997  
CUSTOMER : RED OAK ENERGY  
WELL : 1-31 TEST: 1  
ELEVATION: 3810 K.B.  
SECTION : 31  
RANGE : 41W COUNTY: WALLACE  
GAUGE SN#: 11018 RANGE : 4025

TICKET : 22632  
LEASE : UNOCAL  
GEOLOGIST: SCOTT BANKS  
FORMATION: MORROW  
TOWNSHIP : 15S  
STATE : KS  
CLOCK : 12 H.R.

ORIGINAL

WELL INFORMATION

PERFORATION INTERVAL FROM: 4980.00 ft TO: 5065.00 ft TVD: 5065.0 f  
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS  
DEPTH OF RECORDERS: 4983.0 ft 5062.0 ft  
TEMPERATURE: 126.0

DRILL COLLAR LENGTH:	510.0 ft	I.D.:	2.250 in
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH :	4444.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	26.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	85.0 ft	ANCHOR SIZE:	5.500 in
SURFACE CHOKE SIZE :	0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE :	7.875 in	TOOL JOINT SIZE :	4.5 XH
PACKER DEPTH:	4975.0 ft	SIZE:	6.630 in
PACKER DEPTH:	4980.0 ft	SIZE:	6.630 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG #16  
MUD TYPE : CHEMICAL  
WEIGHT : 9.100 ppg  
CHLORIDES : 8000 ppm  
JARS-MAKE : W.T.C.  
DID WELL FLOW?: YES

VISCOSITY : 60.00 cp  
WATER LOSS: 9.200 cc  
SERIAL NUMBER: 12369  
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG OFF BOTTOM OF BUCKET  
IN 1 MIN. GAS TO SURFACE IN 4 MINS.  
FINAL FLOW PERIOD GAS TO SURFACE SEE GAS REPORT



15-199-20257-00-00

## DST REPORT (CONTINUED)

## FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
60.0	0.0	30.0	0.0	70.0	GASSY MUD
540.0	35.0	25.0	0.0	40.0	HEAVY GAS & OIL CUT MUD

## RATE INFORMATION

OIL VOLUME:	1.0250 STB	
GAS VOLUME:	5.5288 SCF	TOTAL FLOW TIME: 105.0000 min.
MUD VOLUME:	1.7606 STB	AVERAGE OIL RATE: 30.1238 STB/D
WATER VOLUME:	0.0000 STB	AVERAGE WATER RATE: 0.0000 STB/D
TOTAL FLUID :	2.7856 STB	

## FIELD TIME &amp; PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2390.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	318.00	356.00
INITIAL SHUT-IN	45.00		430.00
FINAL FLOW	60.00	411.00	413.00
FINAL SHUT-IN	60.00		418.00

FINAL HYDROSTATIC PRESSURE: 2360.00

## OFFICE TIME &amp; PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2403.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	376.30	412.98
INITIAL SHUT-IN	45.00		475.30
FINAL FLOW	60.00	465.99	467.59
FINAL SHUT-IN	60.00		478.28

FINAL HYDROSTATIC PRESSURE: 2385.00

15-199-20257-00-00

## GAS FLOW REPORT

## GENERAL INFORMATION

DATE : 10-20-1997	TICKET : 22632
CUSTOMER : RED OAK ENERGY	LEASE : UNOCAL
WELL : 1-31 TEST: 1	GEOLOGIST: SCOTT BANKS
ELEVATION: 3810 K.B.	FORMATION: MORROW
SECTION : 31	TOWNSHIP : 15S
RANGE : 41W COUNTY: WALLACE	STATE : KS
GAUGE SN#: 11018 RANGE : 4025	CLOCK : 12 H.R.

## PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
20 MIN	MERLA	1.500	2 PSIG	527000 SCF/D
30 MIN	MERLA	1.500	8 PSIG	1123000 SCF/D
40 MIN	MERLA	1.500	12 PSIG	1420000 SCF/D
50 MIN	MERLA	1.500	12 PSIG	1420000 SCF/D
60 MIN	MERLA	1.500	12 PSIG	1420000 SCF/D

## SECOND FLOW

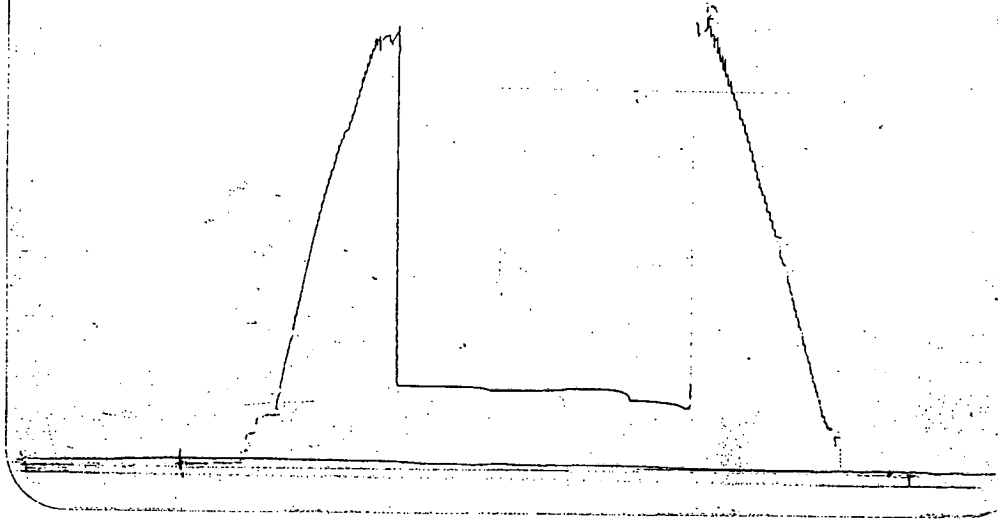
Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
5 MIN	MERLA	1.500	11 PSIG	1348000 SCF/D
10 MIN	MERLA	1.500	12 PSIG	1420000 SCF/D
15 MIN	MERLA	1.500	14 PSIG	1559000 SCF/D
25 MIN	MERLA	1.500	13 PSIG	1490000 SCF/D
35 MIN	MERLA	1.500	14 PSIG	1559000 SCF/D
45 MIN	MERLA	1.500	14 PSIG	1559000 SCF/D

15-199-20257-00-00

DST #1  
REC #110.18  
INSIDE

TK# 22632

I.



Inside Recorder

DST #1  
REC #234  
OUTSIDE

TK# 22632

O.



Company: RED OAK ENERGY  
Well: UNOCAL 1-31 DST #1  
Field: TKT # 22632

15-199-20257-00-00

[Monday: Oct. 20, 199  
Page 1

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
START FLOW 1				
1	0	0: 2:42	0.0000	376.30
6	0	0: 3:18	0.0100	376.19
11	0	0: 3:54	0.0199	375.16
16	0	0: 4:30	0.0299	375.06
21	0	0: 5: 6	0.0399	374.03
26	0	0: 5:42	0.0498	373.01
31	0	0: 6:18	0.0599	373.83
36	0	0: 6:54	0.0700	376.50
41	0	0: 7:31	0.0800	378.25
46	0	0: 8: 7	0.0902	380.92
51	0	0: 8:43	0.1002	382.67
56	0	0: 9:20	0.1104	386.26
61	0	0: 9:56	0.1205	388.01
66	0	0:10:32	0.1305	388.83
71	0	0:11: 9	0.1406	390.58
76	0	0:11:45	0.1506	391.40
81	0	0:12:21	0.1607	393.15
86	0	0:12:57	0.1707	393.97
91	0	0:13:33	0.1808	394.79
96	0	0:14: 9	0.1909	396.54
101	0	0:14:45	0.2008	396.44
106	0	0:15:22	0.2109	397.26
111	0	0:15:58	0.2209	398.08
116	0	0:16:34	0.2309	398.90
121	0	0:17:10	0.2410	399.73
126	0	0:17:46	0.2510	399.62
131	0	0:18:22	0.2610	399.52
136	0	0:18:58	0.2710	400.34
141	0	0:19:34	0.2810	401.16
146	0	0:20:10	0.2911	401.99
151	0	0:20:46	0.3011	402.81
156	0	0:21:22	0.3111	402.71
161	0	0:21:58	0.3211	403.53
166	0	0:22:35	0.3312	404.35
171	0	0:23:10	0.3411	404.25
176	0	0:23:46	0.3511	404.15
181	0	0:24:23	0.3612	404.97
186	0	0:24:59	0.3712	405.79
191	0	0:25:35	0.3812	405.69
196	0	0:26:11	0.3912	406.51
201	0	0:26:47	0.4012	406.41
206	0	0:27:23	0.4113	408.15
211	0	0:27:59	0.4213	408.05
216	0	0:28:35	0.4313	408.87
221	0	0:29:11	0.4413	408.77
226	0	0:29:47	0.4514	410.52
231	0	0:30:23	0.4614	410.41
236	0	0:30:59	0.4714	410.31
241	0	0:31:35	0.4814	410.21
246	0	0:32:11	0.4913	410.11
251	0	0:32:47	0.5014	411.85
256	0	0:33:23	0.5114	411.75
261	0	0:33:59	0.5214	411.65
266	0	0:34:35	0.5314	411.54

WESTERN TESTING CO., INC.

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Company: RED OAK ENERGY  
 Well: UNOCAL 1-31 DST #1  
 Field: TKT # 22632

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
271	0	0:35:11	0.5414	411.44
276	0	0:35:47	0.5514	412.26
281	0	0:36:23	0.5614	412.16
286	0	0:36:59	0.5714	412.06
291	0	0:37:35	0.5814	411.96
296	0	0:38:11	0.5914	412.78
301	0	0:38:47	0.6014	412.67
306	0	0:39:23	0.6114	412.57
311	0	0:39:59	0.6214	412.47
316	0	0:40:35	0.6314	412.37
321	0	0:41:11	0.6414	412.26
326	0	0:41:47	0.6514	413.09
331	0	0:42:23	0.6614	412.98
336	0	0:42:59	0.6714	412.88
341	0	0:43:35	0.6813	412.78
346	0	0:44:11	0.6913	412.67
351	0	0:44:47	0.7014	413.50
356	0	0:45:23	0.7114	413.39
361	0	0:45:59	0.7214	413.29
366	0	0:46:35	0.7313	413.19
371	0	0:47:11	0.7413	413.09
376	0	0:47:47	0.7513	412.98
END FLOW 1				
START SHUTIN 1				
379	0	0:48:10	0.7578	422.17
380	0	0:48:19	0.7601	428.62
384	0	0:48:49	0.7685	436.87
389	0	0:49:26	0.7788	443.24
394	0	0:50: 3	0.7889	446.83
399	0	0:50:39	0.7991	450.43
404	0	0:51:16	0.8092	453.10
409	0	0:51:52	0.8192	453.93
414	0	0:52:28	0.8293	455.67
419	0	0:53: 4	0.8395	458.34
424	0	0:53:41	0.8495	459.17
429	0	0:54:17	0.8595	459.99
434	0	0:54:53	0.8696	461.74
439	0	0:55:29	0.8797	463.48
444	0	0:56: 5	0.8897	464.31
449	0	0:56:41	0.8997	465.13
454	0	0:57:18	0.9098	465.95
459	0	0:57:54	0.9198	466.77
464	0	0:58:30	0.9298	467.59
469	0	0:59: 6	0.9399	468.42
474	0	0:59:42	0.9499	468.31
479	0	1: 0:18	0.9599	469.14
484	0	1: 0:54	0.9699	469.96
489	0	1: 1:30	0.9799	469.85
494	0	1: 2: 6	0.9900	470.68
499	0	1: 2:42	0.9999	470.57
504	0	1: 3:18	1.0100	471.40
509	0	1: 3:54	1.0200	471.29
514	0	1: 4:30	1.0300	472.12
519	0	1: 5: 6	1.0400	472.01
524	0	1: 5:42	1.0500	472.83

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
529	0	1: 6:18	1.0600	472.73
534	0	1: 6:54	1.0700	472.63
539	0	1: 7:31	1.0800	473.45
544	0	1: 8: 7	1.0901	474.27
549	0	1: 8:43	1.1001	474.17
554	0	1: 9:19	1.1100	474.07
559	0	1: 9:55	1.1200	473.96
564	0	1:10:31	1.1300	473.86
569	0	1:11: 6	1.1400	473.76
574	0	1:11:42	1.1500	473.66
579	0	1:12:19	1.1600	474.48
584	0	1:12:55	1.1700	474.38
589	0	1:13:30	1.1800	474.27
594	0	1:14: 6	1.1900	474.17
599	0	1:14:42	1.2000	474.07
604	0	1:15:18	1.2100	473.96
609	0	1:15:54	1.2200	473.86
614	0	1:16:30	1.2300	473.76
619	0	1:17: 6	1.2400	473.66
624	0	1:17:42	1.2499	473.55
629	0	1:18:18	1.2599	473.45
634	0	1:18:54	1.2699	473.35
639	0	1:19:30	1.2800	474.17
644	0	1:20: 6	1.2899	474.07
649	0	1:20:42	1.2999	473.96
654	0	1:21:18	1.3099	473.86
659	0	1:21:54	1.3199	473.76
664	0	1:22:30	1.3299	473.66
669	0	1:23: 6	1.3399	473.55
674	0	1:23:42	1.3499	473.45
679	0	1:24:18	1.3599	474.27
684	0	1:24:54	1.3699	474.17
689	0	1:25:30	1.3799	474.07
694	0	1:26: 6	1.3899	473.96
699	0	1:26:42	1.3999	473.86
704	0	1:27:18	1.4099	474.68
709	0	1:27:54	1.4199	474.58
714	0	1:28:30	1.4299	474.48
719	0	1:29: 6	1.4399	474.38
724	0	1:29:42	1.4499	474.27
729	0	1:30:18	1.4598	474.17
734	0	1:30:54	1.4699	474.99
739	0	1:31:30	1.4799	474.89
744	0	1:32: 6	1.4899	474.79
749	0	1:32:42	1.4999	474.68
754	0	1:33:18	1.5099	475.51
759	0	1:33:54	1.5199	475.40
764	0	1:34:30	1.5299	475.30
		END SHUTIN 1		
		START FLOW 2		
767	0	1:34:50	1.5354	465.99
769	0	1:35: 4	1.5394	465.95
774	0	1:35:40	1.5494	465.85
779	0	1:36:16	1.5594	465.74
784	0	1:36:52	1.5694	465.64

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
789	0	1:37:28	1.5794	465.54
794	0	1:38: 4	1.5893	465.43
799	0	1:38:40	1.5993	465.33
804	0	1:39:16	1.6093	465.23
809	0	1:39:52	1.6193	465.13
814	0	1:40:28	1.6293	465.02
819	0	1:41: 4	1.6393	464.92
824	0	1:41:40	1.6493	464.82
829	0	1:42:16	1.6593	464.71
834	0	1:42:52	1.6693	464.61
839	0	1:43:28	1.6793	464.51
844	0	1:44: 4	1.6892	464.41
849	0	1:44:40	1.6992	464.30
854	0	1:45:16	1.7092	464.20
859	0	1:45:52	1.7192	464.10
864	0	1:46:28	1.7292	463.99
869	0	1:47: 3	1.7392	463.89
874	0	1:47:39	1.7492	463.79
879	0	1:48:15	1.7592	463.69
884	0	1:48:51	1.7692	463.58
889	0	1:49:27	1.7792	463.48
894	0	1:50: 3	1.7891	463.38
899	0	1:50:39	1.7991	463.28
904	0	1:51:15	1.8091	463.17
909	0	1:51:51	1.8191	463.07
914	0	1:52:27	1.8291	462.97
919	0	1:53: 3	1.8391	462.86
924	0	1:53:39	1.8491	462.76
929	0	1:54:15	1.8591	462.66
934	0	1:54:51	1.8691	462.56
939	0	1:55:27	1.8790	462.45
944	0	1:56: 3	1.8890	462.35
949	0	1:56:39	1.8990	462.25
954	0	1:57:15	1.9090	462.14
959	0	1:57:51	1.9190	462.04
964	0	1:58:27	1.9290	461.94
969	0	1:59: 3	1.9390	461.84
974	0	1:59:39	1.9490	461.73
979	0	2: 0:15	1.9590	461.63
984	0	2: 0:51	1.9689	461.53
989	0	2: 1:27	1.9789	461.43
994	0	2: 2: 3	1.9889	461.32
999	0	2: 2:38	1.9989	461.22
1004	0	2: 3:14	2.0089	461.12
1009	0	2: 3:50	2.0189	461.01
1014	0	2: 4:26	2.0289	460.91
1019	0	2: 5: 2	2.0389	460.81
1024	0	2: 5:38	2.0489	460.71
1029	0	2: 6:14	2.0588	460.60
1034	0	2: 6:50	2.0688	460.50
1039	0	2: 7:26	2.0788	460.40
1044	0	2: 8: 2	2.0888	460.29
1049	0	2: 8:38	2.0988	460.19
1054	0	2: 9:14	2.1088	461.01
1059	0	2: 9:50	2.1188	460.91

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
1064	0	2:10:26	2.1288	460.81
1069	0	2:11: 2	2.1388	460.71
1074	0	2:11:38	2.1488	460.60
1079	0	2:12:14	2.1588	460.50
1084	0	2:12:50	2.1688	460.40
1089	0	2:13:26	2.1788	460.29
1094	0	2:14: 2	2.1888	460.19
1099	0	2:14:38	2.1987	460.09
1104	0	2:15:14	2.2087	459.99
1109	0	2:15:50	2.2187	459.88
1114	0	2:16:26	2.2287	459.78
1119	0	2:17: 2	2.2387	459.68
1124	0	2:17:38	2.2487	459.57
1129	0	2:18:14	2.2587	459.47
1134	0	2:18:50	2.2687	460.29
1139	0	2:19:26	2.2787	460.19
1144	0	2:20: 2	2.2887	460.09
1149	0	2:20:38	2.2987	459.99
1154	0	2:21:14	2.3087	459.88
1159	0	2:21:50	2.3187	459.78
1164	0	2:22:25	2.3286	459.68
1169	0	2:23: 1	2.3386	459.57
1174	0	2:23:37	2.3486	459.47
1179	0	2:24:13	2.3586	459.37
1184	0	2:24:49	2.3686	459.27
1189	0	2:25:25	2.3786	459.16
1194	0	2:26: 1	2.3886	459.06
1199	0	2:26:37	2.3986	459.88
1204	0	2:27:13	2.4086	459.78
1209	0	2:27:49	2.4186	459.68
1214	0	2:28:25	2.4286	459.57
1219	0	2:29: 1	2.4386	459.47
1224	0	2:29:37	2.4486	459.37
1229	0	2:30:13	2.4586	460.19
1234	0	2:30:49	2.4686	460.09
1239	0	2:31:25	2.4786	459.99
1244	0	2:32: 1	2.4886	459.88
1249	0	2:32:37	2.4985	459.78
1254	0	2:33:14	2.5087	462.45
1259	0	2:33:50	2.5187	464.20
1264	0	2:34:26	2.5288	465.02
1269	0	2:35: 2	2.5389	466.77
1274	0	2:35:38	2.5489	467.59
END FLOW 2				
START SHTUIN 2				
1276	0	2:35:53	2.5529	467.55
1279	0	2:36:15	2.5589	468.41
1284	0	2:36:51	2.5690	469.23
1289	0	2:37:27	2.5790	470.06
1294	0	2:38: 3	2.5890	470.88
1299	0	2:38:39	2.5991	471.70
1304	0	2:39:15	2.6091	471.60
1309	0	2:39:51	2.6191	472.42
1314	0	2:40:27	2.6291	473.24
1319	0	2:41: 3	2.6391	473.14



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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
1324	0	2:41:39	2.6491	473.96
1329	0	2:42:15	2.6591	473.86
1334	0	2:42:51	2.6692	474.68
1339	0	2:43:28	2.6792	475.50
1344	0	2:44: 3	2.6892	475.40
1349	0	2:44:39	2.6992	475.30
1354	0	2:45:15	2.7092	475.19
1359	0	2:45:51	2.7192	475.09
1364	0	2:46:27	2.7292	475.91
1369	0	2:47: 3	2.7392	475.81
1374	0	2:47:40	2.7492	476.63
1379	0	2:48:16	2.7592	476.53
1384	0	2:48:51	2.7692	476.43
1389	0	2:49:28	2.7792	477.25
1394	0	2:50: 4	2.7892	477.15
1399	0	2:50:40	2.7992	477.04
1404	0	2:51:16	2.8092	477.87
1409	0	2:51:52	2.8192	477.76
1414	0	2:52:28	2.8292	477.66
1419	0	2:53: 4	2.8392	477.56
1424	0	2:53:39	2.8492	477.46
1429	0	2:54:16	2.8592	478.28
1434	0	2:54:52	2.8692	478.17
1439	0	2:55:28	2.8792	478.07
1444	0	2:56: 3	2.8892	477.97
1449	0	2:56:39	2.8992	477.87
1454	0	2:57:15	2.9092	477.76
1459	0	2:57:51	2.9192	477.66
1464	0	2:58:27	2.9292	477.56
1469	0	2:59: 3	2.9391	477.45
1474	0	2:59:39	2.9492	478.28
1479	0	3: 0:15	2.9592	478.17
1484	0	3: 0:51	2.9692	478.07
1489	0	3: 1:27	2.9791	477.97
1494	0	3: 2: 3	2.9892	478.79
1499	0	3: 2:39	2.9992	478.69
1504	0	3: 3:15	3.0092	478.59
1509	0	3: 3:51	3.0191	478.48
1514	0	3: 4:27	3.0291	478.38
1519	0	3: 5: 3	3.0391	478.28
1524	0	3: 5:39	3.0491	478.17
1529	0	3: 6:15	3.0591	478.07
1534	0	3: 6:51	3.0691	477.97
1539	0	3: 7:27	3.0791	478.79
1544	0	3: 8: 3	3.0891	478.69
1549	0	3: 8:39	3.0991	478.58
1554	0	3: 9:15	3.1091	478.48
1559	0	3: 9:51	3.1191	478.38
1564	0	3:10:27	3.1291	478.28
1569	0	3:11: 3	3.1391	478.17
1574	0	3:11:39	3.1490	478.07
1579	0	3:12:15	3.1591	478.89
1584	0	3:12:51	3.1691	478.79
1589	0	3:13:27	3.1791	478.69
1594	0	3:14: 3	3.1890	478.58

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
1599	0	3:14:39	3.1990	478.48
1604	0	3:15:15	3.2090	478.38
1609	0	3:15:51	3.2191	479.20
1614	0	3:16:27	3.2290	479.10
1619	0	3:17: 3	3.2390	479.00
1624	0	3:17:39	3.2490	478.89
1629	0	3:18:15	3.2590	478.79
1634	0	3:18:51	3.2690	478.69
1639	0	3:19:27	3.2790	478.58
1644	0	3:20: 3	3.2890	478.48
1649	0	3:20:39	3.2990	478.38
1654	0	3:21:15	3.3090	478.28
1659	0	3:21:51	3.3189	478.17
1664	0	3:22:27	3.3289	478.07
1669	0	3:23: 3	3.3390	478.89
1674	0	3:23:39	3.3490	478.79
1679	0	3:24:15	3.3589	478.69
1684	0	3:24:51	3.3689	478.58
1689	0	3:25:27	3.3789	478.48
1694	0	3:26: 3	3.3889	478.38
1699	0	3:26:38	3.3989	478.28
1704	0	3:27:14	3.4089	478.17
1709	0	3:27:50	3.4189	478.07
1714	0	3:28:26	3.4289	477.97
1719	0	3:29: 2	3.4389	477.86
1724	0	3:29:38	3.4489	478.69
1729	0	3:30:14	3.4589	478.58
1734	0	3:30:50	3.4689	478.48
1739	0	3:31:26	3.4789	478.38
1744	0	3:32: 2	3.4889	478.28
1749	0	3:32:38	3.4988	478.17
1754	0	3:33:14	3.5088	478.07
1759	0	3:33:50	3.5188	477.97
1764	0	3:34:26	3.5289	478.79
1769	0	3:35: 2	3.5389	478.69
1774	0	3:35:38	3.5488	478.58
1779	0	3:36:14	3.5588	478.48
1784	0	3:36:50	3.5688	478.38
1789	0	3:37:26	3.5788	478.28
1794	0	3:38: 2	3.5888	478.17
1799	0	3:38:38	3.5988	478.07
1804	0	3:39:14	3.6088	478.89
1809	0	3:39:50	3.6188	478.79
1814	0	3:40:26	3.6288	478.69
1819	0	3:41: 2	3.6388	478.58
1824	0	3:41:38	3.6488	478.48
1829	0	3:42:14	3.6588	478.38
1834	0	3:42:50	3.6688	478.28

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