### SIDE ONE

## CONFIDENTIAL

## ORIGINAL

STATE CORPORATION COMMISSION OF KANSAS OIL & GAS CONSERVATION DIVISION	API No. 15 - 093-21455	<sub>5-0000</sub> U	RIGINAL	-
WELL COMPLETION FORM	County Kearny			
ACO-1 WELL HISTORY DESCRIPTION OF WELL AND USE	<u>SE - SE - SW</u>	Sac 19 Tun 2	21S <sub>Ban</sub> 38 <del>x</del>	_ Eas
Operator: License #	į	eet from N (circle one		_ vve:
Name: Amoco Production Company		et from EW (circle on	e) Line of Section	
Address PO Box 800 Room 924	Footages Calculated from Neg	arest Outside Section (	Corner:	
10 20 100 100 III 22 1	_	ENW, or SW (circle o	•	
City/State/Zip Denver, CO 80201	Lease Name Wyatt E. Field Name Wildo		1-19	
Purchaser: N/A	Producing Formation		· ·	
Operator Contact Person: Susan R. Potts	Producing Formation		3/126'	
Phone 303-830-5323	1			
Contractor: Name: Cheyenne Drilling	Total Depth5430			
	Amount of Surface Pipe Set a			
License: 5382	Mulitple Stage Cementing Col			
Wellsite Geologist: Austin Garner	If yes, show depth set			Feet
Designate Type of Completion	If Alternate II completion, cerr	nent circulated from		
X	feet depth to			sx cm
Gas , ENHR SIGW  X Dry Other (Core, WSW, Expl., Cathodic, etc.)	Drilling Fluid Management Plar (Data must be collected from	n ACT (	DAW 5-14-95	<b>,</b>
If Workover/Re-entry: old well info as followell EASER $\psi$	Chloride content 65,0	)00 ppm Fluid	Volume 2000	_ bbls
Operator:	Dewatering method used	Dried and Fill	ed	
Well Name:	Location of fluid disposal Chair	uledfoffsite:	huu	
Comp. Date Old Total Depth	KANSAS CORPORA	ITION COMMISSION	JUL 2 0	
Deepening RelipBOM_CQNT. WinjSWDA Plug Back PBTD	Cperator Name — 111 2	4 1995	_	ri i
Commingled Docket No.	Lease Name		CONFIDENTI	AL.
Dual Completion Docket No Other (SWD or Inj?) Docket No	Quarter CGNSERVA	TION DIVISIOND.	S.Rng	_ E/W
6-12-95 6-22 <b>-</b> 95 6-22-95	WICH	IITA, KS Docket No.		-, -
Spud Date Date Reached TD Completion Date	- County -			
NSTRUCTIONS: An original and two copies of this form shall be file (ansas 67202, within 120 days of the spud date, recompletion, wo information on side two of this form will be held confidential for a pt2-3-107 for confidentiality in excess of 12 months.). One copy of a sementing TICKETS MUST BE ATTACHED. Submit CP-4 form with	rkover or conversion of a well. I eriod of 12 months if requested II wireline logs and geologist w	Rule 82-3-130, 82-3-1 I in writing and submit rell report shall be attac	06 and 82-3-107 apply ted with the form (see ched with this form, AL	y. rule L
All requirements of the statutes, rules and regulations promulgated t	o regulate the oil and gas indus	try have been fully cor	mplied with and the	
tatements herein are complete to the best of my knowledge.				
Signature Susa K. 15 H		l 1/ .	FFICE USE ONLY	
	ly 18, 1995	F Letter of con	fidentiality Attached Received	
Subscribed and sworn to before me this day of	und 1995	C Drillers Timel		
Notary Public Ser	<u>~</u>	1 1/	Distribution	
Date Commission Expires January	4 1997	KGS SW	VD/Rep NGPA g Other	
	שממביוואיו		(Specify)	
10.00 E	ROADWAY		•	_

Operator Name	mócol Produc	tion Company	Lease N	lame <u>Wya</u>	tt Earny	w	ell # <u>1-19</u>
Sec. <u>19</u> Twp	o. <u>21S</u> Rg	East X West	a,				
and closed, flowing an	d shut-in pressur		essure reached sta	tic level, hydr	ostatic pressures,		val tested, time tool open nperature, fluid recovery,
Drill Stem Tests Taker (Attach Additiona	· 🗘	Yes 🔀 No	X Lo	g Form	nation (Top), Dept	h and Datums	Sample
Samples Sent to Geole	ogical Survey X	Yes y No					
Cores Taken		Yes 👔 No	Name Base	Ogallala	To Q1	op Dat 32' KB	um
Electric Log Run (Submit Copy.)	X	Yes No	Base Chase	Stone Co Top	rral 232 272	21' 26'	
List AN E. Logs Run: Microlog, Compo Long Spaced Son Spaced Neutron	ensated Spe nic, Spectr	al Density Dua	y, Penns Base Lansi	_	297 357 402 410	76' 21' 00'	
		CASING RECO	RD X New		·	16.	
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	12.25"	8.625"	24	1092'	MidCon3 Premium Pl	230 us 150	3%CC, ½# Flocele
. 191	16,50	U.U.J.		, ,			
			·		7.5		
Purpose:	. Depth ·	ADDITIO	NAL CEMENTING/S	OUEEZE REC		Percent Additiv	/es
Perforate Protect Casing Plug Back TD Plug Off Zone	'-Top Bottom						
	PERFORATION	N RECORD - Bridge Plu	ıgs Set/Type		Acid, Fracture, Sh	ot, Cement Squ	eeze Record
Shots Per Foot	Specify Fo	otage of Each Interval	Perforated	(Amou	unt and Kind of Ma	aterial Used)	Depth
	N/A						
TUBING RECORD	Size	Set At	Packer At	Liner Run	Ye	s T No	
Date of First, Resumed P	roduction,SWD o	r Inj Producing Met	hod Flow	/ing Po	umping G	as Lift	Other (Explain)
Estimated Production Per 24 Hours	Oil	Bbls. Gas	Mcf Water	r Bbl	s. G	as-Oil Ratio	Gravity
Disposition of Gas:	\		TETHOD OF COMP	LETION			Production Interval
Vented Sold	Used on Leas	se Open Ho	le Perf.	Duali	y Comp.	Commingled	
(If vented, submit ACC	)-18)	Other (S	pecify)		· · · · · · · · · · · · · · · · · · ·		

Formations (Continued)

Wyatt E. #1-19

15.093.21455.0000

Name Morrow St. Louis

Top 4981' 5226'

ORIGINAL

## CONFIDENTIAL

RELEASED

APR 6 1998

FROM CONFIDENTIA

JUL 2 0
CONFIDENTIAL

RECEIVED
KANSAS CORPORATION COMMISSION

JUL 2 4 1995

CONSERVATION DIVISION WICHITA, KS

**DRILLERS LOG** 

AMOCO PRODUCTION COMPANY

WYATT E. 1-19

SECTION 19-T21S-R38W KEARNY COUNTY, KANSAS

CONFIDENTIAL

ORIGINAL

COMMENCED: COMPLETED: 06-12-95

06-22-95

RELEASED

**APR** 

SURFACE CASING: 1091' OF 8 5/8" CMTD

W/230 SKS MIDCON3 + 3% CC + 1/4 #/SK FLOCELE, TAILED IN W/ 150 SKS

CLASS C + 2% CC + 1/4 #/SK FLOCELE.

**FORMATION** 

FROM CONFIDENTIA

6 1998

DEPTH

SURFACE HOLE	0 - 1092	
SHALE'S, ANHYDRITE & SANDSTONE	1092 - 1530	
SANDSTONE & SHALE	1530 - 2141	
SHALE	2141 - 2642	
COUNCIL GROVE	2642 - 3590	
PENNSYLVANIAN	3590 - 3840	
HEEBNER & LANSING	3840 - 4115	KUC
LANSING	4115 - 4495	
KANSAS CITY	4495 - 4861	JUL 2 n
KANSAS CITY & MORROW	4861 - 5018	
MORROW	5018 - 5231	COMERRENTIAL
MISSISSIPPI	5231 - 5290	, , sig
ST. LOUIS	5290 - 5450 RTD	

I DO HEREBY CERTIFY THAT THE FOREGOING STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

CHEYENNE DRILLING, INC.

Wray Valuto

WRAY VALENTINE

RECEIVED
KANSAS CORPORATION COMMISSION

STATE OF KANSAS: ss:

JUL 2 4 1995

SUBSCRIBED AND SWORN TO BEFORE ME THIS 26TH DAY OF JUNE, 1995

CONSERVATION DIVISION WICHITA. KS

PEGGY A. HARMS

NOTARY PUBLIC

Leggy A. Warms

PEGGY A. HARMS
Notary Public - State of Kansas
My Appt. Expires

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FORM 1906 R-13 SERVICE LOCATIONS	• • • • •	WELL/PROJECT NO	<u> </u>	LE	ASE	<u></u>		COUNTY	//PARISH		STATE	CITY/OFFSH	ORE LOC	ÁTION	DA	ATE O	VNER ·	
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3.		WELL TYPE				TEGORY		PURPOSE				WELL PERMI	T NO.	.#=		ELL LOCATION	-	
4. REFERRAL LOCATION		()3 (4) :// INVOICE INSTRUC	TIONS	<u> </u>	<u>(                                    </u>	Andelost		<u> 15° - 7</u>	9605 70	1.8111	dul					LANCT		_
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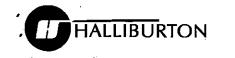
#### **TERMS AND CONDITIONS**

For good and valuable consideration received, Customer (as identified on the face of this document) and Halliburton Energy Services, a division of Halliburton Company (hereinafter "Halliburton") agree as follows:

- A. CUSTOMER REPRESENTATION Customer warrants that the well is in proper condition to receive the services, equipment, products, and materials to be supplied by Halliburton.
- B. PRICE AND PAYMENT The services, equipment, products, and/or materials to be supplied hereunder are priced in accordance with Halliburton's current price list. All prices are exclusive of taxes. 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 the 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.
- C. RELEASE AND INDEMNITY CUSTOMER AGREES TO RELEASE HALLIBURTON GROUP FROM ANY AND ALL LIABILITY FOR ANY AND ALL DAMAGES WHATSOEVER TO PROPERTY OF ANY KIND OWNED BY, IN THE POSSESSION OF, OR LEASED BY CUSTOMER AND THOSE PERSONS AND ENTITIES CUSTOMER HAS THE ABILITY TO BIND BY CONTRACT. CUSTOMER ALSO AGREES TO DEFEND, INDEMNIFY, AND HOLD HALLIBURTON GROUP HARMLESS FROM AND AGAINST ANY AND ALL LIABILITY, CLAIMS, COSTS, EXPENSES, ATTORNEY FEES AND DAMAGES WHATSOEVER FOR PERSONAL INJURY, ILLNESS, DEATH, PROPERTY DAMAGE AND LOSS RESULTING FROM:
  - LOSS OF WELL CONTROL; SERVICES TO CONTROL A WILD WELL WHETHER UNDERGROUND OR ABOVE THE SURFACE; RESERVOIR OR UNDERGROUND DAMAGE, INCLUDING LOSS OF OIL, GAS, OTHER MINERAL SUBSTANCES OR WATER; SURFACE DAMAGE ARISING FROM UNDERGROUND DAMAGE; DAMAGE TO OR LOSS OF THE WELL BORE; SUBSURFACE TRESPASS OR ANY ACTION IN THE NATURE THEREOF; FIRE; EXPLOS ON; SUBSURFACE PRESSURE; RADIOACTIVITY; AND POLLUTION AND ITS CLEANUP AND CONTROL.

CUSTOMER'S RELEASE, DEFENSE, INDEMNITY AND HOLD HARMLESS OBLIGATIONS WILL APPLY EVEN IF THE LIABILITY AND CLAIMS ARE CAUSED BY THE SOLE, CONCURRENT, ACTIVE OR PASSIVE NEGLIGENCE, FAULT, OR STRICT-LIABILITY OF ONE OR MORE MEMBERS OF THE HALLIBURTON GROUP, THE UNSEAWORTHINESS OF ANY VESSEL OR ANY DEFECT IN THE DATA, PRODUCTS, SUPPLIES, MATERIALS OR EQUIPMENT FURNISHED BY HALLIBURTON GROUP WHETHER IN THE DESIGN, MANUFACTURE, MAINTENANCE OR MARKETING THEREOF OR FROM A FAILURE TO WARN OF SUCH DEFECT. "HALLIBURTON GROUP" IS DEFINED AS HALLIBURTON, ITS PARENT, SUBSIDIARY, AND AFFILIATED COMPANIES AND ITS/THEIR OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS. CUSTOMER'S RELEASE, DEFENSE, INDEMNITY AND HOLD HARMLESS OBLIGATIONS APPLY WHETHER THE PERSONAL INJURY, ILLNESS, DEATH, PROPERTY DAMAGE OR LOSS IS SUFFERED BY ONE OR MORE MEMBERS OF THE HALLIBURTON GROUP, CUSTOMER, OR ANY OTHER PERSON OR ENTITY AND THE CUSTOMER WILL SUPPORT SUCH OBLIGATIONS ASSUMED HEREIN WITH LIABILITY INSURANCE TO THE MAXIMUM EXTENT ALLOWED BY APPLICABLE LAW.

- D. EQUIPMENT LIABILITY Customer shall at its risk and expense attempt to recover any Halliburton equipment lost or lodged in the well. If the equipment is recovered and repairable, Customer shall pay the repair costs, unless caused by Halliburton's sole negligence. If the equipment is not recovered or is irreparable, Customer shall pay the replacement cost, unless caused by Halliburton's sole negligence. If a radioactive source becomes lost or lodged in the well, Customer shall meet all requirements of Section 39.15(a) of the Nuclear Regulatory Commission regulations and any other applicable laws or regulations concerning retrieval or abandonment and shall permit Halliburton to monitor the recovery or abandonment efforts all at no risk or liability to Halliburton. Customer shall be responsible for damage to or loss of Halliburton equipment, products, and materials while in transit aboard Customer-supplied transportation, even if such is arranged by Halliburton at Customer's request, and during loading and unloading from such transport. Customer will also pay for the repair or replacement of Halliburton equipment damaged by corrosion or abrasion due to well effluents.
- E. LIMITED WARRANTY Halliburton warrants only title to the equipment, products, and materials supplied under this agreement and that same are free from defects in workmanship and materials for one year from date of delivery. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE BEYCND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's sole liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the sale, lease or use of any equipment, products, or materials is expressly limited to the replacement of such on their return to Halliburton or, at Halliburton's option, to the allowance to Customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, consequential, or punitive damages. Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, HALLIBURTON IS UNABLE TO GUARANTEE THE EFFECTIVENESS OF THE EQUIPMENT, MATERIALS, OR SERVICE, NOR THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, JOB RECOMMENDATION OR OTHER DATA FURNISHED BY HALLIBURTON. Halliburton personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Customer agrees that Halliburton shall not be liable for and CUSTOMER SHALL INDEMNIFY HALLIBURTON GROUP AGAINST ANY DAMAGES ARISING FROM THE USE OF SUCH INFORMATION, even if such is contributed to by Halliburton's negligence or fault, Halliburton also does not warrant the accuracy of data transmitted by electronic process, and Halliburton will not be responsible for accidental or intentional interception of such data by third parties.
- F. GOVERNING LAW The validity, interpretation and construction of this agreement shall be determined by the laws of the jurisdiction where the services are performed or the equipment or materials are delivered.
- G. WAIVER Customer agrees to waive the provisions of the Texas Deceptive Trade Practices-Consumer Protection Act or any similar federal or state statute to the extent permitted by law.
- H. MODIFICATIONS Customer agrees that Halliburton shall not be bound by any modifications to this agreement, except where such modification is made in writing by a duly authorized executive officer of Halliburton. Requests for modifications should be directed to the Vice President Legal, 5151 San Felipe, Houston, Texas 77056.



TICKET CONTINUATION

DUNCAN COPY

TICKET No.

HALLIBURT	TON ENERGY SERVICES	,			CUSTOMER		WELL				DATE	- A	PAGE OF	F
FORM 1911 R-10		<del></del>			Amoco. Prod	NCTION	I WY	م مرالساد	1-1	9	6-22.			
PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	LOC	ACCT ACCT	DF	DESCRIPTION			l U/M	QTY.	U/M	UNIT PRICE		AMOUN	ıт
	<u>                                     </u>	'			285 60 12 40%	Pozmix 61	3 %	N .p	nent		•			┬ -1
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ISTOME			WELL NO.	····		LEASE		JOB TYPE TICKET NO.
NOCO	Prod		1:19	<del></del>		WYNTT		PLUG TO ABANDON 7073/4
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMF T	PS C	PRESSUI TUBING	RE(PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	0400							JOB READY
	2400	REL	EASED					CALLED OUT FOR SOB
	0330	APR	6 1998	RE	C	IVED	SSION	DUMP TRUCK ON LOCATION - RIC
		1943 11 	KANS	100 SZ	PUKI	Alloid Som		LIYING DOWN DRILL PIPE
	0345F	ROM CO	NFIDE	NTI	\L	2 4 1995		SET UP DEMO TRUCK
	0415				-			. RIO TRIP IN DRILL PIPE
	0430	_	i	CON	SER\	ATION DIVISI CHITA, KS	מע	BINK PRICK ON LOCATION
					VVI	omiral -		D. P. W. HOLF.
								JOB PROSTAURIE - 100 SK DING AT 3400
	0637	4.5	100	1	٠	2.3025		DAMO 10 BBIS FRESH WITTER Alleid
	0642	4.5	270	w		0 (300)		my 100 SKS CM 1 AT 13.1 48/24
	0648	5.50	3.50	1		0 1300	,	DOMES 36 BBIS FRESH WATER BEHIND
	<i>370</i> 6		37.5	( )		NU(	,	DISPLACE WITH 37.5 DAS MUNT.
						5 HH O O		LAY DEALE D. P 10 2052 -
						JUL 2 0		
					C	ON	, AI	2Nd Plas - 50 SKS AT 2052"
	0737	4.5	10	W		0.250		perop 10 pine FRESH WATER AHIAN
	2740	4.5	13.6	4	/	0250		Mix 50 Sts CMF AT 13.1 1/2
	0743	4.5	3.5	)		0250		pump 3.5 CBIS WATTE BrHING
	0745	50	22.5	1		0.250		DISPARE WITH 22.5 BBIS MIN
,								Iny DOWN D.P. 75 1122'
				CUI	JE	IDENT	Δ	
				UUI	41-	IDEN		3 Rd Plus - SOSKS AT 1122'
	0815	50	55.0	V		5-150		PUMP 55 BBIS FRISH WATER MITTAGE
	G%2;		136	1		2150		Mix so sts cmf 13.1 Plan
	0200		12.5			0.150		Displace WILL 12.5 BBIS GATTER
								My D.P. DOWN TO SCO
		-						
								4 TH PUG - SO SXT AT 560'
_	0848	5.0	5.0	1		0-100		Pino 5 BBIS AHTING
	0850		13.5	1		0700		MIX SO SKS CKMENT
			4.5			07/06		Displace WITH 4.5 BELS
								LAY DOWN REST OF P.P
								114 DOWN P-11 + M-H + B.OP
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	1005		3.0			G		MIN 10 SKS FOR M-11
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CUSTOMER THANK YOU ! WOODY + TYCK

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E AGENT TYPE		GAL.	IN		DESCRIPTION				<u>_</u>			
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STAGE NUMBER OF SACKS		BRAND	BULK SACKED		v	1	rives	_	_	CU.F	T./SK,	LBS./GAL.
THER	CEMENT 6940 102 108	BRAND	BULK	CEMEN	v	1	rives		_	CU.F	T./SK,	MIXED LBS./GAL.
NUMBER OF SACKS		BRAND	BULK SACKED		v	1	FIVES			CU.F	T./SK,	LBS./GAL.
STAGE NUMBER OF SACKS		BRAND	BULK SACKED		v	1	TIVES	-		CU.F	T./SK,	LBS./GAL.
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NUMBER OF SACKS		BRAND Frider / 11/1/C 12	BULK SACKED	61.GF	v	1	TIVES	VOLU	IMES	CU.F	T./SK,	LBS./GAL.
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STAGE NUMBER OF SACKS  2 % S  RCULATING_REAKDOWN_	PRESSURES I	BRAND  FINAL AND  N PSI DISPLACEMENT  MAXIMUM	BULK	SUMI	MARY PRESLUSH: BBL LOAD & BKDN: I	ADDIT			TYPE .	CU.F'	7./SK,	LBS./GAL.
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STAGE NUMBER OF SACKS  235	PRESSURES I  FR.  S-N  HYDRAULIC  AVAILABLE	BRAND  PAN // // C O  N PSI DISPLACEMENT  MAXIMUM  ACTURE GRADIENT  AIN HORSEPOWER	BULK	SUMI	MARY PRESLUSH: BBL LOAD & BKDN: TREATMENT: BE CEMENT SLURF	ADDIT	L	7.5	TYPE	CU.F'	7./SK,	LBS./GAL.
STAGE NUMBER OF SACKS  255  RCULATING REAKDOWN VERAGE HUT-IN: INSTANT	PRESSURES I  FR.  S-N  HYDRAULIC  AVAILABLE	BRAND  FYN JOY JULY OF  N PSI DISPLACEMENT  MAXIMUM  ACTURE GRADIENT  HORSEPOWER	BULK SACKED	SUMI	MARY PRESLUSH: BBL LOAD & BKDN: TREATMENT: BE CEMENT SLURF	ADDIT	L	7.5	TYPE - PAD	CU.F'	7./SK,	LBS./GAL.
STAGE NUMBER OF SACKS  255  RCULATING REAKDOWN VERAGE HUT-IN: INSTANT	PRESSURES I  FR.  S-h HYDRAULIC  AVAILABLE _ AVERAGE I	BRAND  FYNDOW / INC. OF  N PSI DISPLACEMENT  MAXIMUM  ACTURE GRADIENT  HORSEPOWER  RATES IN BPM	BULK SACKED	SUMI	MARY PRESLUSH: BBL LOAD & BKDN: TREATMENT: BE CEMENT SLURF	ADDIT	L	7.5	TYPE - PAD	CU.F'	7./SK,	LBS./GAL.
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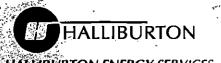
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	100 3006	

JOB LOG HAL-2013-C 15/8 SURFACE WYATT E.
PRESSURE(PSI) Amolo VOLUME PUMPS (BBL) (GAL) T TIME RATE **DESCRIPTION OF OPERATION AND MATERIALS** TUBING CASING CALLEDOUT 3:30 ON LOCATION - PRE SET-UP MEETING 8:00 6115 Rig DRIlling 8:30 9:30 11 10:30 CONFIDENTIA This COMMING OUT OF HOLE 11:00 11:45 RIG OUT OF HOLE RELEASED 6-13-95 Am 12.00 RIG UP LASING CREW RUN CS9 + FLOAT EQUIPMENT APR 6 1998 12:10 ON Bottom. Stab Head, Rig CIRCUlAtE 11 1:15 FROM CONFIDENTIAL 1:30 SWAP LINES ON Floor 1:45 Mix + Pump 133,9 BBLS OF M.d. Con ut 11,1 /ga 133,9 6 2:10 My+Pump 35.2 BBis OF PREMPlus AT 14.8 /246 11 352 215 DROP TOP Plug LOG DISPLACE W/67 BBLS OF H26 2:16 67 2133 800 Bump Plug 11 2:34 Check Floats JUL 2 0 2:35 Zloats Held 2:45 CONILIDEALITIAL BACK UP 320 ReleaseD Ciec. 32 BBLS TO PIT 54 SX PECEIVED KANSAS CORPORATION COMMISSION CONSERVATION DIVISION WICHITA, KS



miderations

SUMMARY WELL DATA SEC. 19 TWP. 3/ RNG. 76/6/ COUNTY. MAXIMUM PSI WEIGHT SIZE FROM CASING 10962 FROM. LINER BPD. WATER TUBING OPEN HOLE PERFORATIONS PERFORATIONS BOTTOM HOLE TEMP. . PRESSURE PERFORATIONS TOTAL DEPTH /696.29 JOB DATA CALLED OUT ON LOCATION TOOLS AND ACCESSORIES DATE 6-13 - 95 TYPE AND SIZE MAKE DATE 6-1275 DATE 6-13-95 TIME / BO AM FLOAT COLLAR TOUCHT WASTILL TIME ON THE FLOAT SHOE PERSONNEL AND SERVICE UNITS NAME UNIT NO. & TYPE LOCATION 38242 CENTRALIZERS Liberal BOTTOM PLUG 6w 57 4 75496 TOP PLUG HEAD PACKER HUSOTEN OTHER MATERIALS LB/GAL. API MAECENED KANSASINGORPORATION COMMUNICATION OF JOB Surface JOB DONE THRU: TUBING GAL. CONSERVATION DIVISION CEMENT DATA NUMBER OF SACKS YIELD CU.FT./SK. MIXED LBS./GAL. CEMENT BRAND ADDITIVES 1/19 Floods 29 re 150 PRESSURES IN PSI SUMMARY VOLUMES LOAD & BKDN: BBL,-GAL, DISPLEBID-GALLO TRBL HOD CEMENT SLURRY (BB) -GAL / 38.9 44 11/2- 35.2 47 14.87 SHUT-IN: INSTANT 5-MIN REMARKS AVAILABLE AVERAGE RATES IN BPM CEMENT LEFT IN PIPE



TICKET CONTINUATION

**CUSTOMER COPY** 

No. 706 8.99

CONTINUATION TOTAL

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PRICE	SECONDARY REFERENCE/ PART NUMBER	LOC	ACCOUNTING ACCT	<b>G</b>	DESCRIPTION	QTY.		QTY.   Ú/M	<del></del>	UNIT	r T	AMOUN	<del></del>
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#### **TERMS AND CONDITIONS**

For good and valuable consideration received, Customer (as identified on the face of this document) and Halliburton Energy Services, a division of Halliburton Company (hereinafter "Halliburton") agree as follows:

- A. CUSTOMER REPRESENTATION Customer warrants that the well is in proper condition to receive the services, equipment, products, and materials to be supplied by Halliburton.
- B. PRICE AND PAYMENT The services, equipment, products, and/or materials to be supplied hereunder are priced in accordance with Halliburton's current price list. All prices are exclusive of taxes. 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 the 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.
  - C. RELEASE AND INDEMNITY CUSTOMER AGREES TO RELEASE HALLIBURTON GROUP FROM ANY AND ALL LIABILITY FOR ANY AND ALL DAMAGES WHATSOEVER TO PROPERTY OF ANY KIND OWNED BY, IN THE POSSESSION OF, OR LEASED BY CUSTOMER AND THOSE PERSONS AND ENTITIES CUSTOMER HAS THE ABILITY TO BIND BY CONTRACT. CUSTOMER ALSO AGREES TO DEFEND, INDEMNIFY, AND HOLD HALLIBURTON GROUP HARMLESS FROM AND AGAINST ANY AND ALL LIABILITY, CLAIMS, COSTS, EXPENSES, ATTORNEY FEES AND DAMAGES WHATSOEVER FOR PERSONAL INJURY, ILLNESS, DEATH, PROPERTY DAMAGE AND LOSS RESULTING FROM:

LOSS OF WELL CONTROL; SERVICES TO CONTROL A WILD WELL WHETHER UNDERGROUND OR ABOVE THE SURFACE; RESERVOIR OR UNDERGROUND DAMAGE, INCLUDING LOSS OF OIL, GAS, OTHER MINERAL SUBSTANCES OR WATER; SURFACE DAMAGE ARISING FROM UNDERGROUND DAMAGE; DAMAGE TO OR LOSS OF THE WELL BORE; SUBSURFACE TRESPASS OR ANY ACTION IN THE NATURE THEREOF; FIRE; EXPLOSION; SUBSURFACE PRESSURE; RADIOACTIVITY; AND POLLUTION AND ITS CLEANUP AND CONTROL.

CUSTOMER'S RELEASE, DEFENSE, INDEMNITY AND HOLD HARMLESS OBLIGATIONS WILL APPLY EVEN IF THE LIABILITY AND CLAIMS ARE CAUSED BY THE SOLE, CONCURRENT, ACTIVE OR PASSIVE NEGLIGENCE, FAULT, OR STRICT LIABILITY OF ONE OR MORE MEMBERS OF THE HALLIBURTON GROUP, THE UNSEAWORTHINESS OF ANY VESSEL OR ANY DEFECT IN THE DATA, PRODUCTS, SUPPLIES, MATERIALS OR EQUIPMENT FURNISHED BY HALLIBURTON GROUP WHETHER IN THE DESIGN, MANUFACTURE, MAINTENANCE OR MARKETING THEREOF OR FROM A FAILURE TO WARN OF SUCH DEFECT. "HALLIBURTON GROUP" IS DEFINED AS HALLIBURTON, ITS PARENT, SUBSIDIARY, AND AFFILIATED COMPANIES AND ITS/THEIR OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS. CUSTOMER'S RELEASE, DEFENSE, INDEMNITY AND HOLD HARMLESS OBLIGATIONS APPLY WHETHER THE PERSONAL-INJURY, ILLNESS, DEATH, PROPERTY DAMAGE OR LOSS IS SUFFERED BY ONE OR MORE MEMBERS OF THE HALLIBURTON GROUP, CUSTOMER, OR ANY OTHER PERSON OR ENTITY AND THE CUSTOMER WILL SUPPORT SUCH OBLIGATIONS ASSUMED HEREIN WITH LIABILITY INSURANCE TO THE MAXIMUM EXTENT ALLOWED BY APPLICABLE LAW.

- D. EQUIPMENT LIABILITY Customer shall at its risk and expense attempt to recover any Halliburton equipment lost or lodged in the well. If the equipment is recovered and repairable, Customer shall pay the repair costs, unless caused by Halliburton's sole negligence. If the equipment is not recovered or is irreparable, Customer shall pay the replacement cost, unless caused by Halliburton's sole negligence. If a radioactive source becomes lost or lodged in the well, Customer shall meet all requirements of Section 39.15(a) of the Nuclear Regulatory Commission regulations and any other applicable laws or regulations concerning retrieval or abandonment and shall permit Halliburton to monitor the recovery or abandonment efforts all at no risk or liability to Halliburton. Customer shall be responsible for damage to or loss of Halliburton equipment, products, and materials while in transit aboard Customer-supplied transportation, even if such is arranged by Halliburton at Customer's request, and during loading and unloading from such transport. Customer will also pay for the repair or replacement of Halliburton equipment damaged by corrosion or abrasion due to well effluents.
- E. LIMITED WARRANTY Halliburton warrants only title to the equipment, products, and materials supplied under this agreement and that same are free from defects in workmanship and materials for one year from date of delivery. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's sole liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the sale, lease or use of any equipment, products, or materials is expressly limited to the replacement of such on their return to Halliburton or, at Halliburton's option, to the allowance to Customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, consequential, or punitive damages. Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, HALLIBURTON IS UNABLE TO GUARANTEE THE EFFECTIVENESS OF THE EQUIPMENT, MATERIALS, OR SERVICE, NOR THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, JOB RECOMMENDATION OR OTHER DATA FURNISHED BY HALLIBURTON. Halliburton personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Customer agrees that Halliburton shall not be liable for and CUSTOMER SHALL INDEMNIFY HALLIBURTON GROUP AGAINST ANY DAMAGES ARISING FROM THE USE OF SUCH INFORMATION, even if such is contributed to by Halliburton's negligence or fauit. Halliburton also does not warrant the accuracy of data transmitted by electronic process, and Halliburton will not be responsible for accidental or intentional interception of such data by third parties.
- F. GOVERNING LAW The validity, interpretation and construction of this agreement shall be determined by the laws of the jurisdiction where the services are performed or the equipment or materials are delivered.
- G. WAIVER Customer agrees to waive the provisions of the Texas Deceptive Trade Practices-Consumer Protection Act or any similar federal or state statute to the extent permitted by law.
- H. MOBIFICATIONS Customer agrees that Halliburton shall not be bound by any modifications to this agreement, except where such modification is made in writing by a duly authorized executive officer of Halliburton. Requests for modifications should be directed to the Vice President Legal, 5151 San Felipe, Houston, Texas 77056. (0599)

Name Morrow St. Louis

Top 4981' 5226'



# CONFIDENTIAL

RELEASED

APR 6 1998

FROM CONFIDENT

KCC

JUL 2 0

COVERNIA

RECEIVED
KANSAS CORPORATION COMMISSION

JUL 2 4 1995

CONSERVATION DIVISION WICHITA, KS

CONFIDENTIAL

The second secon AMOCO PRODUCTION COMPANY

TICKET NO. 70707500 26-JUN-95 LIBERAL

APR 6 1998

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GAUGE NO: 7351 DEPTH:5123.0 BLANKED OFF: NO HOUR OF CLOCK: 24 DESCRIPTION

A INITIAL HYDROSTATIC 2402 . 2351.9 INITIAL FIRST FLOW 11.0 11.2 FINAL FIRST FLOW <del>. -|- -- |- -- |</del> | INITIAL FIRST CLOSED-IN 61.0 60.8 FINAL FIRST CLOSED-IN | INITIAL SECOND FLOW 121.0 121.4 FINAL SECOND FLOW INITIAL SECOND CLOSED-IN 119.0 118.6 FINAL SECOND CLOSED-IN H | FINAL HYDROSTATIC 2305 2376.

FELFAMELD

707075-7352

C | INITIAL FIRST CLOSED-IN | 528 503.0 |

F INITIAL SECOND CLOSED-IN 1182 1118.7

\_\_\_

GAUGE NO: 7352 DEPTH: 5242.0 BLANKED OFF: YES HOUR OF CLOCK: 24

2400 2403.1

, 599 543.5

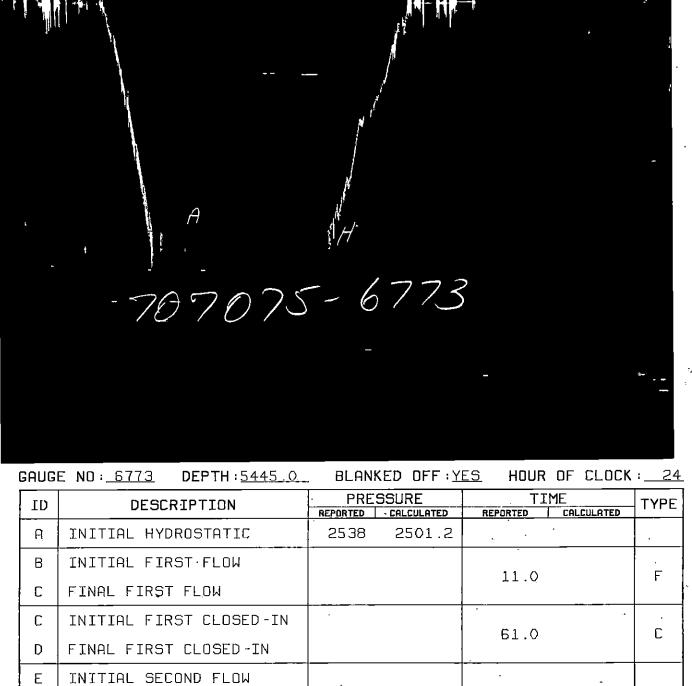
2368 2427.3

CONFIDENTIAL

11.0 11.2

121.0 121.4

119.0 118.6



	-	}}	LOKWHITON (F2)FD: WOKKOM
	ļ	}	NET PAY (ft): 61.0
		{	GROSS TESTED FOOTAGE: 111.0 P
		\{\ \{\	ALL DEPTHS MEASURED FROM: K.B.
			CASING PERFS. (ft):
	-		
		} -	HOLE OR CASING SIZE (in): 7.87
		} .	ELEVATION (ft):
		-   -	TOTAL DEPTH (ft): <u>5448.0</u>
		<b>}</b>	PACKER DEPTH(S) (ft): 5136, 5247
		}	FINAL SURFACE CHOKE (in): 0.25
	•		BOTTOM HOLE CHOKE (in): 0.750
			MUD WEIGHT (16/gal): 9.10
		<b>\$</b>	MUD VISCOSITY (sec): 50
	•	}	ESTIMATED HOLE TEMP. (°F): 125
	l	{	ACTUAL HOLE TEMP. (≗F):@
	** ·		
	<del></del>	· {	FLUID PROPERTIES RECOVERED MUD &
		. {	
	1	{	SOURCE RESISTIVITY
		<b>)</b>	PIT 0.470 © 80
CLOCK	: 24	)	TOP       0.200 € 80         MIDDLE       0.130 € 80
	TYPE	ľ	BOTTOM
ULRTED		li l	
		<b>!</b>	8
	F [	{	HYDROCARBON PROPE
		{ <del>,</del>	OIL GRAVITY ( PAPI):
.•	.	()	GAS/DIL RATIO (cu.ft. per bbl)
	C }	<u>;</u>	GAS GRAVITY:
		li .	RECOVERED:
	_   .	\	488 FT OF DRI
-	F	i Fi	1962 FT OF SAL
		<u> </u>	6 FT OF SANI
		- 1	3 1 1 3 3 1 1 1
	C .	}' [	
		(	REMARKS:
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EQUIPMENT & HOLE DATA TICKET NUMBER: 70707500 FORMATION TESTED: MORROW DATE: <u>06-21-95</u> TEST NO: <u>PKR. TO PKR.</u> TYPE DST: ON BTM. STRADDLE FIELD CAMP: LIBERAL \_\_\_\_ TESTER: ARMSTRONG <u>25000 (B. HDSE)</u> SO WITNESS: BILL CHATHAM -DRILLING CONTRACTOR: \_\_CHEYENNE DRILLING RIG #3 SAMPLER DATA ITY CHLORIDES | Psig AT SURFACE: \_\_\_\_\_ 80 °F <u>8354 ppm</u> cu.ft. OF GAS: \_ \_\_\_ F \_\_\_\_\_ PPm | TOTAL LIQUID cc: \_\_\_\_\_ AMDUNT WEIGHT \_\_\_\_ ® \_\_\_\_\_°F · \_\_\_\_ LTWATER

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIDUID RATE BPD	REMARKS			CI
06-20-95							 	F
2000					CALLED DÙT; REQUESTED TO BE ON LOCATION			
		_			AT MIDNIGHT	· .		
2322					DN LOCATION; RIG PULLING PIPE		į	B
2355			-		PIPE AND COLLARS DUT OF THE HOLE			
06-21-95			•					
0045			-		PICKED UP TOOLS IN 3 SECTIONS			
0300	<del></del>				STARTED IN THE HOLE			- [
0500					STOPPED 1 JOINT OFF BOTTOM TO WAIT	<u>.</u>		
					ON DRYLIGHT	}		C
<b>0</b> 558					ON BOTTOM			'
0600	В.Н.				HYDROSPRING OPENED		}	
0602	В.Н.			,	GOOD BLOW OFF BOTTOM OF BUCKET		1	c
0611	В.Н.			† · · · · ·	CLOSED TOOL; NO GAS AT SURFACE			'
0712	В.Н.	,		, .	OPENED TOOL	, ,		
0714	В.Н.				GOOD BLOW OFF BOTTOM OF BUCKET .	- }		
0740	В.Н.				BLOW WEAKENED TO 6" IN BUCKET			
0750	В.Н.		-		BLOW 4" IN BUCKET			i
0805	В.Н.	1		`,	BLOW 2" IN BUCKET			
0820	В.Н.				BLOW 1" IN BUCKET			
0835	В.Н.		· · ·	-	BLOW 1/2"'IN BUCKET ;		<u> </u>	
0850	В.Н.		•		BLOW 1/8" IN BUCKET	ļ		
0905	В.Н.				VERY WEAK BLOW (PRACTICALLY DEAD)	Ì		
0913	В.Н.				CLOSED TODL; NO GAS AT SURFACE	. }	1	
1112	<del>:</del>				PULLED TOOLS OFF BOTTOM		ļ	
1120					STARTED DUT OF THE HOLE	j	1	
1430		· ·			TOOLS AT TABLE	- {	1:	
1500				<u> </u>	READ CHARTS; LOADED TOOLS	- 1	1 1	
1700	<del></del>			•	JOB COMPLETED	- [		D
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						, , ,	1	
						j	}	
		<b>T</b>				3		RE
				<del>                                     </del>		,	,L	''-

00			-	ET NO: 1		OUR: 24				<u> </u>	UGE NO:						<u> </u>		70707500 7524 HC		 
			REF		PRESSURE	ΔР	<u>tx åt</u> t + åt	log <u>t. + &amp;t.</u>	REF	<u> </u>	PRESSURE	ΔP	t × &t t + &t	log t+At	]	<b>\</b>	REF	1	PRESSURE	AP ·	1. 1
N	ļ				<del></del>		11 110		s	ECOND FLOW •	- CONTINUED	<u> </u>		μ.		<b>\$</b>	SE	COND CLOSED	-IN - CONTINU	<u> </u>	
	- ]	٠			FIRST	FLOW			6 7	5.0 6.0	566.8 583.6	15.6 16.7					23 24	40.0 45.0		59.4 61.3	
	,	<b>,</b>	B 1	0.0	142.7				8	7.0	598.6	` 15.0					25		1130.1	БЗ.4	
	. {		2		248.2	105.5	•		9	8.0	612.3	13.7				<b>{</b>	25		1132.4	65.6	
			3	2.0 3.0	289.2 310.0	41.0 20.8			10 11		626.5 639.6	14.2 13.1	•			}	27 28	60.0 70.0	1134.5 1138.0	57.7 71.3	
-			5	4.0	326.9	16.9		÷	. 12		666.7	27.1		1 11		<u>}</u>	29		1140.5	.73.8	
			6	5.0	347.9	21.0			13	14.0	689.7	23.0		٠.	-	<b>}</b>	30	0.08	1143.7	77.0	
	`	1	7 8	6.0 7.0	366.5 383.3	18.6 16.9			. 14 . 15	15.0 18.0	709.9 <b>72</b> 9.6	20.3 19.6			]	8	31	100.0 110.0	1145.8 1147.9	79.1 81.2	
			s		400.5	17.2	-	]	16	20.0	747.0	17.4			1	Ş	G 33	118.6	1150.3	83.6	
1	. {		10	9.0	416.8	16.2			17	22.0	<i>7</i> 65.3	18.4			ľ	₹i	1				
	' {		C 12	10.0 11.2	434.1 <sup>-</sup> 452.0	17.4 17.8	•		18	24.0 25.0	781.6 797.6	16.3	ķ.		,	g (L			•	٠,	
	1		" 12	11.2	432.0	, 11,0		-	19 20	28.0	810.2	16.0 12.6				{[					
						,		ì	21,	30.0	823.6	13.4	*			<b>\$</b>			•		
				F.	IRST CL	OSED-IN			22	. 35.0	854.8	31.2	-	•		<b>}</b>		, .	•		
	Š			0.0	452.0				23 24	40.0 45.0	880.5 7. E0Ė	25.7 23.2	•	•		<u>}</u>		•			
,	}		2		953.9	501.9	0.9	1.085	25	50.0	924.5	20.8				}					
· · ·	}		В 3	2.0	995.4	543.5	1.7		26	55.0	942.1	17,6				}				. '	
	. }		4	3.0	1023.1	571.2	2.4		27	. 60.0	958.9	15.8		* (		)					,
,	· .		6	4.0 5.0	1042.9 1054.1	591.0 602.2	3.0 3.4		28. 29	70.0 . 80.0	986.1 1008.5	27.2 22.4				<u>}</u>					
			7	Б.О	1067.1	615.2	3.9		30	90.0	1026.9	18.4				<b>}</b> !					
			8	7.0	1.076 .5	624.6	4.3		31	100.0	1041.0	14.1	4								
		)	10	0,8 0.e	1085.2 1090.9	S.EE3 O.EE3	4.7 5.0		F 33	110.0 121.4	1053.3 . 1066.7	12.3			٠, ١	<b>}</b> :					
			11	10.0	1097.8	645.9	5.3		' "	121.1	1000.1	. 20.1				<b>{</b>					
	<b>!</b>		12	12.0	1107.4	655.5	5.8			0.5	COND O	00ED TH				<b>.</b>			•		
;	į	1	13 14	14.0 16.0	1115,6 1122.3	663.6 670.4	6.2 6.6			. 5Ł	COND CL	DZFD-TV	l			{	İ				
	ļ	1	15		1127.8	675.8	6.9		F 1	0.0	1066.7			,		<b>{</b> }					
	į		16	20.0	1131.9	680.0	7.2	0.193	2	1.0	1090.9	24.2		2.144		{}					
	{		17	22.0	1136.4	Б84.4 <sub>,</sub>	7.4		3	2.0	1095.1	28.3		1,833		<b>{</b> }					
	. }	4	18	2 <del>4</del> .0 26.0	1140.Б 1143.8	688.6 691.8	7.6 7.8		5	3.0 4.0	1097.3 .1099.7	30.6 33.0		1.560 1.529		<b>{</b>					
		Ì	20	28.0	1147.0	695.0	8.0		6	. 5.0	1100.5	33.8		1 439		}					
	ļ	1	21	30.0	1150.2	698.2	. 8.1		7	6.0	1102.0	35 .2	5.7	1.354		}					
		1	22	. 35.0 40.0	1155.8 1160.7	8. E07 8. 807	8.5 8.7		8 9	7.0 8.0	1103.6 1104.7	8. 36 9. 76		1.301 1.246		P.			<b>'</b> .		
	}	1:	23 24	45.0	1164.6	712.6	9.0		10	9.0	1104.7	38.7		1 196		]			•		
,	-		25	50.0	1167.9	716.0	9.1		11	10.0	8, 8011	40.0	9.3	1.153	•	<b>}</b> }					
	- }	•	D 27	55.0	1170.8	718.9	9.3		12	12.0	1109.2	42.4		1.081		}}	1				
	-		D 27	8.03	1173.5	721.6	9.4	E70.0	13 14	14.0 16.0	1110.4 1112.5	43.7 45.8		1.019 0.969		<b>]</b> [			•		
			ļ ·						15	18.0	1114.0	47.2		0.922		}} }	-				
	Ì	}			SECOND	FLDW			15	20.0	1114.9	48.2	17.4			}}					
			E 1	٥.٥	488.1				17 18	22.0 24.0	1116.5 1118.0	49.8 51.2	18.9 20.3	0.846 0.815		<b>š</b> i					
			2	1.0	500.5	12.4			19	26.0	1118.9	52.2	21.7	0.786		<b>}</b> }					
	1	,	E .	2.0	515.8	15.3			50	28.0	1120.4	53.6		0.758		}					
-		į	5	3.0 4.0	534.0 551.2	18.2 17.2			21	30.0 35.0	1121.2 1123.6	54 . 4 56 . 8		0.734 0.680		}}					
	í	}							ł							<b>}</b> }					
	\$	1	REMARI	(5:													REMARK	S:			
		;]  -	, NEURRI											-			KEMAN				
																<u>                                     </u>					

1 U 1

GAUGE ND: 7351 : 70707500 ---17524 HOUR: 24 DEPTH: 5123.0

\_\_\_\_\_\_

ES PRESSURE AP 1x4t 10g 4.4 REF MINUTES PRESSURE AP 1x4t 10g 4.4 OSED-IN - CONTINUED

0.0 1126.1 59.4 30.7 0.635

5.0 1128.1 61.3 33.6 0.596

0.0 1130.1 53.4 36.3 0.562 1132.4 65.6 38.9 0,533 1134.5 67.7 41.3 0.507 1138.0 71.3 45.8 0.452 1140.5 73.8 49.9 0.424 1143.7 77.0 53.6 0.393 1145.8 79.1 57.0 0.367 1147.9 81.2 60.1 0.343 1150.3 83.6 62.6 0.326 provide 1

DST REPORT PRODUCED BY HRS a division of Halliburton company

A STATE OF THE STA

A INITIAL HYDROSTATIC

B | INITIAL FIRST FLOW

FINAL FIRST FLOW

E INITIAL SECOND FLOW

F FINAL SECOND FLOW

H | FINAL HYDROSTATIC

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G FINAL SECOND CLOSED-IN

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2538 2527.5

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				TICKET NO. 70707500		jigg				TICKET NUMBER 70707500
TICKET NO: 70707500	GAUGE ND: 7352	TICKET. NO: 70707500	GAUGE ND: 7352	O.D. I.D. LENGTH DEPTH			· · · · · · · · · · · · · · · · · · ·	IS4 '4	ISd 'd	SUMMARY OF RESERVOIR PARAMETERS
CLOCK NO: 17532 HOUR: 24	DEPTH: 5242.0	CLOCK NO: 17532 HOUR: 24	DEPTH: 5242.0	O.D. I.D. LENGTH DEPTH	2005	12000,2200		125( 125( 100( 100( 100(	130( 125( 1100( 1000(	USING HORNER METHOD FOR LIQUID WELLS
REE MINUTES PRESSIRE AP 1x4t log1+4t	REF MINUTES PRESSURE AP txt 10g t+tt	REF MINUTES PRESSURE AP tx tt 10g t+ tt REF MINI	NUTES PRESSURE AP txt logt.			- LOTO	. /			OIL GRAVITY O.O °API®60°F WATER SALINITY 3.7 % SALT GAS GRAVITY O.700 FLUID GRADIENT O.4448 psi/ft
	SECOND FLOW - CONTINUED	SECOND CLOSED-IN - CONTINUED	t+#   # }	DRILL PIPE 4.500 3.825 4543.3					107	GAS/BIL RATIO O.O SCF/STB FLUID PROPERTIES AT 1231.3 psig
FIRST FLOW	7 6.0 627.6 16.3 8 7.0 643.1 15.5	24 45.0 1182.4 63.8 33.6 0.596 25 50.0 1184.8 56.1 36.3 0.563		3 DRILL COLLARS 5.000 2.250 431.5			}			TEMPERATURE 125.0 °F VISCOSITY 0.573 °P  NET PAY 61.0
	9 8.0 657.7 14.5 10 9.0 670.9 13.2	26 55.0 1186.5 67.8 38.8 0.533 27 60.0 1189.0 70.3 41.3 0.507		50 • IMPACT REVERSING SUB 5.000 2.170 1.0 - 5075.4						PDROSITY10.0_% SYSTEM COMPRESSIBILITY7.73_x10 <sup>-6</sup> vol/vol/psi
4 4.0 372.7 20.5	11 10.0 684.3 13.4 12 12.0 708.2 23.9	28 70.0 1192.6 73.9 45.8 0.462 29 80.0 1194.8 76.1 49.9 0.424	-	3 DRILL COLLARS 5.000 2.250 28.1			.		Y E T T T T T T T T T T T T T T T T T T	PIPE CAPACITY FACTORSO.00492 bbl/ft
6 6.0 413.0 21.4	13 14.0 731.1 22.9 14 16.0 753.3 22.2	30 90.0 1199.1 80.5 53.6 0.393 31 100.0 1201.3 82.7 57.0 0.366		5 CRDSSDVER 6.000 2.370 1.0	N	NON 133				GAUGE NUMBER 7351 7352 7352 GAUGE DEPTH 5123.0 5123.0 5242.0 5242.0
8 8.0 451.0 20.2	15 18.0 773.2 19.9 16 20.0 793.1 19.9	G 33 118.6 1204.4 85.8 62.6 0.326		11 HANDLING SUB & CHOKE ASSEMBLY 4.500 2.430 5.0	D C C C C C C C C C C C C C C C C C C C		}	\$ \\ \frac{4}{\phi} \\ 4	200 O O O O O O O O O O O O O O O O O O	GRUGE DEPTH 5123.0 5123.0 5242.0 5242.0 UNITS
10 9.9 484.4 16.0	17 22.0 811.8 18.7 18 24.0 828.0 16.2 19 26.0 844.3 16.3			12 • DUAL CIP VALVE 5.000 0.750 7.0	) DE	1H5				FINAL FLOW PRESSURE P. 452.0 1066.7 503.0 1118.7 psig
	20 28.0 858.5 14.2 21 30.0 870.9 12.5			60 HYDROSPRING TESTER 5.000 0.750 5.0 5121.0						TOTAL FLOW TIME t 11.2 132.6 11.2 132.6 min
FIRST CLOSED-IN	22 35.0 901.9 31.0 23 40.0 929.3 27.4			80 AP RUNNING CASE 5.000 2.250 4.0 5123.0						EXTRAPOLATED PRESSURE P* 1201.5 1176.6 1253.7 1231.3 psig
	24 45.0 952.5 23.2			15 JAR 5.000 1.750 5.0 17 PRESSURE EQUALIZING CROSSOVER 5.000 1.000 1.0			<u> </u>	\$	000000000000000000000000000000000000000	ONE CYCLE PRESSURE 819.9 1093.4 872.8 1148.2 p sig
3 2.0 1036.8 533.8 1.7 0.828	25 55.0 991.6 - 18.8 27 60.0 1008.0 16.4			70 DPEN HOLE PACKER	, E .					PRODUCTION RATE Q 953.4 624.4 1048.3 617.1 BPD
	28 70.0 1035.6 27.6 , 25 80.0 1057.9 22.3						· +			TRANSMISSIBILITY kh/μ 410.1 1230.9 451.6 1217.5 md -ft
8 7.0 1123.6 620.5 4.3 0.414	30 90.0 1076.6 18.7 31 100.0 1092.6 16.1			20 FLUSH JUINT ANCHOR 5.000 2.370 11.0						FLOW CAPACITY kh 235.002 705.390 258.800 697.740 md-ft
8 8.0 1131.2 528.2 4.7 0.381 10 9.0 1138.2 635.2 5.0 0.352 F	F 33 121.4 1118.7 12.5		}	17 PRESSURE EDURLIZING CROSSOVER 5.000 1.000 1.0 5 CROSSOVER		-	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			PERMEABILITY k 3.85250 11.5638 4.24262 11.4384 md
11 10.0 1145.1 642.1 5.3 0.327 12 12.0 1155.7 652.7 5.8 0.286	SECOND CLOSED-IN			DRILL COLLARS 6.000 2.250 88.0 5 CROSSOVER 6.000 2.370 1.0	4E 435 8	→ N 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3				SKIN FACTOR S -2.3 -4.8 -2.3 -4.8
13 14.0 1164.4 661.4 6.2 0.255 14 16.0 1170.8 667.8 6.6 0.231				5 CROSSOVER 6.000 2.370 1.0	SUR I	BUG I	\ \ \ \ \		38 38 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	DAMAGE RATIO DR 0.5 0.2 . 0.5 0,2 .
15 18.0 1176.2 673.3 6.9 0.210 F 16 20.0 1181.8 678.9 7.2 0.193 17 22.0 1186.4 683.4 7.4 0.179	2 1.0 1140.5 21.8 1.0 2.142		·	B1 BLANKED-OFF RUNNING CASE 5.000 4.0 5242.0			· · · · · · · · · · · · · · · · · · ·		100 OO	POTENTIAL RATE 0 <sub>1</sub> 953.4 624.4 1048.3 617.1 BPD
18 24.0 1190.4 687.5 7.6 0.166 19 26.0 1193.9 690.9 7.8 0.155	4 3.0 1148.9 30.3 2.9 1.654	is vi N		70 DPEN HOLE PACKER 6.750 1:530 6.0 5247.0						RADIUS DF INVESTIGATION r. 40.7 243.0 42.7 241.7
20 28.0 1197.3 694.3 8.0 0.146 21 30.0 1199.9 697.0 8.1 0.138	б 5.0 1152.7 34.0 4.8 1.440			5 CROSSOVER						REMARKS: ANALYSIS RESULTS SHOWN ABOVE ARE RELATIVE TO SALTWATER. THE NATURE OF THE PLOTS INDICATE THE PRESENCE OF A PERMEABILITY ANDMALY WITHIN THE
22 35.0 1206.8 703.8 8.5 0.120 23 40.0 1211.6 708.7 8.7 0.107	8 7.0 1156.1 37.4 6.7 1.299			3 DRILL COLLARS 6.000 2.250 178.0						TESTED INTERVAL (I.E. NATURAL FRACTURES, LAYERED FORMATION, ETC.)
. 24 45.0 1216.8 713.8 9.0 0.096 25 50.0 1220.8 717.9 9.1 0.088	10 9.0 1158.4 39.8 8.4 1.196 11 10.0 1159.4 40.7 9.3 1.156			5 CROSSOVER	CV II	:				
26 55.0 1223.9 721.0 9.3 0.080 D 27 60.8 1227.2 724.2 9.4 0.073	12 12.0 1162.0 43.4 11.0 1.080 13 14.0 1163.9 45.2 12.6 1.021			20 FLUSH JDINT ANCHOR 5.000 2.370 ; 11.0						
	14 16.0 1165.4 46.8 14.2 0.969 15 18.0 1167.0 48.3 15.9 0.922			81						
	15 20.0 1158.1 49.4 17.4 0.882 17 22.0 1170.1 51.5 18.9 0.847			<del></del>	D T B B D T T T T T T T T T T T T T T T	NO NO 1351		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0 \	i 1 1
2 1.0 547.6 4.0	18     24.0     1171.5     52.9     20.3     0.815       18     26.0     1172.8     54.1     21.7     0.786       20     28.0     1174.0     55.4     23.1     0.758		ي چې د چې	TOTAL DEPTH 5448.0	JGE 7.	JGE 72	}			
4 3.0 579.2 18.6	20 28.0 1174.0 55.4 25.1 0.758 21 30.0 1175.6 56.9 24.4 0.734 22 35.0 1177.6 59.0 27.7 0.680	0. 4	<b>3</b> 7		B B	G G A				
6 5.0 611.2 14.5	23 40.0 1179.6 51.0 30.7 0.635			ig						
REMARKS:		REMARKS:			100	100		1.6		NOTICE:  BECAUSE OF THE UNCERTAINTY OF VARIABLE HELL CONDITIONS AND THE NECESSITY OF RELYING ON FACTS AND SUPPORTING SERVICES FURNISHED BY OTHERS.  HAS IS UNABLE TO GUARANTEE THE ACCURACY OF ANY CHART INTERPRETATION, RESEARCH ANALYSIS, JOB RECOMMENDATION OR OTHER DATA FURNISHED BY HAS.  HAS PERSONNEL WILL USE THEIR BEST EFFORTS IN GATHERING SUCH INFORMATION AND THEIR BEST JUDGMENT IN INTERPRETING IT BUT CUSTOMER AGREES  THAT HAS SHALL NOT BE RESPONSIBLE FOR ANY DRINGES ARISING FROM THE USE OF SUCH INFORMATION EXCEPT WHERE DUE TO HAS GROSS NEGLIGENCE OR  WILLEL MASCADULITY IN THE PERSONSIBLY FOR ANY DRINGES ARISING FROM THE USE OF SUCH INFORMATION EXCEPT WHERE DUE TO HAS GROSS NEGLIGENCE OR
				EQUIPMENT DATA	IS4 'dO	ISA 'AO	i N			THAT HRS SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING FROM THE USE OF SUCH INFORMATION EXCEPT WHERE DUE TO HRS GROSS NEGLIGENCE OR WILLFUL MISCONDUCT IN THE PREPARATION OF FURNISHING OF INFORMATION.
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