SIDE ONE

API NO. 15- 067-21109-2000

Form ACO-1 (7-89)

STATE CORPORATION COMMISSION OF KANSAS DIL & GAS CONSERVATION DIVISION

MELL COMPLETION FORM ACO-1 MELL HISTORY	county				East
DESCRIPTION OF WELL AND LEASE	<u>W/2 SW</u>	<u>NW</u> Sec. <u>3</u>	2 Twp. 2	9 Rge. <u>38</u>	3 <u> </u>
Operator: License # 05398	3300	Ft. I	North from S	outheast Corr	ner of Section
Name: ARCO Oil & Gas Company	4926	Ft. l			
Address Box 1610					n plat below.)
	Lease Name	Lora Hic	kok	W	le #1
City/State/Zip Midland, TX 79702	Field Name	Wildcat	<u>-</u>		
Purchaser: Diamond Shamrock	Producing Fo	ormation St	. Louis		
Operator Contact Person: Ken W. Gosnell	Elevation:	Ground <u>310</u>	2.80	KB	
Phone (<u>915</u>) 688-5672	Total Depth	580	0	PBTD	746
Contractor: Name: H-30 Drilling, Inc. License: 5107	1991			5280 4950 4620	
License: 5107	1 '			4290 3960	
Wellsite Geologist: Ben Francka . D	ECEIVED			3630 3300 2970	N
Designate Type of Completion STATE CORF	PRATION COMM			2640 2310 1980	\mathbb{N}
X_OilSWDTemp. Abd.	N 1 9 1991			1650 1320 990	I 4
biy other (core, water supply, getty	RVATION DIVISION REPORTS AND AUTOMOTE PROPERTY OF THE PROPERTY	0/1	+++++	660	
If OWNO: old well info as follows: Operator:	1	3630 3630 3630 3630 3630 3630 3630	2970 2640 2310 1980 1320	1111	AlT-I
Well Name:	1	urface Pipe Set			<u>) </u>
Comp. Date Old Total Depth	Multiple Sta	age Cementing (Collar Used?	Ye	es X No
Drilling Method: Air Rotary Cable	}	depth set <u>D</u>			
1-15-91 1-25-91 2-7-91 Spud Date Date Reached TD Completion Date	1	to			-
INSTRUCTIONS: This form shall be completed in triplicate a Derby Building, Wichita, Kansas 67202, within 120 days 82-3-106 apply. Information on side two of this form will writing and submitted with the form. See rule 82-3-wireline logs and drillers time log shall be attached with form with all plugged wells. Submit CP-111 form with a conversion of a well requires filing of ACO-2 within 120 days	nd filed with of the spud of be held confic 107 for confic this form. Al ll temporarily	the Kansas Cordate of any weldential for a plentiality in a control to the control of the contro	rporation Coll. Rule 8 period of 12 excess of 12 ICKETS MUST 1 lls. Any re	ommission, 2 82-3-130, 8 months if r months. One BE ATTACHED.	200 Colorado 32-3-107 and equested in e copy of all Submit CP-4
All requirements of the statutes, rules and regulations promul with and the statements herein are complete and correct to t	gated to regul he best of my	late the oil and knowledge.	d gas indust	ry have been 1	fully complied
Signature Ken W. Losnell		i	K.C.C. OFFICE		******
Title <u>Regulatory Coordinator</u> Date	6-14-91	C Wi	ireline Log M		Attached
Subscribed and sworn to before me this $\underline{14 \text{th}}$ day of $\underline{\text{Jur}}$ 19 $\underline{^9 1}$.	<u>ie</u> , 1		rillers Time Distril	bution	1
Notary Public Arlas (KAROM DON BMPSON)* Notary Public, State of Texas	}	KGS KGS		SWD/Rep Plug	NGPA Other Specify)
Date Commission Expires My Comm. Expires: 11-2-92	<u>}</u>	<u></u>			

SIDE TWO

Operator Name <u>ARCC</u>			Lease Name	Lora	Hickok	 _	_ Well#_1
Sec. 32 Tup. 29	20	∟ East X West	County	Grant			_
INSTRUCTIONS: Show interval tested, time hydrostatic pressures if more space is need	e tool open ar , bottom hole t	nd closed, flowing a temperature, fluid re	nd shut-in pres	sures, whet	er shut-in pre	s <mark>sure</mark> read	hed static level,
Drill Stem Tests Take (Attach Additional		☐ Yes 🗷 No	Format Name		∖⊠ Log	Top	Sample
Samples Sent to Geolo	gical Survey	🗵 Yes 🗌 No	Chase		*	2315	
Cores Taken		x Yes No		l Grove		2606	
Electric Log Run (Submit Copy.) Core #1 563	33-5692	Yes □ No . .	Heebner Lansing Morrow Chester St. Ger St. Lou	g		3795 3898 5158 5483 5576 5680	
	Report al	CASING RECORD		sed ntermediate,	production, et	c.	
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	1800		_900_	2% CC
Production	7-7/8	5-1/2	15.5	5800	H&C	700	
Shots Per Foot	PERFORATION Specify Footag	I RECORD ge of Each Interval P	erforated		Fracture, Shot, d Kind of Mater		ueeze Record Depth
4	5666-56	72					
+		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					
TUBING RECORD	Size 2-7/8	Set At	Packer At	Liner Run	☐ Yes ☐	No	
Date of First Produc	1	ng Method	X Pumping G		nal 4- 1- 1- 1-	_	
2-25-91			— h∩uubiud — Ca		utner (Explain)	<u> </u>	
Estimated Production Per 24 Hours	oil 24	Bbls. Gas	Mcf Water	70 Bbls.	Gas-Oil NA	Ratio	Gravity
Disposition of Gas:			THOO OF COMPLETI				roduction Interval
Vented Sold (If vented, sub		.ease Open	Hole X Perfor	ration 🔲		d Comm	

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Geoscience Services

FINAL REPORT

Routine Core Analysis

ARCO OIL & GAS COMPANY

Lora Hickok No. 1 Well Grant County, Kansas

TTGS File No. 5807

Prepared for:

ARCO Oil & Gas Company 600 N. Marienfeld Midland, Texas 79701

Prepared by:

TerraTek Geoscience Services University Research Park 360 Wakara Way Salt Lake City, Utah 84108

March 1991

RECEIVED STATE CORPORATION COMMISSION

JUN 1 9 1991

CONSERVATION DIVISION Wichita, Kansas



Geoscience Services

March 4, 1991

ARCO Oil & Gas Company 600 N. Marienfeld Midland, Texas 79701

Attn:

Mr. Bill Gibbs M10-28

Subject:

Routine Core Analysis Results; ARCO Lora Hickok No. 1

Well; Grant County, Kansas; TTGS File No. 5807

Dear Mr. Gibbs:

Diamond coring equipment and water base mud were used in the ARCO Lora Hickok No. 1 Well to obtain four-inch diameter core from the interval and formation listed on the enclosed Core Interval Summary. A representative of TerraTek Geoscience Services was at wellsite to retrieve the cores and prepare them for transport to the TerraTek laboratory in Dallas, Texas for routine core analysis.

Upon arrival in the laboratory, a core component gamma log was recorded. One-inch diameter plug samples were drilled from each foot of core using water as coolant. Residual fluids were removed and measured by means of the solvent distillation extraction technique using toluene. Porosities were determined by measuring grain volumes in a helium expansion porosimeter by Boyle's Law and bulk volumes by mercury displacement. Permeabilities to nitrogen gas were measured in a Hassler sleeve using an orifice-equipped pressure transducer to monitor downstream flow.

The results of the measurements described above are presented following the Core Interval Summary. A plot of the total gamma ray activity appears on the enclosed Teklog, along with plots of grain density, horizontal permeability, porosity and residual fluid saturations. The results are then tabulated on the pages following the Teklog. A permeability versus porosity crossplot is included.

We sincerely appreciate this opportunity to be of service and look forward to working with you again on future projects.

Sincerely,

Kevin R. Francis for

Michael F. McAuley Laboratory Manager, Technical Sales Representative RECEIVED STATE COPT PATION COMMISSION

JUN 1 9 1991

CUMBERVATION DIVISION Wichita, Kansas

DISTRIBUTION OF FINAL REPORTS

ARCO OIL & GAS COMPANY

Lora Hickok No. 1 Well Grant County, Kansas

TTGS File No. 5807

2 COPIES SENT TO:

ARCO OIL AND GAS COMPANY 600 N. MARIENFELD MIDLAND, TEXAS 79701

ATTN: MR. BILL GIBBS

2 COPIES SENT TO:

AMOCO PRODUCTION COMPANY
P.O. BOX 800
1670 BROADWAY
DENVER, COLORADO 80201

ATTN: MR. VAN LEIGHTON

The services of the services o

RECEIVED STATE CORPORATION COMMISSION

JUN 1 9 1991

CONSERVATION DIVISION Wighita, Kanaas

CORE INTERVAL SUMMARY

ARCO OIL & GAS COMPANY

Lora Hickok No. 1 Well Grant County, Kansas

TTGS File No. 5807

CORE NO.

INTERVAL

FORMATION

1

5633.0 - 5691.0

St. Louis

RECEIVED STATE CORPORATION COMMISSION

JUN 1 9 1991

COMSERVATION DIVISION Wighita, Kansas

RECEIVED RECEIVED CONSERVATION DIVISION Wichita, Kandas JUN 1 9 1991

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TerraTek Core Services

13628 Gamma Road • Dallas, Texas 75244 • (214) 960-8777 • WATS (800) 338-3182 • FAX (214) 960-2939

ARCE OIL & GAS COMPANY

We∄: Lora Hickok No. 1

Field: N/A

Drilling fluid: Water Base Mud

State: Kansas County:

Grant *Location: Sec.32-T29S-R38W

4-MAR-1991 Date:

TTCS File #: 5807 Elevation: 3104.31

PLUG DEAN-STARK ANALYSIS

		Permeability	Porosity	Satu	ration	Grain		
Sample Number	Depth (feet)	Horz Vert (md) (md)	. %	0il %	H20 %	Density (gm/cc)	Lithology	
St.	Louis Forma	tion	; ;					
1	5633.0-34.0	<.01	2.5	12.1	70.3	2.67	Sd,vfg,slty,lmy	
	5634.0-35.0	<.01	2.2	9.3	79.3	2.68	Sd,vfg,slty,lmy	
2	5635.0-36.0	<.01	1.9	13.3	74.7	2.68	Sd,vfg,slty,lmy	
4	5636.0-37.0	<.01	1.4	10.5	71.6	2.68	Sd,vfg,slty strks,lmy	
5	5637.0-38.0	<.01	2.0	21.0	69.1	2.68	Sd,vfg,slty,lmy	
6	5638.0-39.0	<.01	2.0	23.3	65.9	2.67	Sd,vfg,slty,lmy	
7	5639.0-40.0	<.01	1.7	9.2	73.1	2.68	Ls,vf-fxln,sl ool,sdy	
8	5640.0-41.0	<.01	1.9	18.2	73.1	2.68	Ls,vf-fxln,v sdy	
9	5641.0-42.0	<.01	1.3	32.1	64.8	2.68	Ls,vf-fxln,sdy	
10	5642.0-43.0	<.01	1.7	11.7	76.8	2.68	Ls,vf-fxln,sdy	
11	5643.0-44.0	<.01	2.3	11.1	84.8	2.68	Ls,vf-fxln,sdy	
12	5644.0-45.0	<.01	2.6	37.0	44.7	2.67	ls,vf-fxln,ool,v sdy	
13	5645.0-46.0	.02	2.7	11.3	76.6	2.68	Ls,vf-fxln,ool,sdy	
14	5646.0-47.0	.01	2.5	22.6	71.6	2.69	Ls,vf-fxln,ool,sdy	
15	5647.0-48.0	.01	2.1	21.1	69.9	2.69	ls,vf-fxln,ool,sdy	
16	5648.0-49.0	.01	2.7	16.8	82.5	2.67	Sd,vfg,v lmy	
17	5649.0-50.0	<.01	2.6	13.8	75.7	2.68	Sd,vfg,v lmy,ool	
18	5650.0-51.0	<.01	1.4	25.3	67.6	2.71	Ls,vf-fxln,sdy,ool	
19	5651.0-52.0	<.01	2.1	7.2	80.0	2.70	Ls,vfxln,slty strks,sdy	
20	5652.0-53.0	<.01	0.9	17.7	80.5	2.69	Ls,vfxln,sm calc fracs	

13628 Gamma Road • Dallas, Texas 75244 • (214) 960-8777 • WATS (800) 338-3182 • FAX (214) 960-2939

ARCO OIL & GAS COMPANY Slell: Lora Hickok No. 1

Date: 4-MAR-1991

TTCS File #: 5807

PLUG DEAN-STARK ANALYSIS

		Permeab	-	Porosity	Satu	ration	Grain	
Sample Number	Depth (feet)	Horz Vert (md) (md)		. %	0il Z	H20 %	Density (gm/cc)	Lithology
				·				
21	5653.0-54.0	<.01		1.4	24.6	74.7	2.69	Ls,vf-fxln,slty,pyr
22	5654.0-55.0	<.01	•	1.4	31.9	66.3	2.69	Ls,f-micxln,ool,sdy
33	5655.0-56.0	<.01		0.7	21.5	73.1	2.69	Ls,f-micxln,ool,sdy
24	5656.0-57.0	<.01		0.8	31.9	54.2	2.69	Ls,f-micxln,ool,sdy
25	5657.0-58.0	11.		0.9	43.1	47.1	2.63	Cht, sile, frac
26	5658.0-59.0	<.01		0.9	30.6	34.7	2.63	Cht,silc,frac
27	5659.0-60.0	.20		2.1	20.6	77.0	2.71	Ls,vfxln,sl pyr,frac
28	5660.0-61.0	15.+		2.1	13.9	85.0	2.70	Ls.vfxln
29	5661.0-62.0	.06		1.6	21.3	72.3	2.71	Ls,vfxln,pyr
30	5662.0-63.0	12.+		2.4	21.6	76.4	2.71	Ls,vfxln,pyr
31	5663.0-64.0	<.01		0.7	29.1	61.9	2.70	Ls,micxln,ool,pyr
3,2	5664.0-65.0	323.		12.8	29.8	41.7	2.68	ls,micxln,ool,fos,vugs
33	5665.0-66.0	240.		14.2	22.0	42.5	2.68	Ls,micxln,ool,fos,vugs
34	5666.0-67.0	601.		15.0	22.1	47.1	2.67	Ls,micxln,pis,ool,vugs
35	5667.0-68.0	358.		14.0	31.0	44.7	2.68	Ls,micxln,pis,ool,vugs
36	5668.0-69.0	441.		13.3	30.2	36.2	2.68	Ls,micxln,ool,vugs
37	5669.0-70.0	262.		12.1	21.5	45.6	2.68	Ls,micxln,ool,vugs
38	5670.0-71.0	229.		14.9	19.3	49.2	2.68	Ls,micxln,ool,fos,vugs
39	5671.0-72.0	5.0		12.2	19.6	50.7	2.69	Ls,micxln,ool,w/sm scat qtz_
40	5672.0-73.0	313.		14.1	17.0	51.6	2,69	Ls,micxln,ool,vugs
41	5673.0-74.0	237.		13.1	38.0	33.3	2.68	Ls,fimicxln,ool,vugs
42	5674.0-75.0	13.		11.0	22.2	47.2	2.71	Ls,f-micxln,ool,vugs ~

^{+ -} Dehydration crack affecting permeability

TerraTek Core Services

13628 Gamma Road • Dallas, Texas 75244 • (214) 960-8777 • WATS (800) 338-3182 • FAX (214) 960-2939

STATE CORPCTATION COMPANY

ARESO OIL & GAS COMPANY

Bell: Lora Hickok No. 1

Date: 4-MAR-1991

TICS File #: 5807

PLUG DEAN-STARK ANALYSIS

		Permeabi	ility	Porosity	Satu	ration	Grain	
Sample Number	Depth (feet)	Horz (md)	Vert (md)	7.	0il . %	H20 %	Density (gm/cc)	Lithology
43	5675.0-76.0	72.	,	11.0	17.6	78.5	2.68	Ls,micxln,ool,vugs
44	5676.0-77.0	185.	,	10.6	11.6	74.0	2.67	Ls,micxln,ool,vugs
45	5677.0-78.0	68.	•	9.5	19.5	80.4	2.67	Ls,micxln,ool,vugs
46	5678.0-79.0	.25		4.5	54.2	36.0	2.68	Ls,f-micxln,ool,sl vug
47	5679.0-80.0	.17		0.5	45.3	28.9	2.71	Ls,cryp-vfxln,ool,sl vug
18	5680.0-81.0	<.01		0.7	28.8	30.5	2.70	is,vfxln,sl ool,sl vug
49	5681.0-82.0	<.01		2.2	34.3	38.8	2.70	Ls.vfxln,sl ool
50	5682.0-83.0	<.01		0.9	22.4	23.8	2.70	Ls,vfxln
51	5683.0-84.0	<.01		0.9	40.9	49.7	2.70	Ls,vfxln
52	5684.0-85.0	<.01		3.0	29.7	44.6	2.69	Ls,micxln,fos,ool
53	5685.0-86.0	<.01		1.2	8.4	17.9	2.70	Ls,f-micxln,stly strks
54	5686.0-87.0	<.01		1.0	10.3	22.0	2.69	Ls,fxln,pyr
55	5687.0-88.0	2.3+		1.6	32.2	62.9	2.72	Ls,vf-fxln .
56	5688.0-89.0	<.01		1.0	15.5	21.9	2.69	Ls,fxln,slty-sdy
57	5689.0-90.0	<.01		1.1	14.3	20.3	2.71	Ls,f-micxln
58	5690.0-91.0	<.01		1.4	33.5	41.2	2.70	Ls,f-micxln

^{+ -} Dehydration crack affecting permeability

RECEIVED
RECEIVED

KEY TO LITHOLOGICAL ABBREVIATIONS

A	Anhy	-	Anhydrite/anhydritic	g : (-	grain	pyr	_	pyrite/pyritic
	arg		argillaceous			glauconitic	qtz		guartz
2	\rk	_	Arkosic	Gyp		Gypsum	ŝđ		Sand/Sandstone
E	3ent	_	Bentonite .	hal		halite	sdy		sandy
			bioturbated	hem	_	hematite	8h		Shale
b	orec	_	brecciated	incl	_	inclusions	shy	-	shaley
C	3	_	coarse	Ign	_	Igneous	sid		siđerite
C	calc	_	calcareous	lam		laminations	sil	_	siliceous
c	carb	_	carbonaceous	lig	_	lignite/lignitic	sl/	_	slightly
C	ccf	_	calcite fill fracture	Ls		Limestone		-	Siltstone
Ç	2g 1	_	Conglomerate/	m	-	medium	slty	_	silty
	_		conglomeratic	mic		micro	stk	_	streak(s)
c	hky	_	chalky	mica	_	micaceous	sty	_	stylolite
C	Cht	_	Chert	Ms	_	mudstone	suc	_	sucrosic
C	chty	_	cherty	nod	_	nodules	Tuff	_	Tuff
c	:ly	_	clay/clayey	ool	_	oolitic	v/	_	very
	oī		Dolomite/Dolomitic	org	_	organic	VC		very coarse
	E		fine	pbĺ		pebbles	VF		vertical fracture
f	fis		fissures	pel		peloids	vf		very fine
	fos		fossiliferous	pis		pisolites/pisolitic	vgs		vugs
			fractures	pp		pinpoint	vgy		vuggy
				rp		E	хl		crystalline

ORIGINAL

Terra Tek Geoscience Services ®

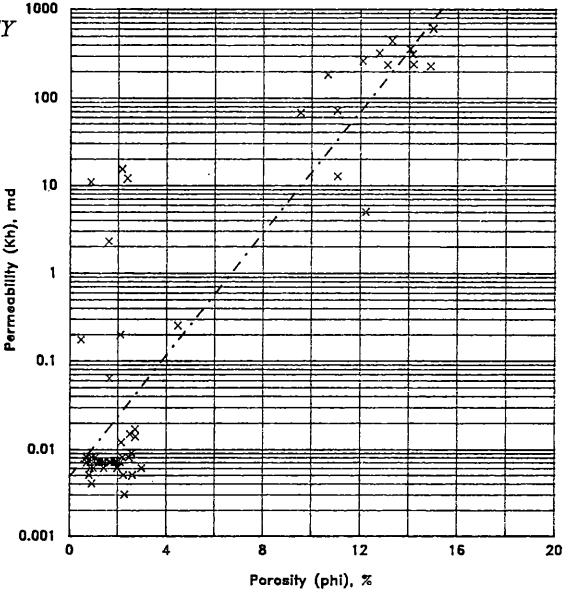
University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - FAX 801-584-2408

HORIZONTAL PERMEABILITY
VS
POROSITY

ARCO OIL & GAS COMPANY

Lora Hickok No. 1 Well Grant County, Kansas March 4, 1991

Depth Interval: 5633 to 5691 Feet TTGS# 5807 Porosity (phi), % Average 0.462 14.973 4.365 Permeability (Kh), md Max Geo. Ave 0.003 600.915 0.157 Equation of the Line $log Kh = \alpha phi + \beta$ log Kh = 0.3477 phi -2.3209Correlation Coefficient: 0.889 St. Louis Formation



ORIGINAL

HALLIBURTON SERVICES LEASE LARA Hichar ARCO OLY GOS PAGE NO. JOB LOG. Stree DV 5/2 Deal Stave FORM 2013 R-2 RATE (BPM) TIME CASING 0100 Time Bocky Time on 16c Rolay Dam DC 0400 0330 START BUNK COSTER 0415 Helip To Cie Essing Pay Pimp & Cielse 0.545 Holipto Lieulate Losing 0745 To Grand Level LIPCATE MA 5757 Sterkin To Rum Treack 2850 STEEL STEEL $\mathfrak{G}(\Omega)$ STAT SCALLINGE COMENT 205 POLILUT 200 21 STORT Misin Const 2910 175 FLAME CONT 1196 SLT ON LO STATION PROMITE + U.S. Pomple C92.7 3929 13 Hzo 73 Mai 5930 136 726 1011 Pin 1000 Release Press How Well & Getherout don IOIO 1013 ip I Crechote The *1*030 Hackette Ris Rome To Cin Mel. 103*5* /036 Hocko To Pemp Truck + lose Top Plan 1605 1610 20 The Water News of Come 150 SheTMilleComent Stock Tail Lement 69.72 1640 1642 SITION 100 Javet Dislacement 1643 1546 1960 Plus Down All Press 1707 1715 FLOAT HELCH CIE

Ther out dos

	JOB		HALLIBURTON _	OKL	Li	Ty OL	<i>.</i>		•.		
HALLIBURTON SERVICES	SUMM	ΥF	HALLIBURTON LOCATION _	Libers	<u>L 1</u>	<u>ار ا</u>	·	E1	LLED ON	-04:	34.751 A
 _			WELL	DATA					U		7:107
_D		_sec. 3	2 TWP. 29	<u>ح _{RNG}38</u>	<u>. </u>	COUNTY	Genet	•	STAT	E_/	
					NEW USED	WEIGHT	SIZE	FROM		0	MAXIMUM PSI ALLOWABLE
RMATION NAME	ТҮР			CASING	USEU	15.3	51/2	KR	58	14	ALLOWABLE
RMATION THICKNESS	FROM	то_		LINER	_	, , , ,		, ~ <u>, , , , , , , , , , , , , , , , , , </u>	120	<i></i>	_
	VATERBPD.		MCFD	TUBING			 		+		
	VATERBPD.	GAS	MCFD	OPEN HOLE			77/	<i>180</i> 0	501	77	SHOTS/FT.
MPLETION DATE	AUD TYPE	MUD WI 3227		PERFORATION	NS.		178	1/34/	+23-	~	
KER TYPE	SET A	<u>ر دید.</u> ۲۰	<u> </u>	PERFORATIO				 -	┪──		
TOM HOLE TEMP.	PRESSURE			PERFORATION			 	ļ	+		
C. DATA		DEPTH				<u> </u>			J		
7001.5.45			JOB	DATA CALLED OUT		ON LOCA	ATION	JOB STARTE		JOBC	OMPLETED
	D ACCESSORIES	Γ-		DATE 1-2		1	1-27	/-	27	٠,	1.27
TYPE AND SIZE 5	QTY.		MAKE	J		DATE	, <u>.</u> .	DATE	٠	DATE	1710
AT COLLAR				TIME O 1	7O	TIME	330	TIME ()	<u> 45</u>	TIME	///5
AT SHOE						PERS	ONNEL AN	D SERVICE			
DE SHOE		ļ		-		NAME		UNIT NO. 8	TYPE		LOCATION
TRALIZERS				(Xxxx	3			H0075		110	eest u
TOM PLUG						.=	59179	■ 6.5			<u> </u>
PLUG				TISHOA	dLFc	J		52276			p.
D		Ho	uco_				04664	176	5900		
KER LOTCL Den Ple	, 7		/	C. Doe				37458	,		
ER LOTEL DOWN BO	FELC 1						7/322	J. 133			7 t
М	ATERIALS			KKing	e i	ene.		4900/			
AY. FLUID	DENSITY		O LB/GAL-API		زحد) /	1993	7554	496		H
_		-	LB/GALAPI LB/GALAPI	7/2			~ / 40 7 3	2223/	. 192	// -	7.
PL FLUID	DENISTY		LB/GALAPI				79259	50757	へて	Meso	100 K
-	SIZE	LB		Pri		<u>/</u>	×14×7	3842/	~		
	SIZE	LB		<u> </u>		7	7/4772.		326		'n
TYPE	GAL		%	$\overline{\Omega\OmegaM}$			7.7.7.	SARVI			
D TYPE	GAL		%	MANY	472		1670	רעל	-/·		11
D TYPE	,GAL.,		%		'		<u> </u>	771	74		
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ID LOSS ADD, TYPE	GAL,-LB	N									
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C. RED, AGENT TYPE	GALLB	IN						1-/	7 -		
AKER TYPE	GALLB	IN		JOB DONE TH	RU: T	UBING .	/) CA	SING A	ANNULU	5 📮∵	TBG./ANN.
CKING AGENT TYPE		SAL-LB			v	, <i>-</i> #		XIII.	./-		1
FPAC BALLS TYPE		TY		CUSTOMER REPRESENTAT	IVE.		<u> </u>	o ji yu	~[]Z	- Alexander	<u>/</u>
ER							,	7	/		
ER				HALLIBURTON OPERATOR		Laidie			CODIE	S ESTED	
<u> </u>			CEMEN	T DATA					-		
TAGE NUMBER CENT	BRAND	BULK	J		ADDIT	rives				LD	MIXED
UF SACKS		SACKED				· · ·			CU.F	T/5K.	LBS/GAL.
20 /Pom /	s UTLET		SERVERO	en Com	4.1	157,	4=_		ے.	89	9.7
250 ThiseT	: '//'		58 KIL	3/08/6/	00	344	144/4 1-	Tocke	1.4	<u>/3</u>	14.5
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- 160 Prem A	Les LITUT		1/9 1/7	& G 11	4	. Tolor	<i></i>		7	14	17.1
200 81/ 5) ,		16.4.7	21. 7	47	ナナア	<u></u>		17:	1	128
~ / PRESSU	ES IN PSI		**************************************	ARY	~~~	ラク	VOLU	MES 1		- E.	10
ULATING	DISPLACEMENT			PRESLUSH: BBL.	GAL.	الما	rees ()	<u>aiol</u> ine	क्य दा	- 1-110	<u>~ 3/#8</u> #
KDOWN	MAXIMUM			LOAD & BKDN: I	BBLGA	L		PAC); ввц - 6	àstr <u>i</u> c	
AGE	_FRACTURE GRADIENT_			TREATMENT: 88	L-GAL.	<u>जरह</u>	- -	√ √ ⇔ DjSi	<u>PL BBL</u>	GAL	<u> </u>
rin: Instant	_5·MIN	,1 5-M1N		CEMENT SLURRY	r: BBL.	GAL TO	<u> </u>	163.6	12	2_1/2	·/ <u>১</u>
HYDRAUL	C HORSEPOWER			TOTAL VOLUME:	BBL·G	2345	15177	<u>び</u>			
EREDAVAILAS	E	_useD		PECI			REMA	RKS			
AVERAGE	RATES IN BPM			1000	~1 C L	<u>ע</u>	-				
ATINGDIS	PL	VERALI		, ,	HIN C	OMMISSI	ON				
CEMENT	LEFT IN PIPE			j.							
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r Ç	A Company		:	4.	ווה ,	/isidn ·	•		·	-	•
M 2025-R2	•			White Park	ь. ; _а	S					

OF ICT OF MED



WORK ORDER CONTRACT

ORIGINAL

FORM 1908 R-7

A Division of Halliburton Company

AND PRE-TREATMENT DATA

DISTRIC	т		LiBerzo	45							DATE	-27-6	7/
то: н	ALLIBURTO	N SERVICES		YOU A	RE HEREBY RE	EQUESTED T	o FURNIS	H EQUI	PMENT A	ND SERVI	CEMEN TO I	DELIVER AN	ID OPERATE
т	HE SAME AS	AN INDEPEN	IDENT CONT	RACTOR TO	s. ARCO	Oil_	4 Ga	<u> </u>					
A	ND DELIVER	AND SELL F	RODUCTS, S	SUPPLIES, A	ND MATERIALS F	OR THE PUR	OSE OF S	ERVICIN	(CUSTOM	ER)			
		1#		1	11 1	1			~~~		765		700
WELL N	10		_ LEASE	LARA	Hichor	<u>{</u>		EC	يدر	_ TWP	<u> </u>	RAN	IGE <u>3 2 </u>
						1/	•			Ann	· ^	101	
FIELD _			cou			STATE			OWNED		<u> </u>	1 6 4 C	<u> </u>
		THE	FOLLOW	ING INFO	RMATION W	AS FURNIS					1		MAX, ALLOW.
FORMA NAME _				TYPE			us us	ED ED	WEIGHT	SIZE	FROM	то	P.S.I.
FORMAT THICKN			FROM		_ TO	CASING	<u> </u>	,	15.5	5/2	KB	5804	
PACKER	R: TYPE	Ov	Tech	SE	т ат <u>3078</u>	LINER							
TOTAL I	DEPTH		MUD	WEIGHT		TUBING	;						
BORE H						OPEN H	IOLE			71/2	1800	5800	SHOTS/FT.
INITIAL	PROD:	OIL	_BPD. H2O_	BPD	, GAS M	PERFO	RATIONS						
	NT PROD:	OIL	•		, GAS M	PERFO	RATIONS				<u> </u>		
						PERFO	RATIONS				<u></u>		
PREVIO	US TREATME	NT: DA	TF		_ TYPE			,	MATERIALS				
		UCTIONS: T		TUBING A	ANNULUS LI CAS	SING ME TUBIN	G/ANNUL				VER ORDERE	D_	
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					290) sic 54	50 PO	Z /	14 # FZ	xele_	225.61	Koch Fl	12 Z 3145°
CUSTO	MER OR HIS	AGENT WARF	NANTS THE	WELL IS IN F	PROPER CONDITI	ION TO RECEI	VE THE PR	ODUCTS	S, SUPPLIE	S, MATERIA	LS, AND SE	RVICES	· · · · · · · · · · · · · · · · · · ·
	Tomuderation the	above-named C	ustomer agrees:	Th	HIS CONTRACT MUST	T BE SIGNED BEF	ORE WORK	S COMME	NCED				
	payment of Cu but deven to ex	stomer's account	by the last day ndum, in the eve	of the month fo	in Halliburton's curren blowing the month in the necessary to employ	which the invoice i	s dated, Cust	omer agree	es to pay inter	est thereon at	er default at the	hignest lawful or	ontract rate applicable
-	T. defend inde	emnity release at	nd hold narmies:	: Halliburton, is dicosts of alifei	aivisions, subsidiane nse to the extent pein	s, parent and aifai nitred by law for	ated compani	es ard the	e anicers, dire	ctors, amployee	s. agents and s	ervants of all of	them from and agains
	C made :	io property hand er shall include	ed by in the po vorking and roys	ssekson of or utv interest over	leased by Customer lers.	and/or the will	owner of diffe	rant Irom	Curtomert in	cluding but no	limited to, gurta	ace and subsurfa	ice damage. The terr
					respass or any action								
	 Personal from polli 	injury or death o	r property dama pressure, losing	ge (including, bu	ut not limited to dama reit and/or a well blow	ige to the reservo	r, formation of adioactive ma	r well), or terial.	any damaçes	whatsoever, g	rowing out of or	in any way conn	ected with or resultin
	regrigence, str the preparation not apply when	int liability, or the n. design, manufa re the claim\$for	e unseaworthine cture, distributio liability are cau	iss of any vess n. or marketing sed by the gro	of Customer provided sel owned, operated, thereof, or from a lass negligence or willf irrectors, employees, as	or furnished by I Silure to warn any ful misconduct of	falliburton er person of st Halliburton, T	any defect ich defect. ha term "F	it in the data, Such detans	products, subj a indemnity, re	blies, materials, i ilease and nold i	or equipment of narmiess oblicati	Halliburten whether . Ons of Customer sha
c)	supplies or ma will use their t	terials, nor thate	suits of any treathering such inf	itment or service ormation and the	the necessity of rely te, nor the accuracy of neir best judgment in	of any chart interp	retation, resea	irch analys	is, job recomi	nendation or o	ther data furnish	ed by Halliburton	ı. Halliburton personn
d)	That Halliburto CF MERCHAN cause of action or materials or	on warrants only ITABILITY, FITNE In (whether in con In their return to I	tire to the pro- SS OR OTHERN stract, tort, bread Halliburton or, at	ducts, supplies VISE WHICH E	and materials and the XTEND BEYOND TH or otherwise) arising o potion, to the allowand	OSE STATED IN 1	HE IMMEDIA use of any on	TELY PRE	CEDING SEN	TENCE, Hallibi rials is exoress	urton's hability ai Iv-limited to the	nd Customers ex replacement of s	«Clusive remedy in an Ruch products, supplie
1	That Customer snall pay Hallif the lesser of it shall, in addition	burton its replace ts replacement o on to the foregoi	and expense, at iment cost unlest cst or the cost ng, be fully resp	ss such loss is of repairs unles ionsible for loss	r any Halliburton equi due to the sole negli ss such damage is ca s of or damage to ar by the sole negligence	igence of Hallibur aused by the sole ny of Halliburton's	ton. If Hallibu neglicence c	ton equior f Halliburt	ment, tools or on in the cas	instruments al e of equipment	re damaged in ti I. toels or instru	ne well, Custome ments for marine	r snail pay Halliburto r coerations. Custome
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g)	That this contr	act shall be gove	rned by the law-	of the state who	are services are perfo	rmed or materials	are furnished					dim officer =411-	liburton .
n)			und by any chan STA	ges or módifica TE CORPOR	are services are perfo tions in this contract. ATION COMMISS	except where such	ochange or m					itive officer of Ha AND REPRESEN STOMER'S AGE!	
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		200	•	JUN	1 0 1001			`\/.	ハロノブ	51 /6	USTOMER		

(A.M.) P.M.

We certify that the Fair Labor Standards Act of 1938, as amended, has been compled with in the production of goods and/or with respect to services furnished under this contract?