STATE CORPORATION COMMISSION OF KANSAS OIL & GAS CONSERVATION DIVISION WELL COMPLETION FORM ACO-1 WELL HISTORY	API NO. 15- 033-20994 0000 R G A A County Comanche County, Kansas
DESCRIPTION OF WELL AND LEASE	NW - NW - NW/4 Sec. 15 Twp. 32 Rge. 19 XX
Operator: License # 6528	330 Feet from S/W (circle one) Line of Section
Name: RJ Patrick Operating Operating Co	330 Feet from E/D (circle one) Line of Section
Address <u>P.O. Box 1157</u>	Footages Calculated from Nearest Outside Section Corner: NE, SE, (NL) or SW (circle one)
City/State/Zip Liberal, Kansas 67905-1157	Lease Name Harold Herd Well # 2-15
Purchaser: Kansas Gas Supply  Operator Contact Person: RJ Patrick	Field Name Wildcat
Operator Contact Person: RJ Patrick 8	Producing Formation Ft. Scott
Phone (316) 624-8483	Elevation: Ground KB KB 2053
Contractor: Name: Duke Drilling Co. Finc.	Total Depth 5300 PBTD 5275
License: 5929 3 4 2 3 3 4 2 3 3 3 4 2 3 3 3 3 3 3 3 3	Amount of Surface Pipe Set and Cemented at 728 Feet
Wellsite Geologist: Marvin Harvey	Multiple Stage Cementing Collar Used?Yes X No
Designate Type of Completion	If yes, show depth set Feet
	If Alternate II completion, cement circulated from
OilSIOWTemp. AbdSIGW	feet depth to w/ sx cmt.
Other (Core, WSW, Expl., Cathodic, etc)	Drilling Fluid Management Plan Alt. 3-25-99 (Data must be collected from the Reserve Pit)
If Workovers	(pars most be entracted from the Reserve bit)
Operator:	Chloride content 7500 ppm Fluid volume 420 bbls
well name:	Dewatering method used <u>setteled</u> water & hauled
Comp. Date Old Total Depth	Location of fluid disposal if hauled offsite:
Deepening Re-perf. Conv. to Inj/SWD Plug Back PBTD Commingled Docket No.	Operator Name KBW Oil & Gas Company
Dual Completion Docket No.	Lease Name Harmon #1 License No. 5993
Uther (SWD or Inj7) Docket No	NW Quarter Sec. 11 Twp. 33 s Rns. 20 E
02-15-99 02-27-99 02-28-99 Spud Date	
spud Date Date Reached TD Completion Date	County Comanche Docket No. 22304
Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on a 12 months if requested in writing and submitted with the months). One copy of all wireline logs and geologist well re-	pe filed with the Kansas Corporation Commission, 130 S. Market spud date, recompletion, workover or conversion of a well. Side two of this form will be held confidential for a period of form (see rule 82-3-107 for confidentiality in excess of 12 export shall be attached with this form. ALL CEMENTING TICKETS S. Submit CP-111 form with all temporarily abandoned wells.
	ated to pegulate the oil and an indicate the oil and a
ignature // / Journ	K.C.C. OFFICE USE ONLY
itle Owner Date 03/2	TO KECEIVED
ubscribed and sworn to before me this 22 day of Marc.	<del>/</del>
otary Public Lisa K. Smith	KCC SWD/Rep NGPA  KGS Plug Other
ate Commission Expires $7-5-60$	(Specify)

NOTARY PUBLIC - State of Kansas LISA K. SMITH My Appt. Expires 7 - 5 - 0 0

Form ACO-1 (7-91)

15 25	10	☐ East		ease Name		County, Kan			
Sec. 15 Tup. 32	Rge	XX West	i ·					•	•
NSTRUCTIONS: Show nterval tested, to ydrostatic pressur f more space is ne	ime tool open a es, bottom hole	and closed, flow temperature, flu	ing and shu	it-in pres	sures, wheth	er shut-in pre	ssure read	ched stati	c leve
rill Stem Tests Ta (Attach Addition		X Yes .	0	X Log	Formation	(Top), Depth	and Datums		Sample
amples Sent to Geo	logical Survey	☐ Yes   N	•   •   He	Name eebner S	Shale	тор 4309'	•	<b>Datum</b> -2243'	•
ores Taken		☐ Yes ☒ N	, To	ronto		4320'		-2254 '	•
Lectric Log Run (Submit Copy.)	gras .	Yes D N	• Ma Pa	insing irmaton iwnee		4507' 4973' 5059'		-2241' -2907' -2993'	
ist All E.Logs Rundual compensat duction log, m time and cemen	ed porosity icroresisti	'log, duel vity, drill	in- Ch	:. Scott erokee ssissip	Shale	5092' 5104' 5178'	•	-3026 <sup>1</sup> -3038 <sup>1</sup> -3112 <sup>1</sup>	
	Report al	CASING RE		New X Us		production, etc			
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D		ight s./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Additi	
Conductor	30	20"		·	90'				
Surface	12-1/4"	8- <u>5</u> /8"	28# 8	× 24#	728.19	65/35 Class A	300 100	6%gel 3%cc	3%cc <u>2%ge</u> ]
Production	7-7/8"	4-1/2"	1.0	).5#_	53061	50/50 Poz	150	18%sa1	t 2%
	ADDITIONAL C	EMENT ING/SQUEEZE	RECORD						
Purpose:	Depth Top Bottom Type of Cement #Sac			ks Used	Type and Percent Additives				
Protect Casing	1	,	· .			<u> </u>			
Plug Off Zone		1	F						
PERFORATION RECORD - Bridge Plugs Set/Type Shots Per Foot Specify Footage of Each Interval Perforated (Amount and Kind of Material Use)						Cement Sq ial Used)	De	epth	
2 per ft.	5182' to 52	04' & 5221'	to 5248'		5000 gal:	s. 15% FE		518 524	2; to
	Set bridge	plug @ 5096	l						
					2000 gal:	s 15% FE		509 510	<del>7' t</del> o 3'
	<del></del>							,	
TUBING RECORD	<b>Size</b> 2-3/8		non	ie	Liner Run	☐ Yes 🗵	No	· · · · · · · · · · · · · · · · · · ·	
Date of First, Result 03/17/99	med Production,	SWD or Inj.	Producing Me	thod X Fl	lowing Pum	ping Gas L	ift 🗆 Ot	her (Expl	nin)
stimated Production Per 24 Hours	n Oil	Bbls. Gas	Mc1		Bbls.				ravity
sposition of Gas:	METHOD OF	COMPLETION	· · · · · · · · · · · · · · · · · · ·		Pro	oduction Interv			
Vented X Sold		.ease 🔲	Open Hole	X Perf.	Dually	Comp. Comm	ingled	5097' t	o 510

# ORIGINAL

PRINTED NAME

Mar-08-99 11:41A Allied Cementing Co

# ALLIED CEMENTING CO., INC. Federal Tax I.D.# 48-0727860

REMIT TO POLE					SER	VICE POINT:				
RUSS	ELL, KA	NSAS 676	65		Medicine Lodge.					
DATE 2-16-99	SEC. 15	TWP. 325	RANGE 19 W	CALLED OUT 4:30 Am	ON LOCATION 2:30 Am	JOB START	JOB FINISH			
LEASE HET D	WELL,#	1-15	LOCATION Colds	vater CAR W		COUNTY Comanche	STATE KS.			
OLD ORCNEW (C	<del></del> -		3w. 5/5	1242 50	( <del>/////</del>	-	<u> </u>			
CONTRACTOR		# 7		OWNER R	J PATE	RICK (	PER.			
TYPE OF JOB SO HOLE SIZE 12		T.D		CEMENT						
CASING SIZE 8			PTH 728	AMOUNT ORI	DERED					
TUBING SIZE	<u> </u>		PTH		300 sx 65:35 6+37 cc + 14 Flo-seal					
DRILL PIPE		DE	PTH		LASS At3					
TOOI,			TH		1000	120	635.00			
PRES. MAX 65	<u>U</u>		<u>vimum 100</u> Dejoint 42.	_ COMMON A	100	_@ <i>_6.3</i> \$_ @	<u>600.00</u>			
MEAS. LINE CEMENT LEFT IN	J CSG	SH	DE JOINT 42.	POZMIX GEL		- @ 9.50	19.00			
PERFS.	<u> </u>	<del></del>		CHLORIDE	13	@28.00	364.00			
DISPLACEMENT	44 h	bls Fres	hwater	All	300	@ 6.00	1800.00			
		UIPMENT		HO-EAL		<u> </u>	86.0			
			3	<u> </u>		_@				
PUMP TRUCK	CEMEN'	TER CA	Bl Palding	- -		- @ - ·				
	HELPER		· •	- HANDLING	100	-@- <del>7.05</del>	12000			
BULK TRUCK				MILEAGE		- 4	688.Q			
# 240-251	DRIVER	Mark	BrungardT.				,			
BULK TRUCK			V			TOTAL	\$4012.2			
#	DRIVER		_,	_		- 1, 7, 1	,			
	מת	MARKS:			SERVI	CE				
	Ki	WMARKS								
Pipe on both	m has	ak Circl	elation w/Rig.	DEPTH OF JO	В 728					
	- 7	•	2 300 sx 65:35		CHARGE O	300'	470.00			
			7+3%cc+2%ge	<u>し</u> EXTRA FOOT	AGE 4281	_@_ <i>_H_3</i> _	184.04			
Coment in stopp				MILEAGE	4.3	_@ <i>=<u>7.85</u></i>	- <del>22</del> .5			
Displace in	141 49	bbls Fi	esh water	PLUG_ <u>Rubb</u>	er Bys"	_ @ <i>40<u>, 00</u>2</i>	90.00			
Bung plug	+ Gen	nent Die	Circulate L			@ @				
+ float H	eld.				<u> </u>	🥨				
						TOTAL	#866.S			
CUADORTO:	2 T	DATR	ICK OPER	)			<del>///</del>			
				<b></b>	YOU AN ARTHUMANT	TYTER A TENTO				
STREET PC	1. <u>Co</u> k	<u> </u>			FLOAT EQU	HENTEN I				
CITY LEERH	K S	TATE KA	NSAS ZIP 6/90	25 - GEREIVE	D SOUMISSION	<u>@</u>				
			•	STATE CORPORATION	GANIMIPOIO.	(e)				
				STATE TROPE	1609	@				
	٠	ad	•	MAR 21	179					
		v		Malla	, BUUSION	@				
To Allied Cemer	_			Wichita, Ka	gnsas					
			menting equipment		t.	TOTAL	, <u></u> _			
and furnish ceme				,	·					
			he above work was							
done to satisfact	ion and s 9. Near ex	supervision Lundareten	of owner agent or detect the "TERMS AN	TAX	1/01	10 011				
CONDITIONS"				TOTAL CHAI		18.84				
001101110110	7,0,004 (/1		1	DISCOUNT -	<u>975.</u>	16 IF PA	ID IN 30 DAY			
		()	, //	NET #	975. 13903.0	8				
SIGNATURE &	min	and 1	Myluno		WETH MI	GUIRE				
	, com a com a contra									

Mar-08-99 11:41A Allied Cementing Co

3167936099

P.02

## CEMENTING CO., INC.

### **CEMENTING LOG**

STAGE NO.

Oate Out	- 99 Distr	in Med-Lo	dge	licket No. <u>95</u>	<u>53_</u>	Spacer Type: 5 bbs Freshwater
	J Path		<i>"</i>	ig Duke "	~~	Amt Sks Yield ft <sup>3</sup> /sk Density PPC
Leaso_He				Noll No		
	manche			itate _ K.S.		
Location _C	duatec	CAR 4	<b>45</b> 6F	eld /5-325-	19N	LEAD, Pump Time hrs. Type
3 W_ 3						65:35:6+3/cc + /4 Flo-Seal Excess
CASING DATA:		TA 🗆 Sq	uitéze: 🗆			Armt 300 Sks Yield 1.97 ft 3/sk Donsity 12.5 PPC
Surface &	Intermedia	ite 🗆 — Produ	oction 🖸 🔔	ا .	iner []	TAIL; Pump Time hrs Type
	Туре	_, Wei	uhr <u>28</u>	Collar		TAIL: Pump Time hrs Type  Class 9+32cc + 22geL Excess
						Amt. 100 Sks Yield 1-34 ft 3/sk Donsity 15.2 1990
				<del>-</del> ,		WAICH: Lead 10.9 gals/sk Tail 45 gals/sk Total 45 Bbls
	<u> </u>	v				·
Casing Depths:	Tup		_ Bottom	728		Pump Trucks Used 256-265 5Hape Wilson
			-\ <u>-</u>	···		Hallk Equip _ 240-251 Mark BrungarDT
						<u> </u>
	4 %		17.40	Collars		
						The Economic Manufacture
CAPACITY FAC		1.0	II.	P.B to	11.	Float Equip: Manufacturer
		0674	1/ 44 /5	3bl16.02		Shoe. Type AFU Insert Depth A86
Casing;	Bbls/Lin. ft			361. 16.59		Centralizers: Quentity Plugs Top Rubber Bum.
Open Holes:	Bbls/Lin. ft			361		
Dall Pipe:	Bbls/Lin 1t			sht. 13.60		Stage Collars
Annulus:	Bbls/Lin. ft			3bl		Special Equip.  Disquiffluid Type Freshwater Arms. 44 Biblis Weight 8.34 PPC
Perforations.	Fron			ft Am		Mod Type WeightPPG
r is joi etions.	rtoin	14, 0-				White Type
COMPANY REC	HIT SENITATIVE	Ken N	Te Guir	e		CEMENTER CARI Balding
UMF		IRES PSI		JID PUMPED (		
ØMDPM	DRILL PILI	ANNULUS	TOTAL	Furnped Per	RATE	REMARKS
	CASING		FLUID	Time Poriod	Bbls Min.	
7:30	- <del></del>					On Location + Rig up.
		<del> </del>		ł	<del></del>	172 - ( TT ) - ( A) - ( A)
10.45		<del> </del>	<del></del>	<del> </del>	<del> </del>	Pipe on bottom break circulation w/ Rig
10:22	150		5_	5	5.	Start Fresh water Displacement
<u>0:23</u>	/50	<del> </del>	134	105		nix + ouma 300 sx 65:39:6+31 cc + 4 Floreal
10.45	300	<del> </del>	134 -	204	<u> </u>	mix+pump 100 sx Class A+3xcc +2xgel
10:46	<del></del>	·	·	<del> </del>	<del></del>	Coment in stop pumps
	<del></del>					switch values + Release plug.
10:47	100			<del> </del>	<del>-2</del>	Start Displacement
	200	<del>  -</del>	174	40	3	steady late.
0:57	650	t	178	<del></del>	>	Displanent in Burge plug
<u></u>		<del> </del>				Cement Did Circulate
	<del> </del>			· · · · · · · · · · · · · · · · · · ·		Float Held
	<del>                                     </del>	j				Total VECO
			,			RECLIVED
						CTATE CORPORATION COMMISSION
		,				3-74-11
						Plan 3 4 1999
	<u> </u>		·			
	<u> </u>					CUngregary 10pt DMUSION
	<del> </del>	[				Wichita, Kansas
	<del> </del>			····		<del></del>
	1	)	· ·			

### ALLIED CEMENTING CO., INC. 9578 Federal Tax I.D.# 48-0727860

REMITTO P.O. BOX 31 RUSSELL, KANSAS 67665	and having the substant to the SERV The transport of the properties of the substant of the transport of the content of the substant of the sub	vice point:
	ALLED OUT ON LOCATION ON LOCATION ON LOCATION	JOB START JOB FINISH
LEASE HERO WELL# LOCATION COVINA	ter (Ario)Ash	COUNTY STATE
OLD OR NEW (Circle one)	And the season of the season o	्राज्य सम्बद्धाः । अपन्यात्मस्य विदेशी जिल्लामः विद्यात्मा पुरुष्ट । अस्तर
CONTRACTOR DOKE #7	OWNER & T PATE	K operatur
TYPE OF JOB TOO CSQ. HOLE SIZE 7 1/2 T.D. 5.300	CEMENT	Received the two control to high
CASING SIZE 1 12 x 10 S DEPTH 5300	AMOUNT ORDERED 253	5.60/40/6
TUBING SIZE DEPTH	1505/5 50/5012	2%G-1+18%SAIt
DRILL PIPE DEPTH TOOL DEPTH	.75%CD-31+/4#F	10-SCA1
PRES. MAX 1200 MINIMUM, 300	COMMON	_ @
MEAS: LINE SHOE JOINT ノロ	POZMIX	@
CEMENT LEFT IN CSG	GEL OPIDE	@
PERFS.  DISPLACEMENT 2%KCLW < 5845	CHLORIDE	@
A CONTROL OF THE PROPERTY OF T	Market Control of the Control	@
is a supplied or a desponding of the final state of the constitution is a second	g val <sub>e</sub> til fra skrivet i fler ett fra fra skrivet fr	
PUMPTRUCK CEMENTER ACCU Dreiling	18. ottok ja se od presidentem (de se se od se od pod je od. Profesioja se bija da se od oblave da se od	@#\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
#233-,302 HELPER JUST IN HACT	HANDLING	@ ***
#259-314 DRIVER CORCT BUCC	MILEAGE	ीत विकासिक क्षेत्रका के स्वाप्तिक है कर स्वाप्तिक
#259:314 DRIVER + Obert Burr BULKTRUCK		il de lega et de la companya et la Companya et la companya et la compa
# DRIVER	ra, ang piggang papilikan palabah palabah palabah Palabah kanggang pang pang palabah palabah palabah palabah palabah	TOTAL
Pine on Betton-Break Circ + Recip	SERVI	CE
mix+ Pump 150=x5. 50/50+2%Gel	DEPTH OF JOB	rang di Karanda di Kar Karanda di Karanda di K
18% SAH+ 75% CD-31+/4 #F10-50AL	PUMP TRUCK CHARGE EXTRA FOOTAGE	•
HaleAse May-wash out thing thes	MILEAGE	
Bomp Plca Release PST Float HelD	PLUG 41/2 Rubber	@
Aug Pathole-155x5 60/4016		@
Pluginousehole-rosys (0406		@
	erro pertuguaran persenta per pertuguar da seria. Taku terhah antah dibibi dikaban selatuh berasar se	TOTAL
CHARGETO: P. T. PAtrick Operating	and the state of t	to and the street of the
and consideration of the first transfer and the first of	FLOAT EQU	5 V 1 V 1 V 1 V 1 V 1 V 1 V 1 V 1 V 1 V
STREET CITY  STATE  ZIP		
CITY STATE ZIP	T-AFD TISSELT PART	a a la company de la compa
hes this continue to be take from the continue to be and		
l, grabins serviced in the manner provided antrantenday. At InWind M. cone of twallerstifice for cross for a he epiton for any incremental M.		
onarottuski abrituki cete e po ko ordokubeko i kar e	TECHNOLOGY STATE CORPORATION OF	
To Allied Cementing Co., Inc.	10 1 2 A 410 A 10 A 10 A 10 A 10 A 10 A 10 A 1	ard Theory and survey of Figure 2011, it is the proper ODAN with the William of Villam to 100 to
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or which the same of the	of a time with an 3 24 9	
contractor to do work as is listed. The above work was	This mount person V. CONCERVATION DAM	Port Lead and Alla Artista Roll
done to satisfaction and supervision of owner agent or	TAX	orthe one other ethics in the their help of the solution of th
contractor. I have read & understand the "TERMS AND	TOTAL CHARGE	A CONTROL OF THE CONT
CONDITIONS" listed on the reverse side.	priestilla de la company de	IP DAID IN 20 DAVE
and no abilitaria the retired in the second lander and the second and the	DISCOUNT	IF PAID IN 30 DAYS
SIGNATURE STORY	Marie Marie Die Tel Ph	and the form of the state of th
SIGNATURE X 1977 H Weet	PRINT	ED NAME
triactification by the Classical Association of the highest transfer	bir i soğlu göğli göt səbiliyi i reçisi	等别的多数。他对他们为Windleb

### ORIGINAL

	CEMENTING LOG STAGE NO.
CEMENTING CO., INC.	CEMENT DATA:
Date 2-28-99 District Med Jage Ticket No. 9578	Spacer Type:
company R. J. PATRICK Open. Rig Duke #7	Amt. Sks Yield ft³/sk Density PPG
Lease Well No.	
County Con Airch & State +S	
Location Coldwater Carwash Field 15:335-K	1 LEAD: Pump Time hrs. Type 60/40/696
3w-95	Excess
CASING DATA: PTA □ Squeeze □	Amt. 25 Sks Yield 1. 58 ft³/sk Density 13.8 PPG
Surface ☐ / Production 🗗 Liner ☐	
Size 4/2 Type Weight 10.5 Collar	.75%CI)-31+ /4#FIO-5-A Excess
ફુંમાં ૧૯ લામો જેવી તાલું અમાના સુંગા છે. જીવા છે. જેવા પ્રાથમિક માં માર્મો તું કોંગા માના છે.	Amt. 150 Sks Yield 1.38 ft³/sk Density 14.5 PPG
PODE 15 16 16 16 16 16 16 16 16 16 16 16 16 16	WATER: Lead 7 8 gals/sk Tail 5 43 gals/sk Total 20 Bbls
Casing Depths: Top	Pump Trucks Used 233.302 JUST n.H.
and the second popular to the second	Bulk Equip. 259-314 Chert B.
्रात्री क्षांत्रे क्षांत्रिक्षा प्रदेशकालेल्या क्षांत्रीका व क्षेत्रकारी है।	The second of th
कुर हो है अपने के प्रतासक के किया है। जा राज के हो है जिस है जो किया है जो	
Drill Pipe: Size 4/2 Weight 16.60 Collars X101e	[1] [1] [1] [1] [1] [1] [1] [1] [1] [1]
Open Hole: Size 7/8 T.D. 5300 ft. P.B. to	ff. Float Fourier Manufacturer
CAPACITY FACTORS:	Shoe: Type, Depth
Casing: Bbls/Lin, ft. 10159 Lin, ft./Bbl. 62.70	Float: Type A FO To Sort Depth
-Onen Holes: Rbls / Lin ft / 0602 Lin ft / Rbl 16 8-599	Centralizers: Quantity Plugs Top Color Btm.
Drill Pipe: Bbls/Lin. ft: Lin. ft./Bbl	Stage Collars
Annulus: Bbls/Lin. ft Lin. ft./Bbl	Special Equip.
Bbls/Lin. ft. Lin. ft./Bbl.	Disp. Fluid Type 290 KC/ Amt. 85 Bbls. Weight 8.43 PPG
Perforations: From ft. to ft. Amt.	Mud Type Chennic Al Weight 9.2 PPG
	and a mengape of plant and an extra the control of
COMPANY REPRESENTATIVE R. T. PATRICK	CEMENTER Arry Creiling
TIME PRESSURES PSI FLUID PUMPED DATA	and the second section of the second section is a second section of the second section of the second section of the second section is a second section of the sect
	DEMADE
	ATE s Min.
1.30 600	Pine on Bottom-Break Cin
130 600	Peciprocate (sq. 15'
2124 500	5/2 mix4Pomp 150 sxs 50/50 + 24/6-1
	18% SAIL+ 75% CD31+ 14 Flu-SEAL
2.30 300	Cement In Stup Humps
	1/2 pash cit Dimp+lines
c/2	- Kelense Plug.
2:35 300 25	S STALT DISTACE DAO KCT MOTEL
300 50	2 STEANY KATE + 1/51
325	Det I Ct Tropped
100 mars 1200 ma	PST 114+ Increase
750 95	Steady Rate Increase
300 10 10 10 10 10 10 10 10 10 10 10 10 1	1 Steady tale Increase

FINAL DISP, PRESS: 600

PSI BLEEDBACK

THANK YOU

## ALLIED CEMENTING CO., INC. 9578

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m handong RUSSELL, KANSAS 67665 and the borrow and the product of the said of To the time of a military of the contraction of the second TWP. 19 RANGE SACTED CALLED OUT ON LOCATION. JOB START DATE ON SACTION. JOB START 130A. M. 10.45A.m. 1.30P. M. JOB FINISH 3!.30P.111 se Hend well # LOCATION COLOWATER CAPL OLD OR NEW (Circle one) CONTRACTOR: TYPE OF JOB Y COLOR
HOLE SIZE CEMENT CASING SIZE キーデュス DEPTH AMOUNT ORDERED 255X5. 6014016 TUBING SIZE DEPTH 50/50+2%G-1+18%SAH DRILL PIPE TOOL PRES. MAX 1200 COMMON POZMIX *@* CEMENT LEFT IN CSG. @ PERFS: CHLORIDE: DISPLACEMENT "(@. 12 4 % 3 YN 10 Vac 15 The EQUIPMENT OF THE CONTROL OF THE PARTY OF South and the state of the state of the state of प्रकृतिका का प्रकर्ण के क्षेत्र के निर्देश के लिए हैं है है जिस है है कि लिए हैं है कि लिए हैं है कि लिए हैं ह CEMENTER ACCULATION PUMP TRUCK [ Richard @ Bar to the Colored Tustin Hart HANDLING orania di **@**imbilità di di BULK TRUCK SO ME THE PROPERTY MILEAGE BULK TRUCK TO SECUL TO LOOK AND SECULD SHOW SEC ation that in the state of the control of the party of the property of the control of the contro and an experience of the second of the secon REMARKS: SERVICE Bottom-Break Circ + Pump 1-50=x5.50/50+2%Gel SAH+.75%CD-31+/4#F10-5-AL DEPTH OF JOB 530 PUMP TRUCK CHARGE KaleAse Min wash out Homptlines EXTRA FOOTAGE ) Splace Augus 85 Buls 2961ch water MILEAGE STATE OF o Release PST Float HelD @ -155XS-601446 mousehole-rosks coluct जिल्ला है कर है। विकास से किया है के लिए कि लिए देवा है है कि कि किया है है है कि है कि लिए किया है the consecutive was tupe with district to be senting CHARGE TO RET PATE OPERATing FLOAT EQUIPMENT CITY tron as de shagained by it to be true from defores in the cetted there is sectional to the property of the section o zertesing grant der sie des een et seen en een een een een de services in hegrender fronderd eind intendert. Et 1864 curga an poducion in aspera de comprese escriptivas de compandos, escalos as de contrata de configue de altra de compando de c To Allied Cementing Co., Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was to the second second at the contract of रे । हे कि विद्यानिक के विद्यान कि विद्यानिक के बिद्धानिक के बिद्धानिक के बिद्धानिक के बिद्धानिक के बिद्धानिक के done to satisfaction and supervision of owner agent or TOTAL CHARGE contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side. not fulfactional in thing the contract of the DISCOUNT IF PAID IN 30 DAYS sight constitution of factor and the design contribution mestrilla Toggi disebuponilari di masti va kiran Salens and serve his and reported and provide he PRINTED NAME a hos composed the trust colores out a real man mit with Wirkita Nahaan

### 15-633-26994-6000 R.J. PATRICK OPERATING COMPANY P.O. BOX 1157

### LIBERAL, KANSAS 67905-1157

Phone No. 316-624-8483

e-mail: patrick@ptsi.net

Fax: 316-624-1819

#### DRILLING REPORT

Re:Harold Herd 2-15 NW/NW/NW Section 15-32S-19W Comanche County, Kansas

RECEIVED STATE CORPORATION COMMISSION

02/01/99 Staked location and ran elevation - GR - 2053

MAR 2 4 1999 3-24-99 CONSERVATION DIVISION

Michita Kane

02/08/99 Making location and reserve pit.

02/09/99 Set 90' of 20" Conductor Pipe.

02/10/99 Finished making location and reserve pit.

02/16/99 Spudded @ 5:30 p.m. Drilling 121" surface hole. Drilling @ 685' @ 7:00 a.m.

02/17/99 Drilling ahead @ 1317'. Set 728' of 8 5/8 - 28# casing (17 joints). Cemented w/300 sks. 65 - 35 w/6% gel & 3% c.c. and 1/4# Flo Seal. Tailed in w/100 sks. Class "A" w/3% C.C. and 2% gel. Plug down @ 11:00 a.m., 02/16/99. Cement did circulate by Allied Cementing Company. W.O.C. 8 hours. Rigged up 8 5/8" well head and BLow -Out Preventors. Started drilling out from under surface pipe @ 7:00 p.m.

02/18/99 Drilling ahead @ 2331'. Survey 3/4° @ 1496'.

02/19/99 Drilling ahead @ 2830'. Survey 3/4° @ 2616'.

02/20/99 Drilling ahead @ 3355' in lime and shale.

02/21/99 Drilling ahead @ 3860' in lime and shale.

02/22/99 Drilling ahead @ 4430' in lime and shale.

02/23/99 Tripping out of hole for DST#1 @ 4827'. Testing from 4810' to 4827'.

02/24/99 DST#1 - recovered 2160' of salt water and drilling mud. Drilling ahead @ 4827'.

02/25/99 Circulating for DST#3 @ 5076'. Ran DST#2 @ 5008' to 5040'. Recovered 560' of salt water and drilling mud.

02/26/99 Taking DST#4 @ 5116'. Ran DST#3 @ 5064' to 5076'. Recovered 260' of gas cut mud and muddy water. No gas in pipe.

02/27/99 Circulating for logs @ 5300'. Results DST#4 - 5089' to 5116'. Recovered 30' drilling mud with stablized gas flow of 137,000 cu ft per day w/1871# shut in pressure. DST Chart showed formation damage which would result in less gas flow. Drill STem Test analyses report said we should expect 6 to 8 times increase after acid treatment.

02/28/99 Finished logging and ran DST#5 @ 5210' to 5267'. Recovered 80' of gas cut mud w/show of oil and stabilizing flow of 17,000 cu. ft. gas per day w/1600# shut-in pressure. Lay down drill pipe and ran 131 jts.,5306' of 4½" - 10.5# casing Cemented w/150 sks Poz Mix. Plug down @ 2:50 p.m. Set slips and released rig @ 5:15 p.m. WOC and completion unit.

### R.J. PATRICK OPERATING COMPANY P.O. BOX 1157 LIBERAL, KANSAS 67905-1157

Phone No. 316-624-8483

e-mail: patrick@ptsi.net

Fax: 316-624-1819

#### COMPLETION REPORT

RE:Harold Herd 2-15 NW/NW/NW Section 15-32S-19W Comanche County, Kansas

- 03/03/99 Move in Completion Unit. Rig up and run Cement Bond and Collar Log. Had good cement bond. PBTD 5275'. Cement top 4508'. Swabbed casing down to 4800'. Perforated 5221' to 5248', 2 holes per ft. and 5182' to 5204', 2 holes per ft. (Mississippi Zone) had slight blow on casing. Swabbed to bottom. Had slight show of gas. No fluid coming in. Let well open to pit overnight.
- 03/04/99 Had slight show of oil. Acidized Mississippian w/5000 gals. 15% FE Acid w/additives and 150 ball sealers. Broke down @ 1100#. Treated @ 6bbls. per minute @ 800#'s. Balled off w/4 bbls. of Flush left. Finished treatment @ 400#'s. Instant shut-down. Bled to 300 in 20 min. Bled off pressure to tank and started swabbing to tank. 205 bbls. to recover. We recovered 169 bbls. of load today w/36 bbls to be recovered. Making gas at the rate of 25,000 gas per day and oil @ the rate of 3 bbls. per day. Shut well in overnight.
- O3/05/99 Shut-in pressure, 360#'s. Had 1000' of fluid in hole. Swabbed 10% oil. Swabbed hole down. Making approximately 1½ bbls. per hour of fluid. Recovered all but 10 bbls. of load water. Making 10% oil and gas too small to measure. Rigged down. Swabbed and rigged up perforators. Set Cast Iron Bridge Plug @ 5169' and load hole w/treated water. Perforated 5097' to 5103' 6 feet, 2 holes per ft. Ran tubing in hole w/2 ft. sub on bottom then seating nipple, then ran 159 jts. (5089') 2 3/8" used tubing, top of perfs @ 5097'. Ran tubing in hole. Shut down overnight.
- O3/06/99 Circulated hole and spotted acid. Treated down tubing 2000 gals., 15% FE Acid w/additives. Broke down @ 600#'s. Treated @ 2 to 2½ bbls per minute. Instant shut-down 500#'s. Bled off to 150# in 20 minutes. Closed in and bled back to swab tank. Started swabbing 2 3/8" tubing. Total load to recover, 125 bbls. Swab back 40 bbls. and well kicked off flowing and cleaning up acid water. Recovered 97 bbls. and shut well in. Lack 28 bbls. having load back. Making approximately 400,000 gas per day. Flowing tubing pressure, 600#'s. Flowing casing pressure, 800#'s on a 16/64 choke. Shut well in @ 6:00 p.m. Shut in overnight for pressure test. Rigged down Completion Unit and move out.
- 03/07/99 Shut-in tubing pressure, 1435#'s. Casing pressure, 1550#'s. Job complete. Waiting on pipe line connection.
- 03/08/99 Shut-in Tubing pressure, 1560#'s. Casing pressure, 1550#'s.

**END REPORT** 

RECEIVED STATE COPPORATION COMMISSION:

MAR 2 4 1999 3-24-7 7 CONSERVATION DIVISION WINDITS KANKES