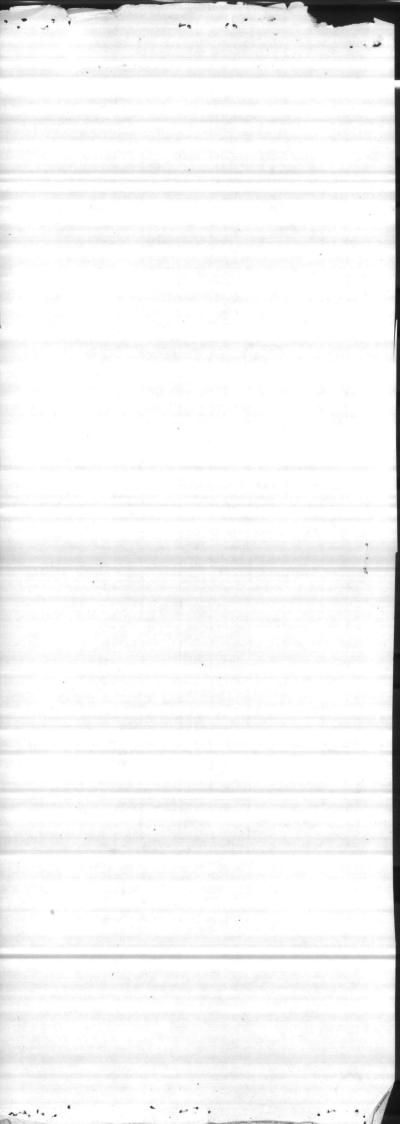
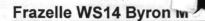
228 " " " " " D.D.-14.4 242 " " D.D.-15.9 D.D. -15.9 Pump Fndn. EL. 23.2 EL 21.2 Static+3.0 18" Clay Max. D.D. - 22.0 300 G.P.M. 58-14" Soft Rock & 00 Fish Bones Soft Sand 0 Soft Shell Rock 0 Screen 9 Fine Sand Shell & Sand 20 7 Fine Sand 8" Screen Soft Rock Muck & Shell 20 Hard Rock Screen 0 Sand, Shell & Rock Screen 0 Sand & Shell 0 Screen Conc. Plug

.P.M .- DUAL DRIVE

10.H.D. 1

TA WETL No. 13





From:

Brewer GS14 Scott A

Sent:

Monday, January 22, 2001 1:25 PM

To: Cc: Cone GM14 Frederick E; Baker GM13 Carl H; Raines GS12 Rick H; Paul GS13 Neal N Phillips Col Thomas S: Frazelle WS14 Byron M; Nicholson LtCol David L; Gwynn GM13

Sammy D

Subject:

RE: Production Well 613

Fred- Thanks for the response. Neal will continue to work this issue with all concerned, such that interim measures are identified/implemented and so all the pieces to the final solution(s) are identified with projects/deadlines. V/r sab

----Original Message----

From:

Cone GM14 Frederick E

Sent:

Monday, January 22, 2001 12:04 PM

To:

Baker GM13 Carl H; Brewer GS14 Scott A; Raines GS12 Rick H Phillips Col Thomas S; Frazelle WS14 Byron M; Nicholson LtCol David L

Cc: Subject:

RE: Production Well 613

SCOTT/RICK-

WE CONCUR THAT THE BEST APPROACH IS TO REPLACE WELL 613 AS SOON AS POSSIBLE. RECOMMEND WE DETERMINE THE BEST, MOST TIMELY METHOD OF ACCOMPLISHING THIS (PROBABLY A SUPPLEMENTAL M2 PROJECT). ALSO, WE NEED TO DECIDE HOW QUICKLY WE NEED TO SHUT DOWN THE WELL.

FRED

----Original Message----

From: Baker GM13 Carl H

Monday, January 22, 2001 11:42 AM

To:

Cone GM14 Frederick E

Cc:

Phillips Col Thomas S; Frazelle WS14 Byron M; Nicholson LtCol David L

Subject: RE: Production Well 613

Fred.

I recommend that the well be closed and a replacement well programmed as an environmental project. In the past, wells have been secured due to close proximity of IR sites, and replacement wells approved. 613 is one of the base's original wells and certainly has exceeded it's life expectancy.

V/R,

Carl

----Original Message----

From:

Cone GM14 Frederick E

Sent:

Monday, January 22, 2001 11:29 AM

To: Baker GM13 Carl H

Cc: Phillips Col Thomas S; Frazelle WS14 Byron M

Subject:

FW: Production Well 613

CARL-

NEED YOUR THOUGHTS.

I TEND TO AGREE WITH RICK'S RECOMMENDATION.

FRED

----Original Message----

From:

Raines GS12 Rick H

Sent:

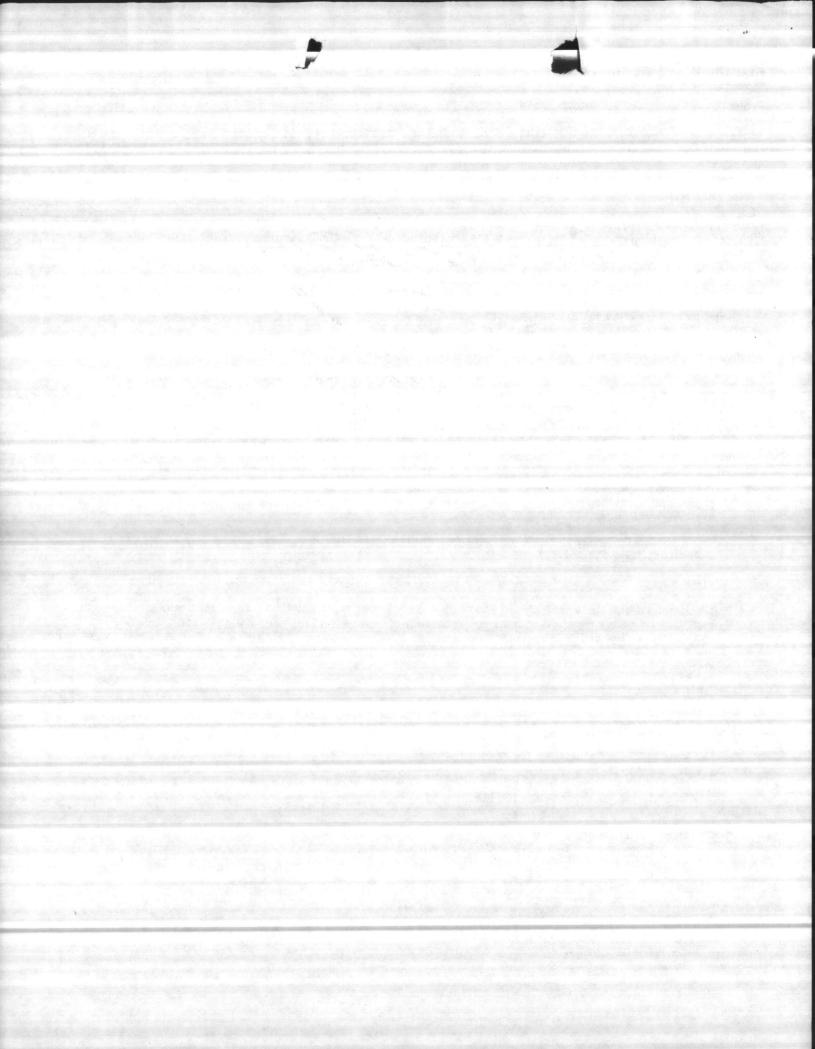
Monday, January 22, 2001 10:44 AM

To: Brewer GS14 Scott A; Paul GS13 Neal N; Burton GS07 Thomas H; Cone GM14 Frederick E; Frazelle WS14 Byron M

Cc: Rowse GS12 Brent W

Subject:

Production Well 613



Gentlemen

A situation has withat needs to be addressed as to how we will proceed.

IR Site 3 is the old creosote plant at the corner of Holcomb Blvd and Sawmill Rd. The site had soil and groundwater contamination associated with it. A recent remedial action was successful in removing the soil contamination but there is still groundwater contamination present beneath the site. The ROD for this site calls for us to monitor the groundwater until we can show that Natural Attenuation has remediated the groundwater. This will take a number of years, possible 5-10. The LUCIP for this site calls for a restriction on the aquifer use that includes not using the water within 1000 feet of the site for potable water. Production well 613 is within that 1000 foot buffer and is hydraulically down gradient of the site, so there is the potential for the contaminants to migrate into the well.

Recent discussions with the State and Federal regulators pertaining to this situation have led to a couple of potential courses of action. One solution is to close well 613. Another option is to construct a sentinel well. The well would be installed between the site and well 613 to the same depth as well 613 and would act as a early warning system that the contaminants are getting close to impacting well 613. Discussions with Mr. Frazelle have disclosed that the base requires the water production from well 613, so that closure of the well would

require construction of a new well.

I realize that there are other considerations that have not been touched on here i.e. scheduling and locating the new well, and that are possibly other options that I'm not aware of. In today's climate though, I recommend that we shut down well 613 and use the money that we would spend on a sentinel well towards the construction of a new production well.

Once we come to a conclusion on how we will proceed, it is imperative that I promptly report back to the

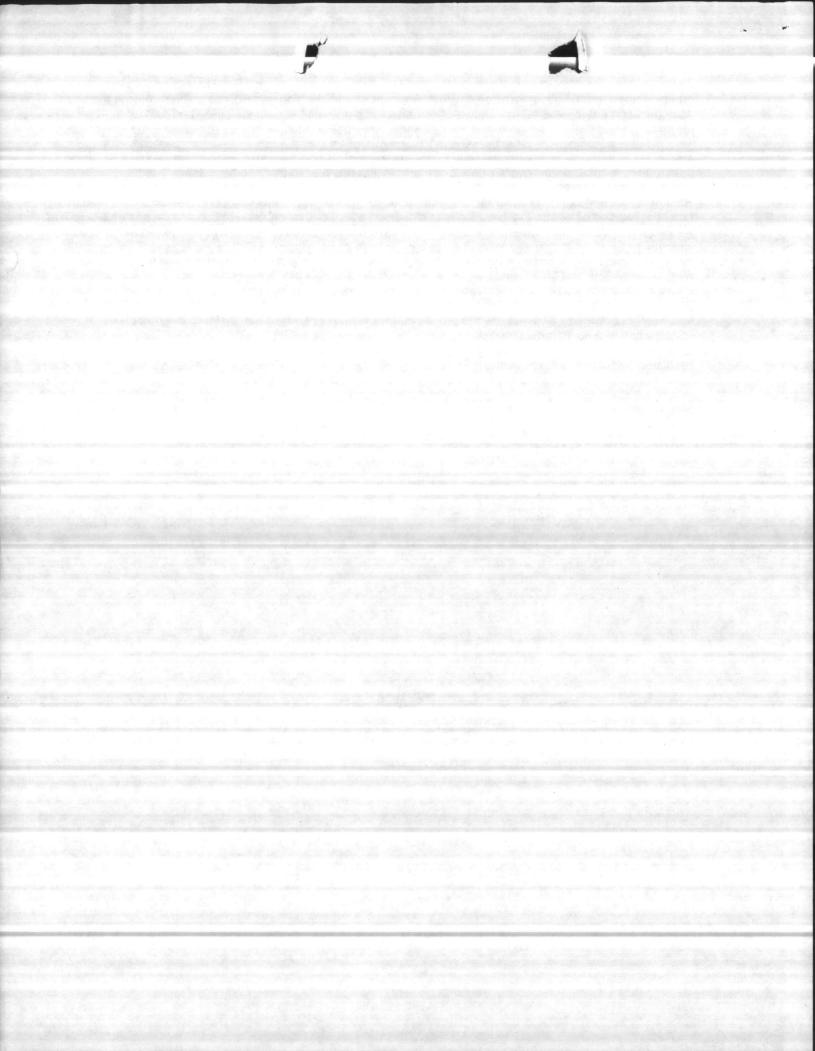
regulators with our proposed plan.

Please let me know if you require any additional information or if I can be of any help.

RIS

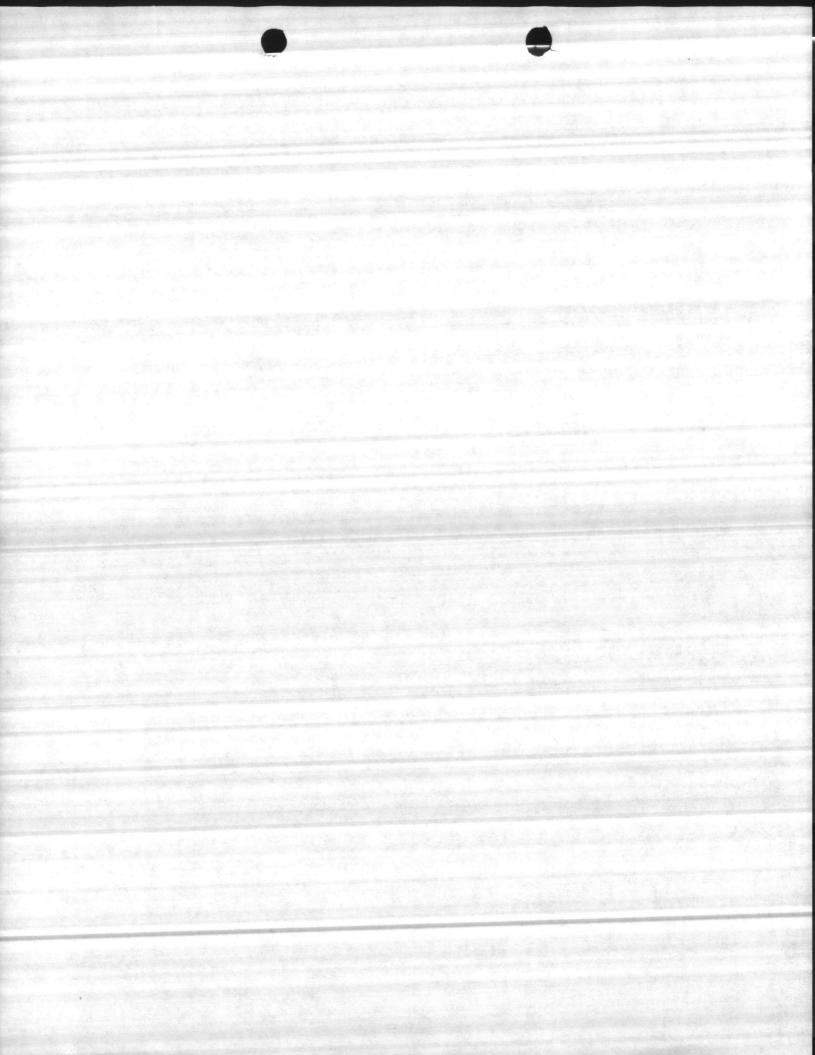
Rick Raines

451-9461



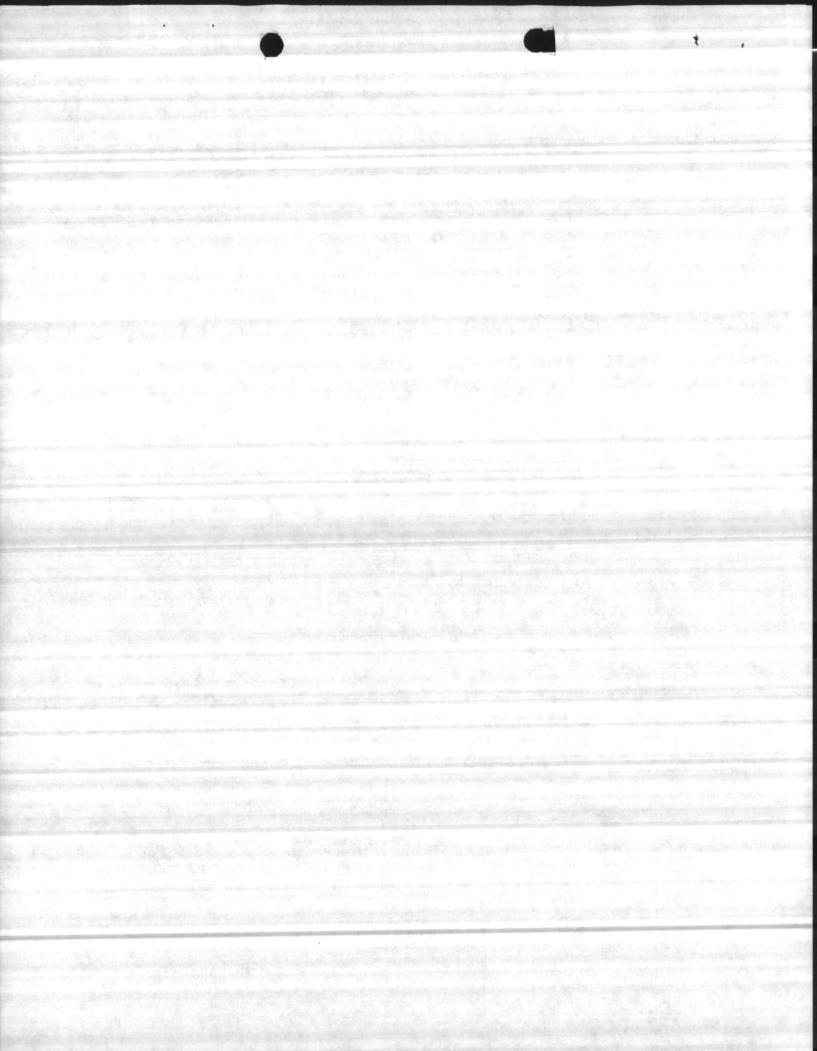
DATE 2-25-00,
PWSID 04-67-041

WELL ##P_613
WELL NAME HADNOT POINT HO-2
BLDG. #9 6/3
CODE S.
AVAILABILITY P.
LOCATION HOICOMB BUD.
LATITUDE34.20829
LONGITUDE72. 33836
WELL DIAMETER8 "
WELL DEPTH/SO'
SCREEN INTERVAL
YIELD250
STATIC LEVEL/3'
PUMPING LEVEL60'
PUMP TYPE VERTICAL TURBINE
MOTOR HP5
INTAKE DEPTH 50
DESIGN CAPACITY 200
ACTUAL GPM 250
SIZE OF CONCRETE SLAB
EIGHT OF CASING _ 30"



SOURCE INFORMATION :

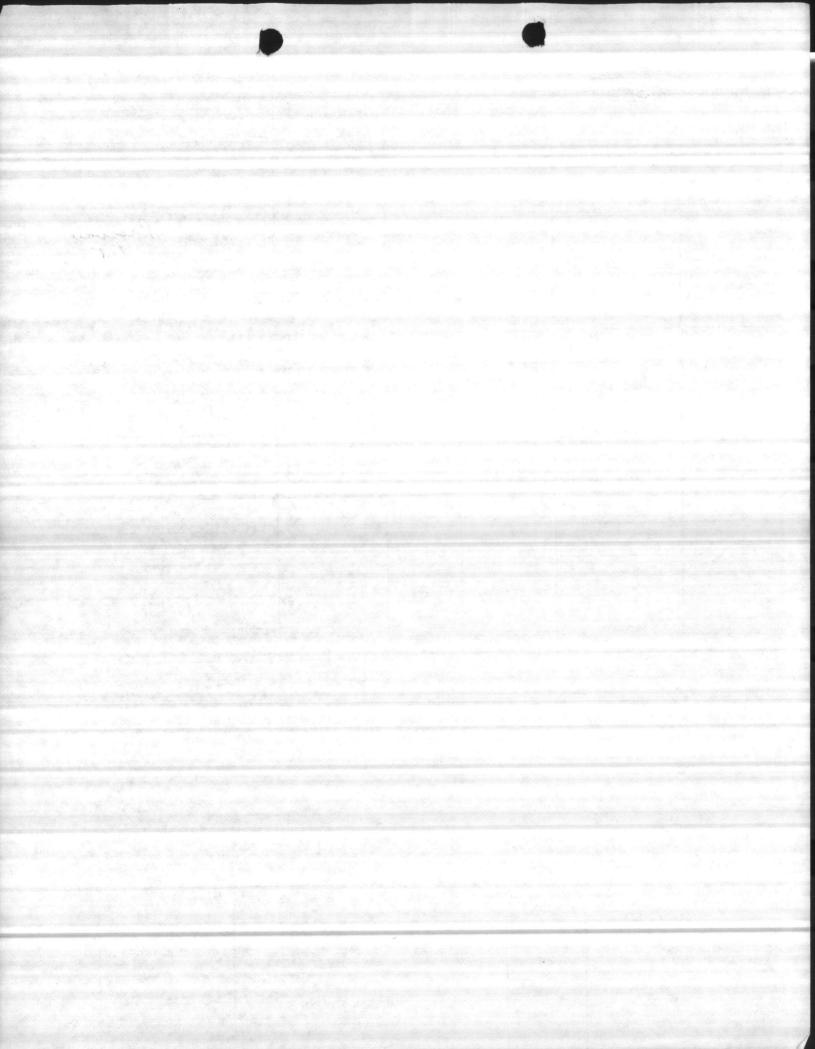
	SOURCE INFORMATION GROUND WATER	Date Form Completed M M D D Y Y 6 / 2 4 9 5
Owner Assigned Well Name (If purch	ase, name of system)	Code G=Ground
6/3 HADNOTIPO	DINT 613	W=Purchase/G Y=C w/direct influence Z=W w/direct influence
If Purchase, seller ID# Source Begin D		Availability P=Permanent
	SWTR! Y MAJORITHAN	P E=Emergency I=Interim S=Seasonal O=Other
Location of well within the system (If pur	chase, location of master meter)	
HOLCOMB BLID		PS Data No. of Sats. Locked on
Latitude (N) Date: Min. Sec. Sec. Deg. Min. Sec. Dog. Min. Sec.	G=GPS M=Map S=Surveyed	PS Data No. of Sats. Locked on OP # DOP #
(If purchase, use seller's primary source la Vulnerable (VOCs) YN	Assessment Date	Y .
Owner Assigned Entry Point Code Entry Point N Location:	D=Ground/non-permanent	P=Year-round S=Seasonal D=Other
Sources of pollution/distance: Surface water within 200'? W N Adequate slope? (Y,N) Flooding	g? (Y,N) Maintenance: 6/K	yes, bact. samples collected?(Y,N) ed?(Y,N)
Well House: Free of stored materials?		
W' 1 D 8" Time (Type of freeze protection:): Properly sealed! (Y,N
Properly vented?/V (Y,N) Casing d	lepth 60 ft. put 'UNK') Well depth:	50 Meter available? N (Y,N) Size: 26X4
Concrete slab adequate? (Y,N) I. Size of blow-off: 2" (CC)	Sample tap: Before treatment?	1/ (Y,N) After treatment?(Y,N)
Pumps: Capacity: GPM: 200162	HP: 5 Pump intake depth: _	150 Auxiliary Power?(Y,N
Type pump: VERTICAL TURBIN	Height above flo	por (pump/casing): 30
Storage at well site: Elev:	Hÿdro:	Ground:
If hydroautomatic, air volume control?	(Y,N) Safety valves?(Y,N) Codehp 2hp 3gpm	hp Auxiliary Power?(Y,N
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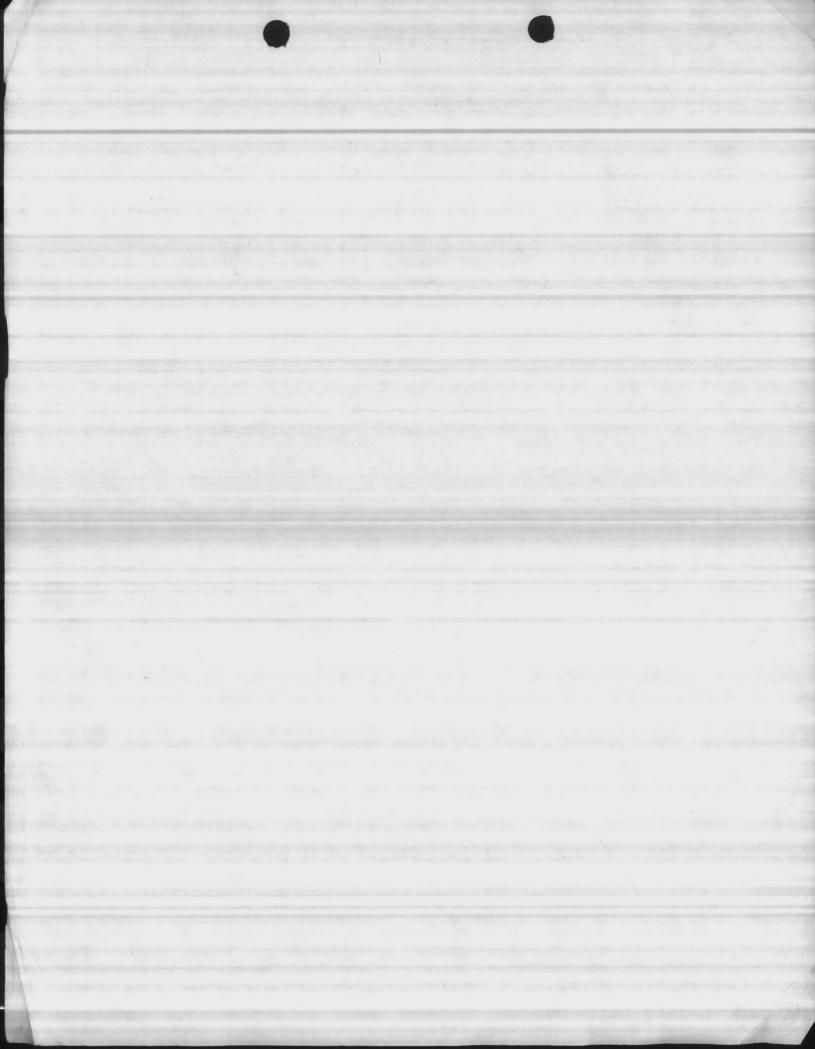


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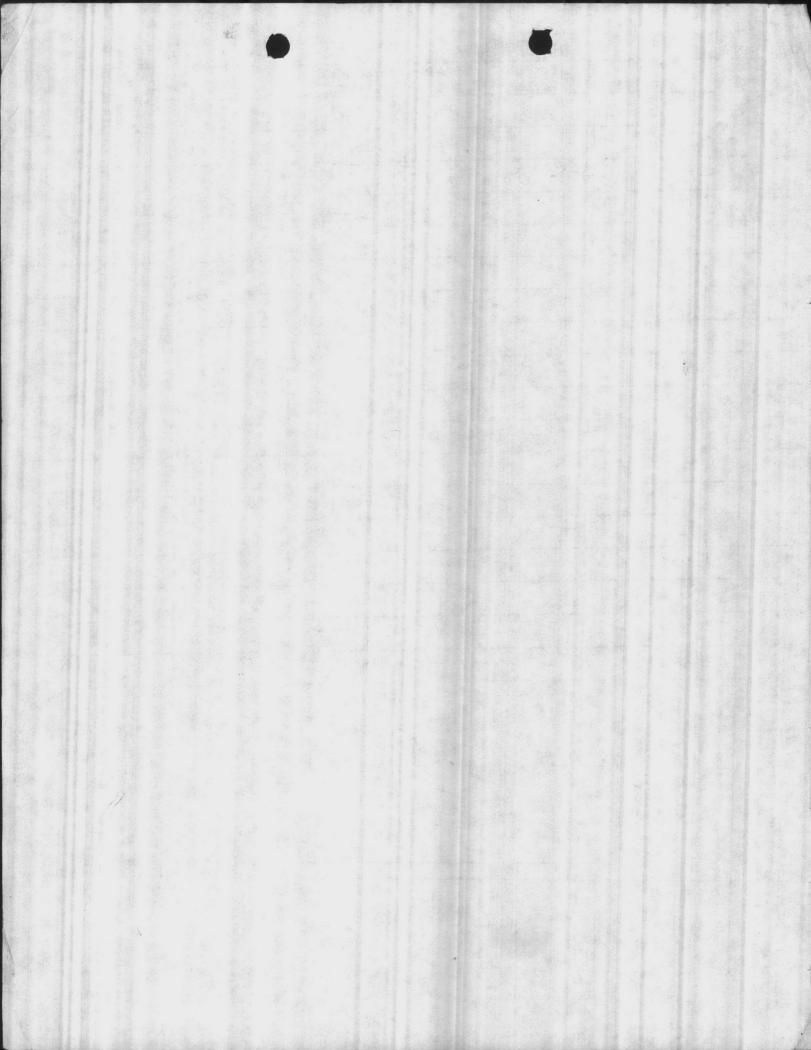
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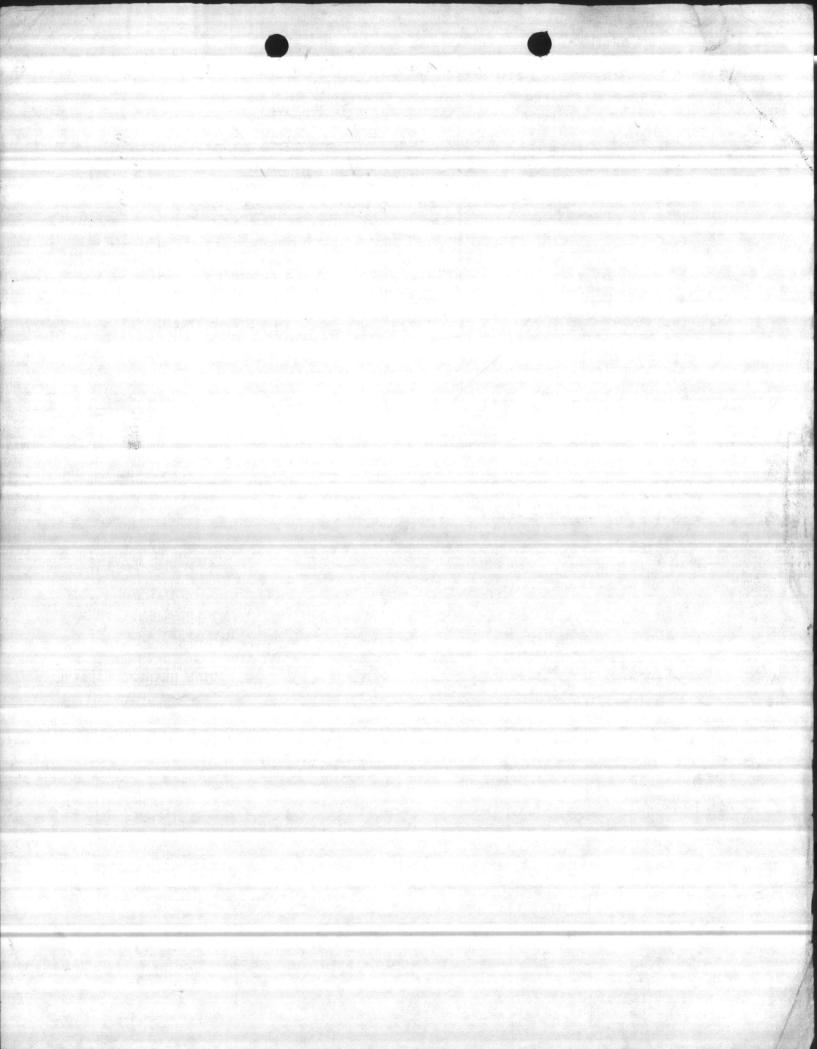
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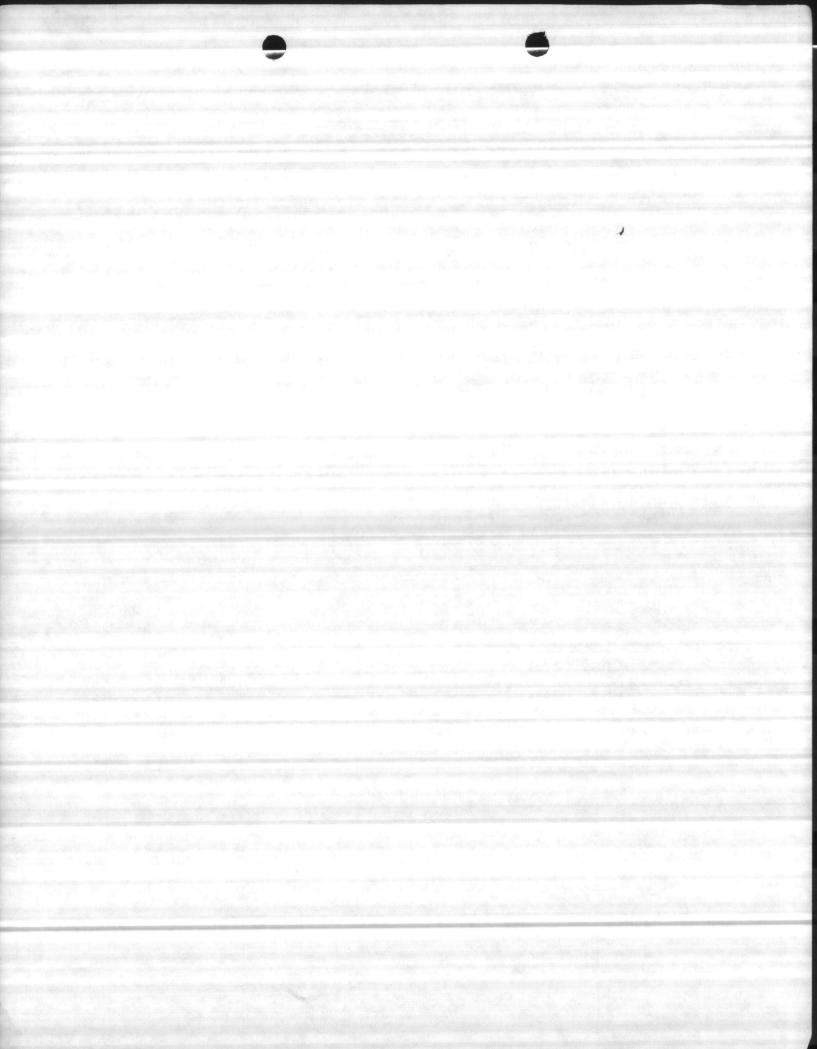
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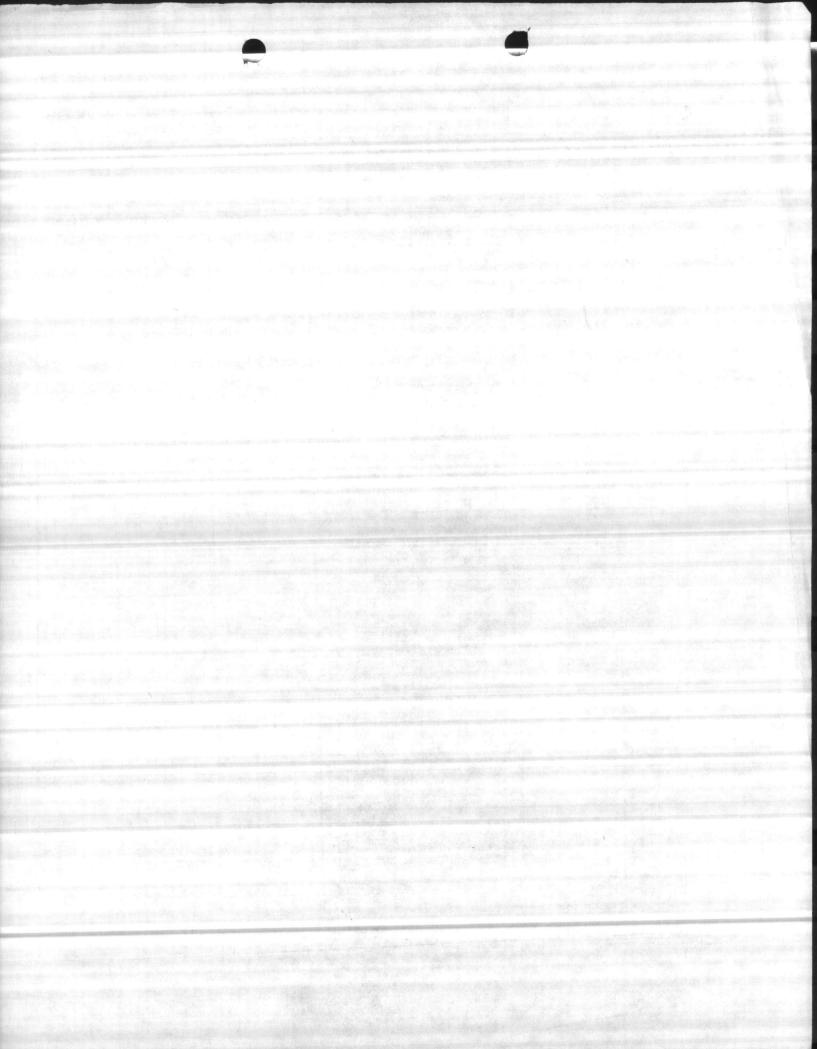
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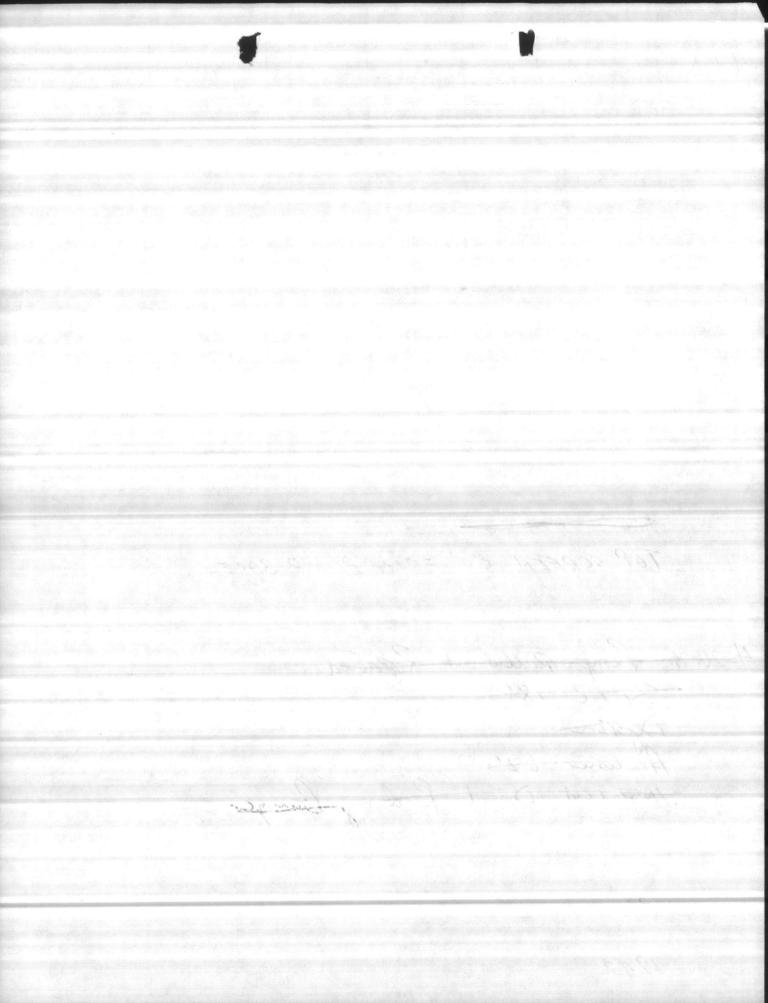
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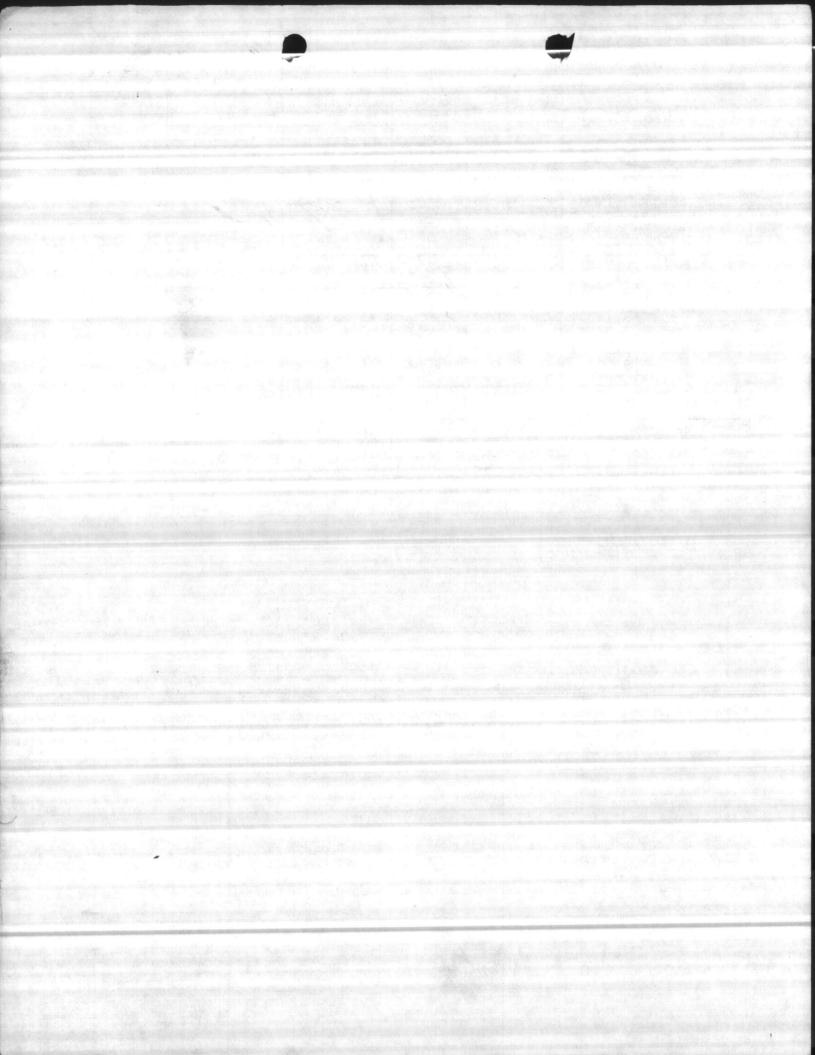
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Mid South Pump Co.

1555 Thr Place / Memphis, TN 38116-3593 WHOLESALE EXCLUSIVELY (901) 345-7204

PAGE

DATE NOV 1/07/90

SALES ORDER

06536

9.57.49

MEMPHIS

SOUTHERLAND SALES INC. 208 BAYLEAF DR. RALEIGH NC. 27615-0000

INDUSTRIAL SALES COMPANY BLUE CLAY RO. WILLINGTON NO .28402--0000 LJW/PD JC " PD

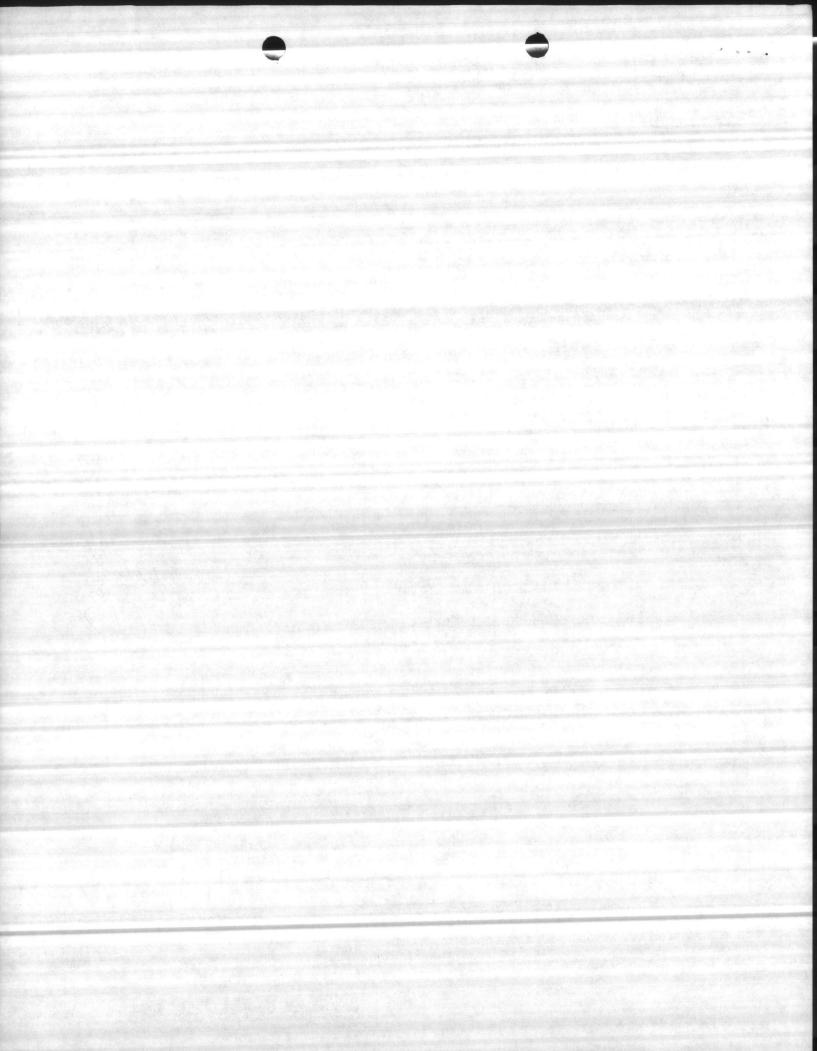
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THANK YOU

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			EA	07-1768-	0.3	CPLG W/L	_ 1-12L	H X 2.5	LG C1137		
						F (1) NO	KCV4 FI	Zi morn			
						1 6	" X 5"	/L BOWL	ASSY		
2		2		00 4444			SZN#	2004			and the second
			EA	29-1111-	(9	COL MAL	5 X 4'	11-1/4"	TBE 2580	U	
4		4	EA	29-1102-3	ර	COL W/L	5 X 0'	111 //11/	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		1
5		_		The state of the s	Street of Control of Control	B TO THE CONTRACT OF THE PERSON NAMED	-	r " - " \ _ +4\	IEE -528		Alt
	" +	2	EA	29-1129-0	9	COLUMN C	PLG 5"			1 1	LX.
1.		1	EA	LINESHAFT	ASSY	CONSISTI	NG OF-	(C)	(A)	we	
4		1	The Marie Company	The same of the sa		55,45,25,21	NO OF # (, bee Bel	.OW)	1	12
1,	'		EA	07-1000-X	XLSSS	LINESHAF	1 1 416	SS(SEE	BELOWY	1/01	
i.		1	T.A	07-5356-0	m	64.	2 ON	G iii			1
		Cytometer			4	CPLG OZL	1-12LF	CS 2-7	/8L.G		
1.		1	EA	9203-2010	D	5X1X5FT	BRG.SLV	.& SHAF	T		
1		4	EA	00//07 4 77774		BUS SH LZ	COLUMN	a state of the same			
		1	4.14	9203-1731	U	SX1X1OFT	BRG, SL	V.& SHAL	FT		And the second s
L		1	EA	9202-0600		GOS SH L/ TR&C DISC	CULUMN	HD Accy			
					Reference of Str.						
		1	#.A	22018068		WZL. PKG H	SG KIT	1"W/ADF	T.FLATE		C.5038-52-0-1
		1	EA	29-0007-60	PERSONAL PROPERTY.	COL.BUSH		3-1/8	'FIT		
		1_									
			0.000		repelación			. Con	lone	CONTEN	1110775 61105
					124 AVE			. Con	LI	CONTIN	WED MEX
							In	0			
	1		_ THIS	COLUMN CHECKE	D DENOTE	S ITEM ON BACK	K ORDER			TOTAL	
E A	CCOUNTS	S SUBJ	ECT TO	A SERVICE CHARG	SE COMP.	FFD 4= 41/0/		FREIGHT	556	. STAL	
						TE LAW PROVID	ES FOR A	CITY	%	TAX	-7.25820000
TAI	E, UNLY	THE LI	ESSER	RATE SHALL APPLY	1.		Y BANGSAN	COUNTY	%	TAX	
								STATE	04	TAV	CALIE EX

ALL CLAIMS AND RETURNED GOODS MUST BE ACCOMPANIED BY THIS BILL PREPAID AND MAY BE SUBJECT TO A 15% RESTOCKING CHARGE.





B/L NO.

12112

ACCOUNT #

Mic South Pump Co.

1555 Three Place / Memphis, TN 38116-3593 WHOLESALE EXCLUSIVELY (901) 345-7204 PAGE 2

DATE

SALES ORDER

TERM

2%

9.57.49 .

SOUTHERLAND SALES INC. 208 BAYLEAF DR. RALEIGH NC 27615-0000

INDUSTRIAL SALES COMEANY
BLUE CLAY RD.
WILLINGTON NC 28402-0007
LJW/FD

C.O.D.	CHARG	CUST. P.O.		RED BY	YOUR P.O. #	17 MDD - 1, 1 / 3;	TERRITORY CODE	PACKED BY	CHECKED BY	DRIVER
QTY. OR	D ВО	QTY. SHIP		PART NU	MBER		DESCRIPTION		UNIT PRICE	NET A
		1			1497511		G OF:(SEE)			
1			EA	14-0441-0	oi .		MKY 17"TO 2 NUT 1-12RH	29" FBOTTON	1	
2	1	2	EA	14-1433-0	09	SCREW, RD.	HD.#10-32X1	1-1/2		
, 2		2	EA.	14-1670-0	01/	SIB KEY	1/4 SQ X 2'	'LG. STL		
1		1	EA	22-0207-0	05	HEADSHAFT	FLINGER 1	1		
1			EA.	29-1121-2	25NPT	COL ONE 8	X 10' 3/4h	NPT 250W		
1.		1	EA	29-1130-0	TPNBC	COLUMN CP	LG 6" 3/4h	4PT		
1		1	ĖA .	30-0067-0)4	CONE STRA	INER W/NIFF	LE 6"GALV		
1.		1	EA	QUOTE		TOTAL PRI	CE	aturi i se que de Agrada		
ă.		***				FREIGHT	**************************************	FOLLOW	1 4 1	
		AND THE STATE OF T				•				
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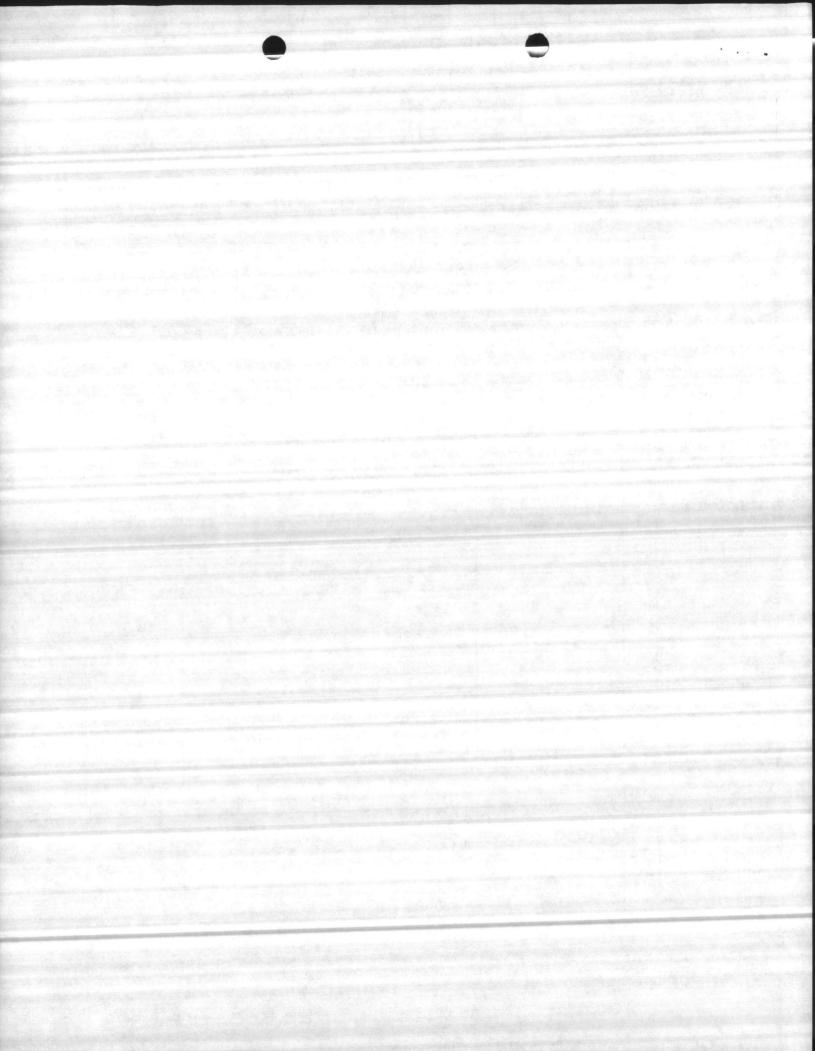
SAA COOPER

_ THIS COLUMN CHECKED DENOTES ITEM ON BACK ORDER

PAST DUE ACCOUNTS SUBJECT TO A SERVICE CHARGE COMPUTED AT 11/2% PER MONTH (18% ANNUM) PROVIDED HOWEVER THAT IF APPLICABLE STATE LAW PROVIDES FOR A LESSER RATE, ONLY THE LESSER RATE SHALL APPLY.

FREIGHT
CITY % TAX
COUNTY % TAX
STATE % TAX

THANK YOU PAY THIS AMOUNT



LOWER PUMP UNIT:

JACUZZI CONSISTING OF: 1 EA.

4 STATE 8KS A TRIM FITTED 5 X 5 BOWL

ASSY. W/SEMI OPEN

IMPECLERS 4 EA. 5" X 10' X 1"

COLUMN 1 EA. 5" X 5' X 1" BOTTOM COLUMN

1 EA. 5" X 10' TAIL

SECTION 1 EA. 5" CONE STRAINER GALV.

_USMQ Call E-02,3 5/6-24386-0

UPPER PUMP UNIT:

JACUZZI CONSISTING OF:: 1 EA.

L6 AB 10" BASE & DISCHARGE HEAD 5' THROX

6" FLG. 1 EA. 1" SS

HEAD SHAFT 1 EA. 5" X 5' TOP

COLUMN W/1" SHAFT

and Treatment

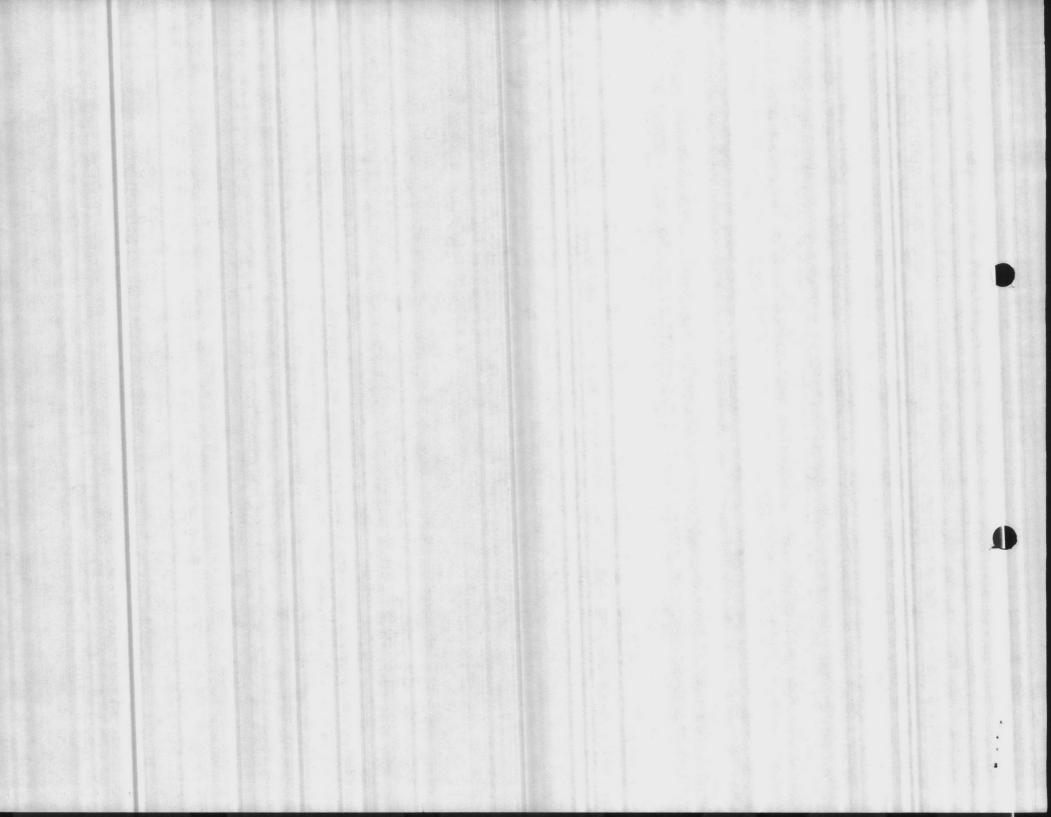
PURCHASE ORDER

NOTICE
THIS ORDER NUMBER
MUST APPEAR ON ALL
INVOICES, ACKNOWLEDGMENTS,
SHIPPING PAPERS AND
PACKAGES.

INDUSTRIAL SALES COMPANY, INC.

Nº 7737

GENE WELLS





Goulds Model DWT

3A.2B1

April 29, 1980 (Sup. 2/1/80)

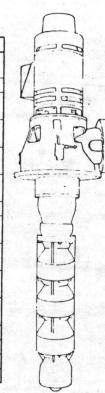
M67001-81-M-5704

MCB CAMP LEJEUNE, N.C.

8JLO/4 STAGE RUMP WATER LUBRICATED PUMP SER. Nº E47844-80

Bowl Assembly

DESCRIPTION	MATERIAL (A)	STANDARD
BOWLS— INTERMEDIATE	CAST IRON ENAMELED (B)	ASTM A48 CL. 30B
IMPELLERS	BRONZE (D)	ASTM B145-4A
LOCK COLLET (Impeller) (B)	MILD STEEL	AISI C1018/EQ
SHAFT	STAINLESS STEEL	AISI 416
COUPLING (Shaft)	MILD STEEL	AISI C1018/EQ
BEARINGS (Intermediate Bowl)	BRONZE OR RUBBER	ASTM B-144-3B
SUCTION BOWL	CAST IRON	ASTM A48 CL. 30B
BEARING (Suction Bowl)	BRONZE (C)	ASTM B-144-3B
DISCHARGE BOWL	CAST IRON	ASTM A48 CL. 30B
BEARING (Discharge Bowl)	BRONZE (C)	ASTM B-144-3B
BEARING (Tube Adapter)	BRONZE (C)	ASTM B-144-3B
CAP SCREWS	MILD STEEL	AISI C1018/EQ
BOLTING	MILD STEEL	AISI C1018/EQ
SAND COLLAR	BRONZE	ASTM B-62
COLUMN	MILD STEEL	ASTM 120



OIL OR WATER LUBRICATED

Column Assembly OIL LUBRICATED

SAE 1045 shaft and couplings, bronze tube connector bearing, steel enclosing tube and threaded steel outer column and couplings. Rubber tube centering spider supplied at 40 ft. intervals.

WATER LUBRICATED

Over 20' TPL, SAE 1045 shaft with permanent hard chrome overlay at bearing journals. SAE 1045 shaft coupling, bronze bearing retainer, rubber bearing and threaded steel column. Up to 20' TPL, 416SS shafting throughout.

Discharge Head Assembly

OIL LUBRICATED

Cast Iron Discharge Head Casting ASTM A48-CL308*
Steel Column Nipple
Malleable Iron Lock Ring Nut
Cast Iron Tube Tension Plate
Cast Iron Tube Nut W/Bronze Brg.
416 Stainless Headshaft
Steel Adjusting Nut & Gib Key
Steel Tube Tension Nipple
Manual Lubricator Assembly (Electric Solenoid
Furnished if Electric Motor Purchased)

WATER LUBRICATED

Cast Iron Discharge Head Casting ASTM A48-CL30B Steel Column Nipple
Malleable Iron Lock Ring Nut
Cast Iron Packing Box
Bronze Packing Gland W/Studs & Nuts
416 Stainless Steel Head Shaft
Steel Adjusting Nut & Gib Key
No Prelube Tank and Fittings

14x24½ is Fabricated Steel Plate—ASTM 283 GR.D Pipe—ASTM 120

ENGINEERING LIMITATIONS

- Semi-open impellers are limited to 200 ft. setting since shaft stretch variation due to changing pumping conditions (varying water table and/or discharge pressure) will affect the critical impeller running clearance.
- Semi-open impellers are limited to a maximum of 10 stages. If these impellers require keyed construction, only a maximum of 3 stages are allowed.
- Semi-open impellers must not be used when more than one flow condition is to be met, or on pumps that operate in parallel, causing variable flow rates.
- 4. All applications over 500 ft. setting must be referred to the factory.
- Prelubrication is recommended for water lubricated rubber bearings when distance between grade and static liquid level is more than 50 ft.
- Non-reverse ratchets (NRR) are recommended on drivers for all applications where the setting is over 100 ft. For settings of 400 ft. or more the driver manufacturer must be consulted for availability of NRR.
- For other than 50 and 60 cycle speeds refer to the factory to check on critical speeds. Otherwise bearing spacings indicated in notes 8 and 9 apply.
- On all water lubricated pumps 5 ft. bearing spacing is required for operation over 2200 RPM. Speeds less than 2200 RPM requires 10 ft. bearing spacing.
- All pumps with enclosed lineshaft construction are supplied with 5 ft. bearing spacings for all speeds.

NOTE:

- (A) Alternate materials available. Contact nearest sales office or factory.
- (B) 18B and 18H have keyed impellers, bowls are lined with Heresite or equal.
- (C) Suction bowl and discharge bowl bearings not available in rubber
- (D) 18B and 18H have iron impellers. See VIT bowl price page for bronze impellers.

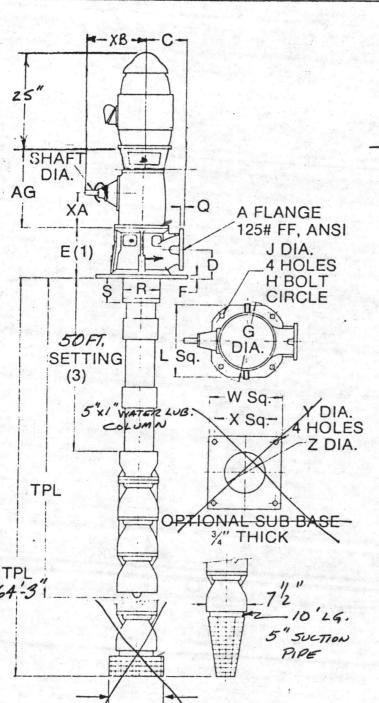
TENCARVA MACHINERY CO. P. O. BOX 3407 WILMINGTON, N. C. 28406 PHONE (919) 799-8800



imensions Mod DWT (VIT-CT) Il Dimensions are in inches.

December 1, 1976





Pump Data

Size 8JLO/4 STAGE

SOC. Nº E 47844-80

DWT DISCHARGE HEADS

Disch. HD & Col. Size	Motor					Dis	schar	ge H	lead					Opt	onal Base	
A	BD	C	D	E'	F	G	н	J	L	Q	R	s	w	X	Y	z
4	10	9	5	10	3/8	15	14	%	_2	3/4	6%	5	18	16	3/4	12
6	12 16%	12	6%	121/2	1/6	231/2	21%	3/4	20	%	8	41/2	24	22	%	14
8	12 16½ 20	13	7%	14%	1	23%	21%	%	20	1	10%	5	24	22	%	16
10	16½ 20	14	9%	16	1%	25	22%	%	21	1	121/2	6	26	23	%	17
12	241/2	16	10%	20	1%	32	30	%	28	1%	14	4%	34	31	1	2

'Hollowshaft driver, one piece headshaft, no coupling above stuff. box.

2Round base plate.

³Unless TPL is specified, column lengths will be std. uncut 5, 10 or 20 ft. sections resulting in settings equal to multiple of these lengths, plus approx. 1 ft. for the adjusting nipple (i.e., 26 ft., 51 ft., 151 ft. etc.).

GEAR DATA

Gear Mfgr. AMARILLO GEAR Co.

Model C-20 VHS V VSS

Rotation Fig. # 1 Gear Ratio 3:4

H.P. ZO Pumpshaft RPM 1760

Thrust Z050 BD 10

G	EAR APPRO	STAMIXC	DIMEN	SIONS-	-INCHE	S
Gear Mfgr.	Gear Model	AG	XA	ХВ	Shaft Dia.	Key
	C-20	24/4	63/4	107/8	11/4	5/6×5/32

Motor Data

Motor Mfgr.

H.P. 7¹/₂ RPM 1760

Phase 3 Cycle 60 Volts 230/460

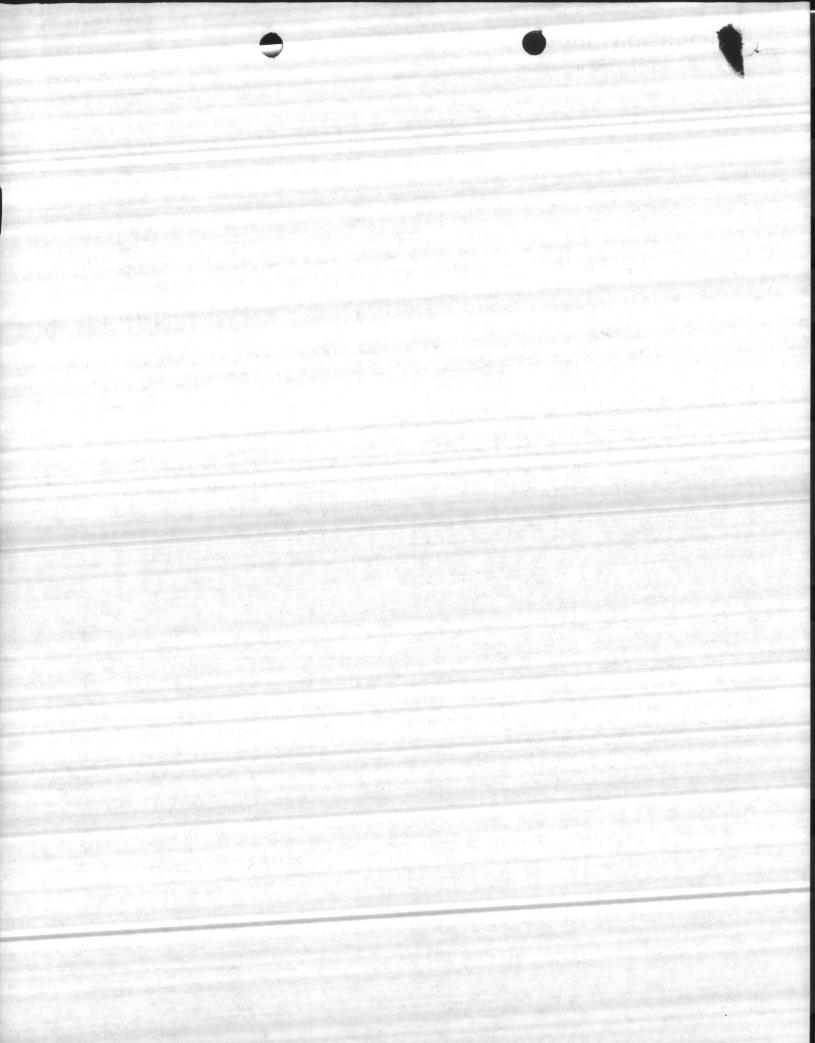
VHS VSS Thrust 1250

Frame 213TP Encl. WP-1 BD 10

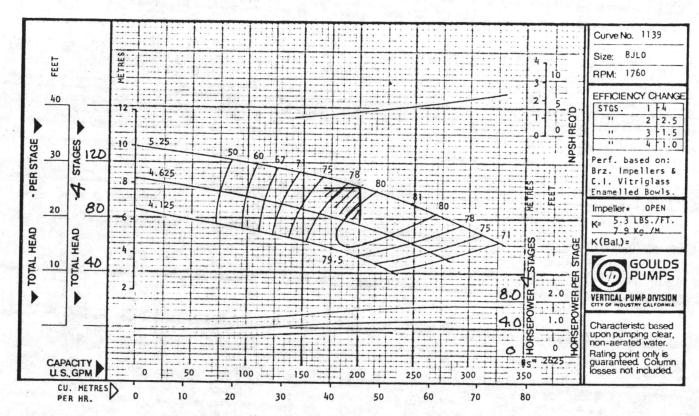
Proposal N	10. MG70	01-81-M-570A
Customer .	MCB	CAMP LETRUNE, N.C.
Project	The state of the s	
Inquiry No		
Item No	WELL	Nº 613
		TER - 200 GPM@ 100'H

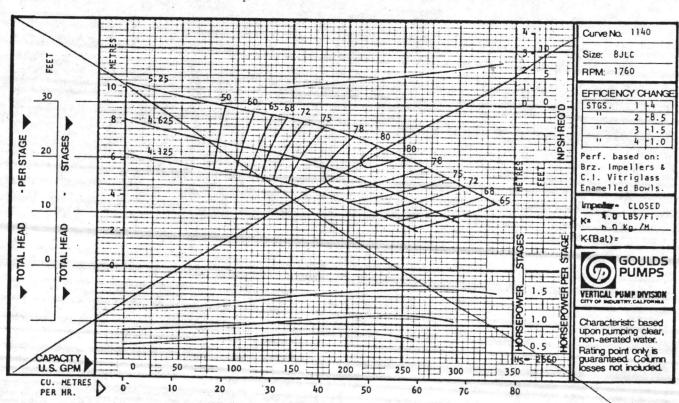
TENCARVA MACHINERY CO. P. O. BOX 3407 WILMINGTON, N. C. 28406 PHONE (919) 799-8800

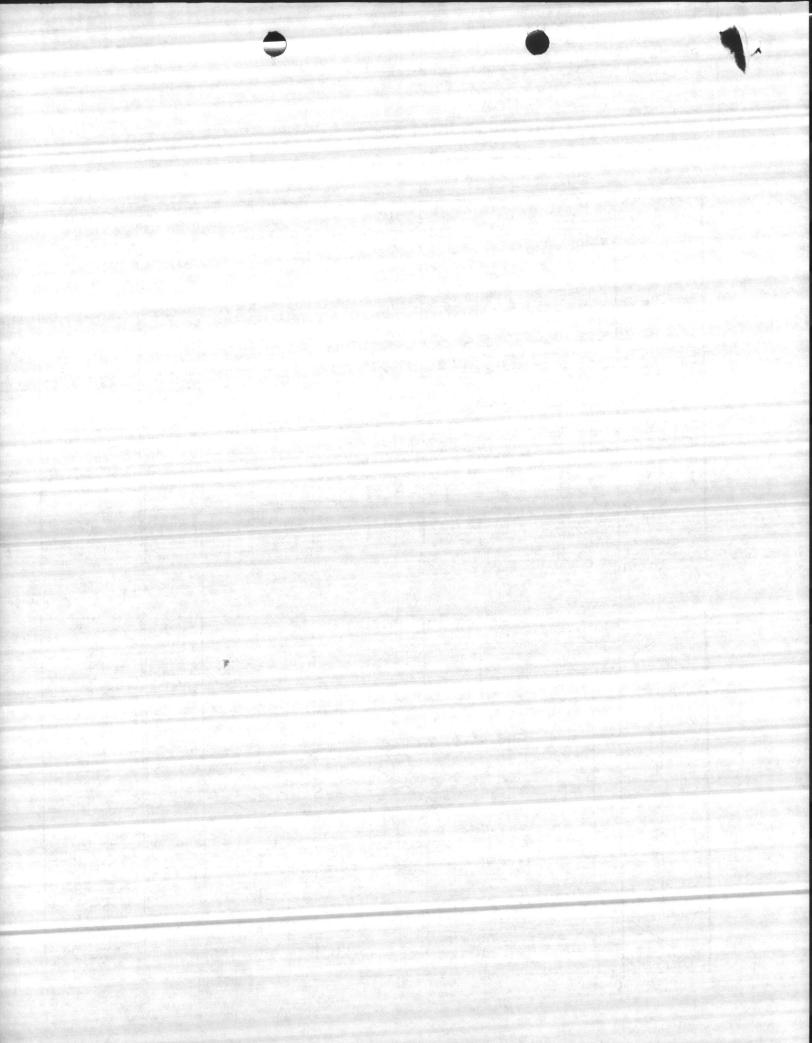
Submitted by Kw Taylor Date 12-16-80	UO-33507-72
Date 12-16-80	



GOULDS PROPOSAL NO.	GOULDS SO NO E41844-80	CUST INQUIRY NO 1-81	CUSTOMER PO. NO. -M-5704	12-15-80	ITEM NO	5C17
CUSTOMER MC	B	AMP LE	SJEUNE,	N.C.		3017
PROJECT WELL	No 61	13				DATE 5/25/77
SERVICE: WATEV		GPM CAPACITY:	FT. TDH: ,	%EFFICENCY	1760	SUPERSEDES 12/1/76







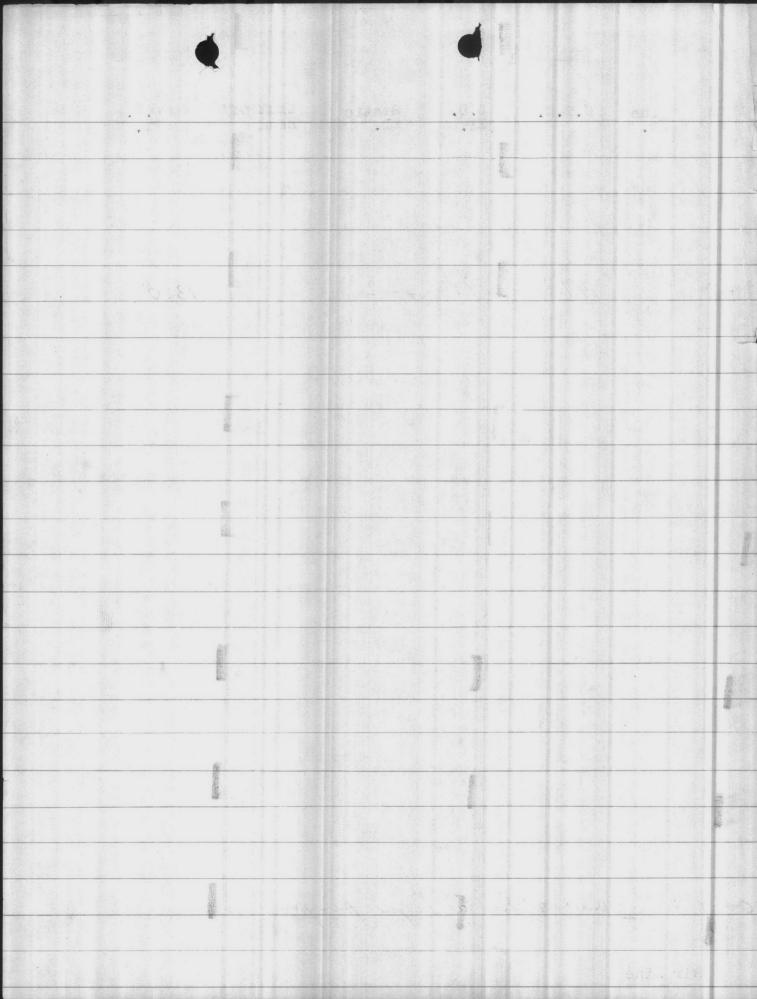
23.GA: 9-16-53 54 18.4 -10.7 +7.7 86 10-14-53 GAGE 10.5 FT 11/866 SE WELL TES? -19.8 161 60 8/7/69 60 - 8.8- 28' 197 9-4-69 - 8.8' +4.2' 197 71350

or of 3/1/67 well 13 has a Layne purp

47. new air line 12 FT FROM BASE TO WATER?

Air Line 58 FT.

- 33.3. L. EL



1 A TO	DHAG	ICAL ATTICHE	MICAL ANALYS	SIS OF WATER	SAMPLE	NO.
PAH	(Station or unit)	TOAL A CITE	MIVAL ARALIS	OTO OF WATER	DATE	2-10
KOM:	(Station or unit)	20.	1. , 1.	+01 1. 1.	I An	1 1010
0.	Name and location of	Inhoratory)	Camp Lej.	eune, Borck Carolina	V 0010)	ch 1960
0. (name and location of	De la comi	Later	BON' 1-20 Vand B	100 10160	6.1145
AMPLE	FROM (Location of Sam	pling point)	Carovarony	, sedy, a st, yaval is	are, Morgoc	WII) Cargin
	Hadnot Point	Area 1	Well No.	13. Bldg. No. 6/3		
OLLEC	TED BY		DATE	HOUR SOURCE (Designat	e ground, sur fa	ce, raw, treated
	Mr. R.L.C	ox	3 Feb. 196	0 - &	round	
	FOR EXAMINATION			EXAMINATION REQUESTED BY		
5.5	R. DPWO PRO	JECT NO.	09-2455	Mr.R.L.Cox		
				s otherwise noted except for ph weigh one kilogram.	, temperature	, and specific
. /.		D ANALYSIS		III. ROUTINE LABOR	ATORY ANALYS	IS
pH	sporer ory -		PERATURE		CK ONE)	·
	7.65	0 F	°c 24.	REQUESTED	NOT REC	UESTED
	ITEM		PPM	1. COLOR Apparent	30.	
. CA	RBON DIOXIDE (CO2)			True,	3,	
101-006	SSOLVED OXYGEN (02)		la ser la serie	2. TURBIDITY SEHIED	0.7	
-	DROGEN SULFIDE (H2S)			3. SAAREN	Y (CaCO ₃)	
	ANALYSIS BY	# 1 · · · · · · · · · · · ·	1	P	MO MO	
	The temperation of colle	ure of the	water	0.0	14	Σ.
1+	time n L colle	ction was	1800.	4. TOTAL HARDNESS (CaCO3)	147.3	
	in of cone	011011 1443	, , ,	(Ca+ma) Hardness	14514	
TE O	F ANALYSIS			5. NON-CARBONATE HARDNESS (CaC	(By Comput	ation)
				5,3		
1.	SPECIAL LA	BORATORY ANALYS	SES	6. CARBONATE HARDNESS (CaCO 3)	(By Computati	on)
	ck (X) individual item			142.		
	lyses. Request determ pected of being presen			7, TOTAL DISSOLVED SOLIDS		
(X)	ITE		PPM	8. SPECIFIC CONDUCTANCE (Microm	hos)	
.,	1. As			265		
	2. Se			ITEM		PPM
	3. Pb			9. CALCIUM (Ca)		52.7
	4. B			10. MAGNESIUM (Mg)	The second second	3,33
	5. Cu			11. SODIUM (Na) AND POTASSIUM	(K) +×	516
	6. Zn			12. HYDROXIDE (OH)*.	CaCO2)	0,0
	7. Cr (Hexavalent)			13. BICARBONATE (HCO3)*	Cacoa)	142,
X	8. PO	and the same and the same and	0.0	14. CARBONATE (CO3)* (as)	a CO3)	0.0
	9, Cd 10, CN		Part of the Part o	15. SULFATE (\$04)	The second	2.4
111111111111111111111111111111111111111	11. Phenolic Comp	ounds (PPR)		16. CHLORIDE (C1) 17. NITRATE (NO ₃)		10.
	12. Others (Specif			18. IRON (Fe) TOTAL		0.75
1	4.1		010	19. MAGANESE (Mn)	The second	
1	13. A/uminun	4	010	20. SILICA (SiO ₂)	ALE CONTRACTOR OF THE PARTY OF	14.
1 - 10	15.	The same of the same		21. FLUORIDE (F)		010
3.	16,			*State whether determined or co	mputed from P a	nd MO alkalinity
EMARI	S (Such as unusual app	pearance, taste, o	dor, etc.) * A	imputed from P and MU	alkalinit	1
11/0	11 OUMA XUVIL	'day powlene		1 , 1	1	
	Il pump duxili		** 60	mputed	+1000 W	e 2 5 m 2/1
by	d gasoline en	igine,	Note: At	the time of analysis,	There was	La sinall
1	9		que	antity of sediment in the	e bottom of	the sample
			The	well was in service	sine in	1 1 1 2 2 2
ABOR	TORY ANALYSIS BY		Sam	ple was collected (dis		ANALYSIS
		40	OTE	mant To Manint		
		wenna	E L. KAY	nest, In Chemist	177	eb. 1960

DD 1 APR 53 710 REPLACES WD AGO FORM 8-125. 1 APR 45. WHICH MAY BE USED. analysis to 5

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Construction (1990) (1990) (1990) (1990) (1990) (1990) (1990) (1990) (1990) (1990) (1990) (1990) (1990) (1990)

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NEVIAM TO TAXI

DAZE BENYAN BESHYE SE ESE T AS 150 MORA USE OF SEEK MEETING A

WATER ANALYSIS

Sample from Well		6	By N. E. 176 Date 4/30/	42	
Sample Irom WPI					
Total Solids	204	PPM	Dissolved Solids	170	PPI
Suspended Solids			Volatile Solids	A SOLD WATER	PPI
Phenol. Alk. as CaCoz_	0	PPM	Silica as Sio2	21	PP:
Total Alk. " "_			Ferrous Iron as Fe		
Carbonates " "			Total Iron as Fe_		
Bicarbonates " "			Aluminum as Al.		
Chlorides as Cl.			Calcium as Ca.		
Sulphates as SO ₄			Magnesium as Mg.	4.1	t
Nitrites as No2			Sodium as Na	2.7	_ '
Carbon Dioxide as CO2	8				
pH 24 Soap Hard	ness as	CaCO ₂		160	PPI
odor 5/19hf			Turbidity	10	_
REMARKS					
Secretary and a					

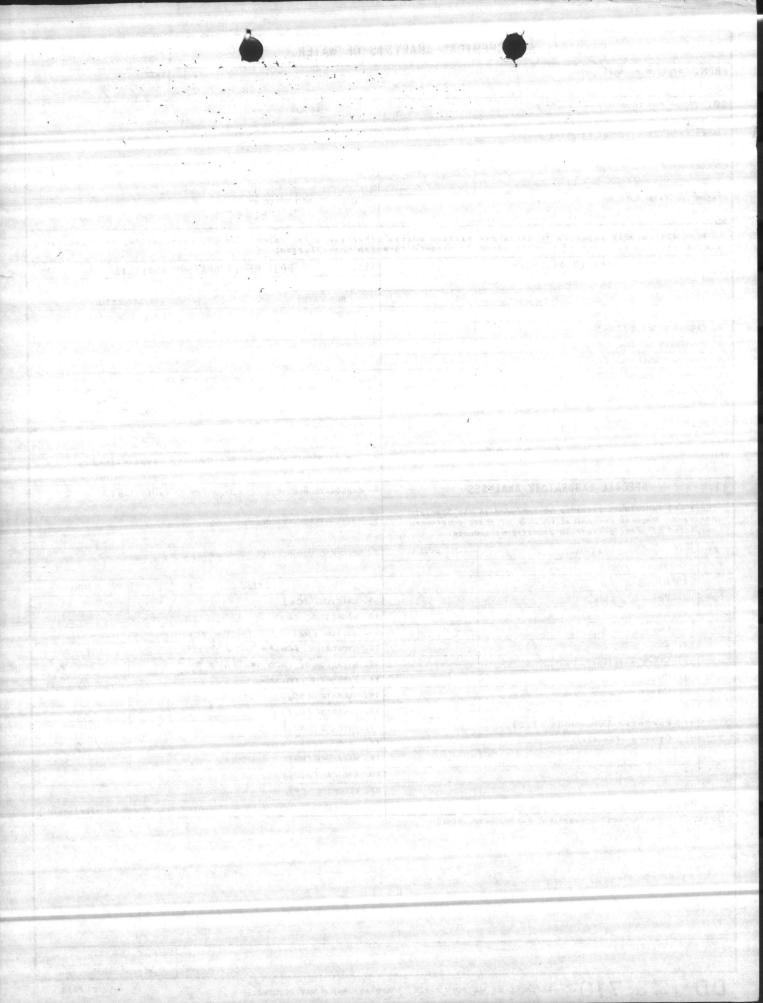
- WEARING STILL

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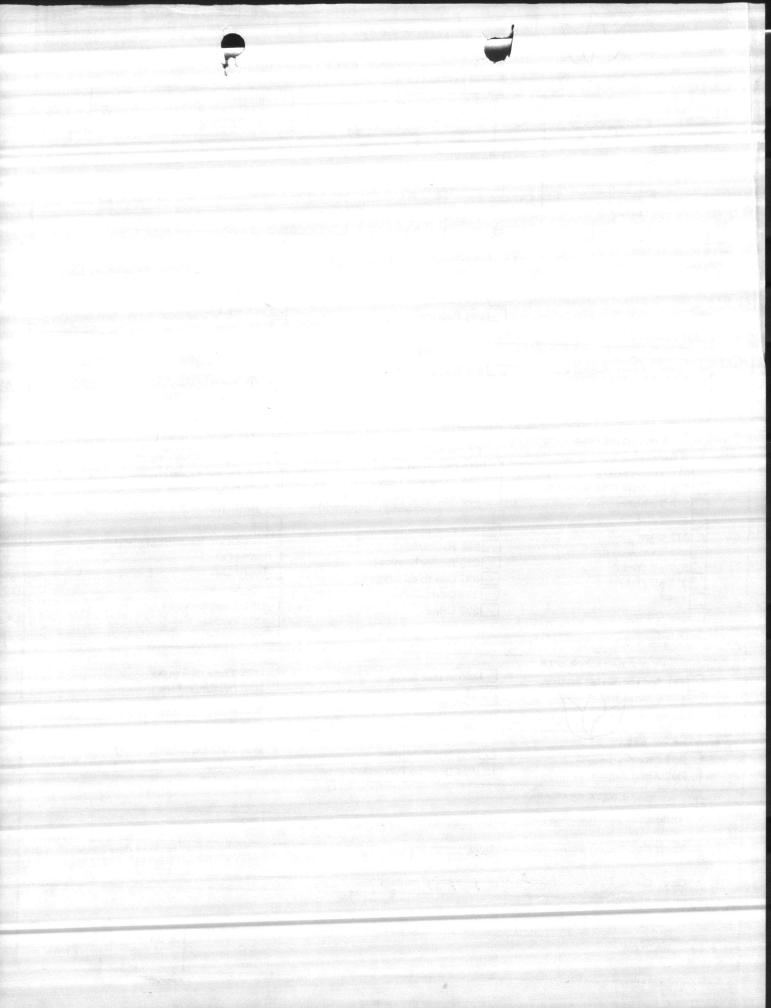
NOTE: All results reported conductance. One liter of	in parts pe	DATE 8-1-5		Bround, surface, raw, treate		
SAMPLE FROM (Location of sampling COLLECTED BY Collected BY REASON FOR EXAMINATION NOTE: All results reported conductance. One liter of the conductance of the conduc	in parts pe	DATE 8-1-5	7	Stormd Surface can bearing		
REASON FOR EXAMINATION NOTE: All results reported conductance. One liter of the second conductance.	in parts pe	B-1-5	7	Stormd Surface can beauti		
REASON FOR EXAMINATION NOTE: All results reported conductance. One liter of the conductance of the conducta	in parts pe	8-1-5	7	ground surface sew toosto		
REASON FOR EXAMINATION NOTE: All results reported conductance. One liter of the conductance of the conducta	in parts pe	8-1-5	7	ground surface rew tooste		
NOTE: All results reported conductance. One liter of	in parts pe		EXAMINATION REQUESTED BY	Zaw		
FIELD A	in parts pe	**************************************				
	Pordore wate	r million unle r is assumed t	as otherwise noted except for pH, o weigh one kilogram.	temperature, and specific		
-U			III. ROUTINE LABORA	TORY ANALYSIS		
. pH	TEM	PERATURE	(CHECK			
0;	F	°c	REQUESTED	NOT REQUESTED		
ITEM		PPM	1. COLOR	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
2. CARBON DIOXIDE (CO2)						
3. DISSOLVED OXYGEN (02)			2. TURBIDITY			
4. HYDROGEN SULFIDE (H2S)						
5. CHLORINE DEMAND (CI2)			3. ALKALINITY	(CaCO ₃)		
IELD ANALYSIS BY		Spirite property	P 0	MO / 3 3		
			4. TOTAL HARDNESS (CaCO3) 136			
ATE OF ANALYSIS				그리고 있는 것이 아니는 이번 생각이 되었다.		
			5. NON-CARBONATE HARDNESS (CaCO3) (By Computation)		
I. SPECIAL LABORA	TORY ANALYS	SES	5. NON-CARBONATE HARDNESS (CaCO ₃) 6. CARBONATE HARDNESS (CaCO ₃) (
Check (X) individual items to Analyses. Request determinati suspected of being present in	be included i	n the Special				
Check (X) individual items to Analyses. Request determinati	be included i	n the Special ose substances mounts.	6. CARBONATE HARDNESS (CaCO ₃) (By Computation)		
Check (X) individual items to Analyses. Request determinati suspected of being present in	be included i	n the Special	6. CARBONATE HARDNESS (CaCO ₃) (By Computation)		
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GPO 912375



APPROVED. U.S. DEPARTMENT OF THE INTERIOR Budget Bureau No. 42-R1485 GEOLOGICAL SURVEY Approval Expires June 30, 1968 E OF WATER DATA COORDINATION INVENTORY OF HYDROLOGIC DATA STATIONS QUALITY OF WATER 4. LONGITUDE 2. TYPE | 3. LATITUDE W L AGENCY CODE N Q MC 34 29 7. STATION NAME 6. AGENCY STATION NO. 613 HP20-613 10. COUNTY CODE 11. COUNTY NAME 9. STATE CODE 8. DRAINAGE BASIN CODE Letter No. Continuous 13. 12. PERIOD OF RECORD Interruption Discontinued Began Exceeds 1 Year 106 Spring 15. SITE 103 Lake 107 Well 104 Reservoir 101'Stream 110 Other 105 Estuary 102 Canal 16. FREQUENCY OF MEASUREMENT 207 Seasonal 203 Daily 201 Continuous Recorder 208 Annual 204 Weekly 202 Telemetered 209 Other Periodic 205 Monthly 210 Occasional 206 Quarterly Organic 17. TYPES OF DATA AVAILABLE 351 Pesticides (insecticides, Chemical Physical herbicides, etc.) 331 Dissolved solids 311 Temperature 352 Synthetic detergents 332 Chlorides Only 312 Specific Conductance 353 Other 333 Nutrients (Nitrogen and 313 Turbidity phosphorus compounds) Biologic 314 Color 361 Coliforms 334 Common ions 315 Odor 362 Other Micro-organisms 335 Hardness 316 Radioactivity 363 BOD 336 Radiochemical 317 pH (field) 364 Other 337 Dissolved oxygen 318 pH (lab) Sediment 338 Other Gases 319 Eh 371 Concentration 339 Other 320 Other 372 Particle size 373 Other 18. SUPPLEMENTARY DATA FOR SITE 425 Time of Travel 423 Water Stage or Level 421 Surface Water Station 426 Drainage Area 424 Water discharge 422 Ground Water Station 19. STORAGE OF DATA 505 Data on Magnetic Tape 2503 Not Published 501 Periodic Report 506 Other 504 Data on Punchcard 502 Areal Report 20, OFFICE AT WHICH DATA AVAILABLE BASE MAINTENANCE DEPARTMENT, UTILITIES DIVISION Street No. City Code - MARINE CORPS BASE



Marine Barracks New River, N. C. May 15, 1942

Wells:

Permanent Water Supply

Regimental Area

By Layne Atlantic Company

Report on Well No. 13

Location:

65' west of Main Access Road. 5,000' north of Wallace Creek Bridge as shown on M.B. Drawing No. 521.

Date Drilled:

May 1942

Status:

A 23" hole cased with 18" I.D. steel casing to a depth of 30' below surface. The anular space around this was filled with cement grout. A 17½" hole drilled to a total depth of 170'.

Drilling Equipment:

Rotary rig and bits

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0	to	3'6"	Clay
316	" to	261	Yellow sand
261	to	32	Clay
321	to	461	Coquina rock
461	to	54.1	Soft rock with fossils
541	to	601	Fine sand and shells
601	to	671	Soft coquina rock
671	to	731	Fine sand
731	to	781	Soft shell and fine sand
781	to	901	Very fine sand
901	to	971	Soft rock
971	to	110'	Muck and shells
110'	to	122'	Hard rock
1221	to	140'	Shell rock and sand
140'	to	1531	Fine sand and shalls
153'		163'	Extra hard rock
1631	to	167	Soft rock and sand
1671	to	1701	Extra hard rock.

Remarks:

Because of the presence of fine sand in the rock formation, it was necessary to construct a gravel wall well.

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Report on Well No./3 - Page 2

Gravel Wall Construction: An 8" steel pipe with sections of silician bronze shutter screen was lowered into the 17% hole to a depth of 150". The anular space around this was filled with a special 1/4" washed gravel.

to 601 8" steel pipe Log of to 701 8" Bronze screen Screen Setting: 60' 8" steel pipe 701 to 901 901 to 951 8" bronze screen to 1151 951 8" steel pipe 1151 to 1201 8" bronze screen 1201 to 1301 8" steel pipe 130' to 135' 8" bronze screen 1351 to 1451 8" steel pipe 1451 to 1501 8" bronze screen

The bottom of the screen was filled with a cement plug. The steel pipe was of threaded joints and the screen was welded.

Static Level: 12' below surface

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Pumping:

Start well pumps 320 GPM with 42.5° D.D. from static level. After washing pumps 300 GPM with 32.2 D.D. after several hours pumps 400 GPM with 40.2 D.D. Final reading after 20 hours pumping constant flow of 310 GPM with 28.7° D.D. from static level. Recovers from 28.7° to 4.6° in 3 minutes. Recovers to static in 5 minutes.

See separate report for chemical analysis.

N. H. Kellam Asst. Chem. Engineer

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WELL DATA

Well No. 13

SPECIFICATIONS

	Pump Base Elevation 23.2
	Ground Elevation 21.2
	Static Elevation 9.2
	Maximum allowed Drawdown -14.1
90000	Total Discharge 260 G.P.M.
	Total Read 90 Foot —

TEST

300	G.P.M. 1	Pressure	u interest	Drawdown	-15.8 - 10. "
280	G.P.M. 2	Pressure		Drawdown	-12.8 - //
265	G.P.M. 2	操 Pressure			-11.7 - 11.8
250	G.P.M. 2	Prossure		Drawdown	-10.3 -12.
235	G.P.M. 2	7 Pressure	f (20)	Drawdown	-8.9

Recovers to elevation + 8.5 in three (3) minutes.

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