

Engineer's Registration No.

Drawing No.

Date July 10, 1972 Scale 1"= 300 Ff.

Weep Welf APR 23 1973

original tracing.

- Denotes one inch spaces on border line of

Quadrangle_St. Marys

Red Shale and Some Sand

* Indicates Electric Log tops in the remarks section.



STATE OF WEST VIRGINIA

OIL & GAS DE CION DEFT. OF MINES

Rotary X Cable

Clas

DEPARTMENT OF MINES Oil and Gas Division

RECORD

Recycling Water Flood Permit No. Pleas-679 Disposal Company FMC Corporation, Inorganic Chemicals Div. Address P. O. Box 8127, South Charleston, W. Va. Tubing Used in Left Cement fill up Drilling in Well Cu. ft. (Sks.) Farm Earl & Rosalene Wells Acres 372.76 Location (waters) Bens Run 681.5 K.B. Size Well No. 10 Elev. 664.5 G.L. 20-16 District Union ('ounty Pleasants Cond. 16' 140 140 135 sacks (surface The surface of tract is owned in fee by 630 " 1744 1744 13-10 FMC Corporation 9 5/8 Address Same as above Mineral rights are owned by FMC Corporation 7-5/8 1010 " 6473 _____Address__ 5 1/2 Drilling Commenced July 12, 1972 4 1/2 Drilling Completed August 11, 1972 Initial open flow eu. ft. bbls. Final production _____ cu. ft. per day Liners Usedbbls. Well open _____ hrs. before test ... Well treatment details: Attach copy of cementing record. Drilling Media Note: Formation Description 250-1750 Fluid 0-5350 driller's log 1750-6229 5350-6350 electric log 6229-7858 6350-7876 electric log and samples Coal was encountered at 812-816 Inches Salt Water Feet Producing Sand_

From Samples & Nuclear Log Run #2	officers and designed to the state of the st		ang na ang salakananan ang ang ang salakan salakan ang na ang na ang ang ang ang ang ang
Formation Color Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water * Remarks
Sand and shale	0	1218	
Greenbrier (Big Lime)	1218	1268	
Sandstone, Shale, Siltstone	1268	1889	Base of Mississippiansystem
Shale and Siltstone	1889	5350	Top of Devonian system
Marcellus	5350	5402	15p of bevoilian system
Onondaga	5402	5594	
Oriskany	5594	5662	
Helderberg	5662	5873	Base of Devonian system
Bass Island	5873	6040	Top of Silurian system - Cayugan.
Salina	6040	6252	Top of Salina group
Salt Section	6252	6385	Top or Barria group
Salina	6385	6773	
Williamsport (few sand grains)	6773	6782	Base of Cayugan series and Salin
Lockport	6782	7238	Top of Niagarin series gro
Keefer	7238	7264	asp of Maddith Scries
Siltstone and Shale	7264	7314	Top of Clinton group = Rose Hill
Red Shale	7314	7448	Top of officer group's Rate Mill
Gray Shale	7448	7525	
Dolomite and Siltstone	7525	7546	(772)
Red Shale	7546	7604	12.58
Siltstone	7604	7636	1 987 80 B
Packer Shell	7636	7651	707
Gray Shale	7651	7668	
D 1 01 1		1	1

(over)

7698

7668

Base of Niagarin series and Clinton group

Formation Color Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water * Remarks
Clinton Sand - Tascarora Gray Shale Whirlpool Sand Red Shale - Tania ta T.D. (logger) T.D. (driller)	7698 7794 7827 7837 7876 7858	7794 7827 7837 7876	Top of Medinan series Base of Silurian system and Medinan Top of Ordovician system
*Sample depths approximately 15 feet higher than electric log depths.			
	observation and the second and the s	Report of the Control	
7537 7698			
6640 expl. St.			

APPROVED FMC Corpustion

Approved Hoy's K. Jackwell

By Project Engineer

(Title)





DEPARTMENT OF MINES

OIL & GAS DIVISION DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

•		
TO THE DEPARTMENT OF MINES,		
Charleston, W. Va.	DATE	
Surface Owner Total Company of the C	Fix Corporation	
	Company The Company	Contract of the second of the case as all other
Address	21441033	
Mineral Owner 600 Portion	Farm Corollina	Acres
Address	Location (waters)	thic liver
Coal Owner	Well No.	Elevation
Address	District	County*1@##@##C\$
Coal Operator	Quadrangle\$ * \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	AR NUN
Address		
THIS PERMIT MUST BE POSTED AT THE WELL SITE		
All provisions being in accordance with Chapte	er 22.	
of the W. Va. Code, the location is hereby app	roved	
for drilling . This permit shall expine operations have not commenced by Oct. 6, 197	ire if	
operations have not commenced by GCt. U, 197		
Deputy Director - Oil & Gas Division	INSPECTOR TO BE NOTIF	HED Arthur Null
Deputy vires our our w das prvision	77 7	
	- A CAR A A CAR STORY	PH: 775-5611
GENTLEMEN:		
The undersigned well operator is entitled to drill upon the a		9s1.
title thereto, (or as the case may be) under grant or lease date made to	and recorded on the24	by day of
NEW WELLDRILL DEEPER	REDRILL FRAC	TURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRILLED E		TOKE OK STIMULATE
The same wall officially brilling	MI OILE 30 NE 5, 1969.	
The enclosed plat was prepared by a registered engineer or lathave been notified as of the above date.	licensed land surveyor and all coal	owners and/or operators
The above named coal owners and/or operator are hereby not to make by Section 3 of the Code, must be received by, or filed	tified that any objection they wish I with the Department of Mines wi	to make, or are required thin ten (10) days. *
Copies of this notice and the enclosed plat were mailed by re- or coal owners at their above shown respective address	day	before, or on the
same day with the mailing or delivery of this copy to the Depar	tment of Mines at Charleston, West	Virginia.
Ve	ery truly yours	Increanie Chamical
(Si	ign Name) Dry & K No	efull 101
\~ v	Well Operator	Project in theer
	F. C. Bex 3127	and the state of t
Address of	Street	
Well Operato	or South Charleston	
•	City or Town	
	West Virginia 2530	3
	State	

*SECTION 3.... If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

PLEAS-679

_PERMIT NUMBER

THIS IS AN ESTIMATE ONLY ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO	DRILL	DEEPEN	FRACTURE-STIMULATE			
DRILLING CONTRACTOR: (If	Known)	RESPONSIBLE AGENT:				
NAME Loimann & Johnson	Drilling Co., Inc.	NAME ****				
ADDRESS 1302 Old Notions			iens Run, W. Va. 26135			
TELEPHONE Evensville, I	4 A00 fe	TELEPHONE				
ESTIMATED DEPTH OF COMPI	LETED WELL:		_ CABLE TOOLS			
PROPOSED GEOLOGICAL FOR	And the last time and the second of the second					
TYPE OF WELL: OIL_			GE DISPOSAL			
e A	RECYCLII	NG WATER F	LOODOTHER_			
TENTATIVE CASING PROGRAM	M·					
CASING AND TUBING	USED FOR	LEFT IN	CEMENT FILL UP			
SIZE 20 - 16	DRILLING	WELL	OR SACKS - CUBIC FT.			
13 - 10	1.790	1.30	75 sacks			
9 - 5/8			after alles after illine . a o o o date after			
8 - 5/8						
	6,400*	6,400	775 escke			
5 ½	*					
3						
2			Perf. Top Perf. Bottom			
Liners			Perf. Top			
	· · · · · · · · · · · · · · · · · · ·		Perf. Bottom			
APPROXIMATE FRESH WATER	DEPTHSFEET _	SALT WATER	R FEET			
APPROXIMATE COAL DEPTHS	330 feet (3 to 6 fee	· · · · · · · · · · · · · · · · · · ·				
IS COAL BEING MINED IN TH	E AREA?	BY WHOM?				
TO DRILL:						
SUBMIT FIVE (5) COPIES	OF OG - 1. \$100.00 PERMI	T FEE PERFORMANCE	BOND AND PERMANENT COPY			
OF PLAT.	, ,		DOND THE IDEMANDENT COLL			
TO DRILL DEEPER OR REDRIL	.L:					
SUBMIT FIVE (5) COPIES	OF OG - 1, SHOWING ORIGI	NAL PERMIT NUMBER A	AND PERFORMANCE BOND. ON			
WELLS DRILLED PRIOR	TO 1929, A PERMANENT CO	PY OF THE PLAT AND	THE ORIGINAL WELL RECORD			
MUST ALSO BE SUBMITTE	D.					
TO FRACTURE - STIMULATE:						
OIL AND/OR GAS WELL O	RIGINALLY DRILLED BEFOR	RE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE			
	AND ORIGINAL WELL REC					
ING ORIGINAL PERMIT NU	RIGINALLY DRILLED ON AN MBER,AND PERFORMANCE	D/OR AFTER JUNE 5, 19	929, FIVE COPIES OG - 1, SHOW-			
four (24) hours in advance.	d within ninety (90) days of co	ompletion for bond release	. Inspector to be notified twenty-			
()						
The following waiver must l	pe completed by the coal oper	ator if the permit is to be	e issued within ten days of receipt			
mereor.						
WAIVER: I the undersigned, Age	nt for	Coal Company, Owne	er or Operator of the coal under			
	ed and place on our mine ma					
We the	Coal Company h	ave no objections to said	well being drilled at this location,			
providing operator has c Code.	complied with all rules and regu	lations in Articles 4, 5, and	7, Chapter 22 of the West Virginia			
oue.						
			For Coal Company			
			Official Title			

STATE OF WEST VIRGINIA DEPARTMENT OF MINES

OIL AND GAS WELLS DIVISION

AFFIDAVIT OF PLUGGING AND FILLING WELL

COAL OPERATO ADDR COAL OPERATO ADDR LEASE OR PRO ADDR STATE INSPECTOR SUPE	OR OR OWNER RESS PERTY OWNER	PAC Corporation Inorganic Chemicals Di NAME OF WELL OP: P.O.BOX 8127. South Ch COMPLETE ADDR WELL AND LOC Union Pleasants Well No. 10	erator iarleston, tess CATION	19 District
ADDR COAL OPERATO ADDR LEASE OR PRO	OR OR OWNER RESS PERTY OWNER	P.O.Box 8127, South Ch complete addr WELL AND LOC Union Pleasants	cation	19 District
COAL OPERATO ADDR	OR OR OWNER	WELL AND LOC Union Pleasants	CATION	19 District
ADDR	PERTY OWNER	Union Pleasants	CATION	District
ADDR	PERTY OWNER	Union Pleasants	CATION	District
LEASE OR PRO	PERTY OWNER	Pleasants		
LEASE OR PRO	PERTY OWNER		the Milliands six reliables our advances on our cut as 10, account as an an	
ADDR			*****	C
	PRESS .	Well No10		County
	ress.			
STATE INSPECTOR SUPE				
STATE INSPECTOR SUPE		NO Corporation		Farm
	ERVISING PLUGGING	:4403086*0588095 <u>86************************************</u>		
	AFFIDA	A 7/1 ****		
STATE OF WEST VIRO		A D D -		
	l ac.			
County of Pleasan	\$ ***			
	ar	nd G. J. NESSENGER (<u> Balligua</u>	<u>n serv</u> ice
		nd say that they are experien		
plugging and filling oil a	and gas wells and were empl	loyed by <u>FMC Corporatio</u> ging and filling the above w	4	9
was commenced on the and filled in the followin	13day ofAugus	, 19.72 , and that the	ne well was	plugged
and inted in the following	ng manner:		Oldysiden are older occupation to the construction of the construc	
AND OR ZONE RECORD	FILLING MATERIAL	PLUGS USED	CAE	BING
FORMATION		SIZE & KIND	CSG PULLED	CSG LEFT IN
CLINION	CLASS A COMMIT	50 SX.		maq. F 23.5
	7876* TV 7630*			****
	7630 TO 7294	6% GEL		
and the second s	CLASS A CEMENT	25 SX.		
	7294* TO 7200*	-		
	7200° IU 6755°	6% GEL		
BUTTOM TIME CSC.	6755 TO 6425	75 3%	CLASS	A GEARAT
	THE ABOVE WELL DATA W	AN		
	FURNISHED BY CUSTOMER	<u> </u>		
	879ND X			
		90		
	Water the second			
COAL SEAMS		DESCRIPTION	N OF MONUME	NT
K)				
E)				******
E)				·
E)				
	olugging and filling said w	ell was completed on the	13	day of
and that the work of p)	
and that the work of p			,	
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	, 19 72 .	A Section	Selie S	No control and Market April and person playing springs and market
August And further depone	nts saith not.	B. S. Summer	Selied .	************
August And further depone	, 19 72 .		Selina (19 <i>72</i> .
August And further depone	nts saith not.		Selines (

Deep Well (Tusc.)



SEND ALL REMITTANCES TO P. O. DRAWER 1431 DUNCAN, OKLAHOMA 73533

(XIIIO)

INVOICE & TICKET OF THE NO. 393120

PAGE 1 OF

CELL NO. AND FARM	0.00.00	COUNTY	S	W. UA		DATE &	-/3	- 7 Cm	THE PROPERTY OF THE PARTY OF TH
TO SEINE VIEW FIRM	arions	CONTRACTOR	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			DUNCAN USE ONLY			
			DELIVERED			LOCATION 101657	on W.	UA. 100	 ان میمی سمج
ODRESS A BEN	SKUN U	U. U.s.	SHIPPED VI			LOCATION 2		CODE	material control of the control of t
The second secon	Openio meno antico mon en escució historio en especial de conformación en en el conformación de entre de estad	estatuta interessa titude estatut esta	CUST. INV. REQ. ORIG. &	REQUISITION	nyaysiaa.co	3	J	CODE	and a second
0.0 E. O.			1 2 3	ONDER NO.	7	BULK MATE DELIVERY TICKET NO.		1954	14
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TYPE AND PURPOSE OF JOB	Un BACK	· · · · · · · · · · · · · · · · · · ·	NO. COPIES	TERMS:	CHARG	Y THE ZOTH O	DAYS FROM	DATE OF IN	AVOICE.
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500-207 500-306	14,1	OO TOTAL WEIGHT	50 LOAI	s 4-23.00	TON MILES		125	105	1/3
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WAS JOB SATISFACTORILY COM	SATISFACTORY!						TAX TAX		
WAS PERFORMANCE OF PERSON	artwell		7/8/	Operator()			TOTAL		



KLBO

XLUO

FORM 1908 R-2

FORMATION THICKNESS

A Division of Holliburton Compo BUNCAN, OKLAHOMA 73833

WORK ORDER CONTRACT AND PRE-TREATMENT DATA

DIESTON W.UA.			V 1	3 - 7 2-
DISTRICT WILLIAM WORLD		DATE	<u> </u>	
TO: HALLIBURTON SERVICES YOU ARE HEREBY REQUESTED TO FURNISH EQUIPME FM C COTTPOIN	NT AND SERVICE	EMEN TO	DELIVER A	ND OPERATE
THE SAME AS AN INDEPENDENT CONTRACTOR TO:	USTOMER)			
AND DELIVER AND SELL PRODUCTS, SUPPLIES, AND MATERIALS FOR THE PURPOSE OF SER				
#10 BIZINE WELL FINE CORDORATION				
WELL NOLEASESEC	TWP		RAI	4GE
FIELD BENS RUN COUNTY PLEASANTS STATE W. VA.	NED BY FIN	c Co.	ZPOIZ	ZATION
. THE FOLLOWING INFORMATION WAS FURNISHED BY THE CU:	STOMER OR H	HIS AGEN	T	
FORMATION CLIN TON TYPE USED WEIG		FROM	то	MAX. ALLOW. P.S.I.

CASING LINER TUDING

TREATMENT INST	RUCTIONS	: TREAT THRU	TUBING ANNULUS	□ CA	SING TUBING/ANNULUS [HYDRAULIC	HORSEPOWE	R ORDERED	
					MAT				
					PERFORATIONS				
PRESENT PROD:	OIL	BPD, H2O	BPD, GAS	MCF	PERFORATIONS				
INITIAL PROD:	OIL	BPD, HaO	BPD, GAS	MCF	PERFORATIONS				
BORE HOLE 6	34"	ROTA			OPEN HOLE	and the second s			внотв/гт.
TOTAL DEPTH #		MELLED 1	WEIGHT		()		marin	· · · · · · · · · · · · · · · · · · ·	- consistent and contact contact contact and attack of contact contact and attack of the contact

CUSTOMER OR HIS AGENT STATES THE WELL IS IN PROPER CONDITION TO RECEIVE THE PRODUCTS, SUPPLIES, MATERIALS, AND SERVICES

THIS CONTRACT MUST BE SIGNED BEFORE WORK IS COMMENCED

As consideration, the above-named Customer agrees:

- (a) To pay Halliburton in accord with the rates and terms stated in Halliburton's current price lists.
- (b) Halliburton shall not be responsible for and Customer shall secure Halliburton against any liability for damage to property of Customer and of the well owner (if different from Customer), unless caused by the willful misconduct or gross negligence of Halliburton, this provision applying to but not limited to subsurface damage and surface damage arising from subsurface damage.
- (c) Customer shall be responsible for and secure Halliburton against any liability for reservoir loss or damage, or property damage resulting from subsurface pressure, losing control of the well and/or a well blowout, unless such loss or damage is caused by the willful misconduct or gross negligence of Halliburton.
- (d) Customer shall be responsible for and secure Halliburton against any and all liability of whatsoever nature for damages as a result of subsurface trespass, or an action in the nature thereof, arising from a service operation performed by Halliburton hereunder.
- (e) Customer shall be responsible for and secure Halliburton against any liability for injury to or death of persons, other than employees of Halliburton, or damage to property (including, but not limited to, injury to the well), or any damages whatsoever, irrespective of cause, growing out of or in any way connected with the use of radioactive material in the well hole, unless such damage shall be caused by the willful misconduct or gross negligence of Halliburton.
- (1) Halliburton makes no guarantee of the effectiveness of the products, supplies or materials, nor of the results of any treatment or service.
- (g) Customer shall, at its risk and expense, attempt to recover any Halliburton equipment, tools or instruments which are lost in the well and if such equipment, tools or instruments are not recovered. Customer shall pay Halliburton its replacement cost unless such loss is due to the sole negligence of Halliburton. If Halliburton equipment, tools or instruments are damaged in the well, Customer shall pay Halliburton the lesser of its replacement cost or the cost of repairs unless such damage is caused by the sole negligence of Halliburton. In the case of equipment, tools or instruments for marine operations, Customer shall, in addition to the foregoing, be fully responsible for loss of or damage to any of Halliburton's equipment, tools or instruments which occurs at any time after delivery to Customer at the landing until returned to the landing, unless such loss or damage is caused by the sole negligence of Halliburton.
- (h) 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 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 responsible for any damages arising from the use of such information except where due to Halliburton's gross negligence or willful misconduct in the preparation or furnishing of it.
- Halliburton warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE HAMLDIATELY PRECLIDING SENTENCE. Halliburton's 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 or use of any products, supplies or materials on their return to Halliburton or, at Halliburton's option, to the allowance to the Customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, punitive or consequential damages.
- Upon Customer's default in the payment of Customer's account 60 days after date of invoice, such account will thereafter be subject to interest until paid. In the event it becomes necessary to employ an attorney to enforce collection of such account, Customer agrees to pay all collection costs and attorney fees in the amount of 20 per cent of the amount of the unpaid account.
- (k) Halliburton shall not be bound by any changes or modifications in this contract, except where such change or modification is made in writing by a duly authorized executive officer of Halliburton.

AND REPRESENT MER'S AGENT. CUSTOMER

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

CHARGEOUND

ALLIBURTON SERVICES JOB SUMMARY WESTEN W. JA. BILLED ON TICKET NO. WELL DATA WEIGHT FROM SIZE CASING 14.0 TUDING OPEN HOLE TOTAL DEPTHE SHOTS/FT. PERFORATIONS PERFORATIONS PERFORATIONS JOB DATA TOOLS AND ACCESSORIES TYPE AND SIZE MAKE TIME 0400 FLOAT COLLAR PERSONNEL AND SERVICE UNITS UNIT NO. SETYPE GUIDE SHOR H.E. NUFF 29507 8775 WESTON CENTRALIZERS 61-0 W.JA. BOTTOM PLUG 6 MICSSENWER 40050 9291 16 HEAD / PACKER MATERIALS HALLIOURTON OPERATOR___ CEMENT DATA YIELD NUMBER BULK MIXED ADDITIVES STAGE CU.FT./SK LBS./GAL. SUMMARY VOLUMES PRESSURES IN PSI CIRCULATING PREFLUSH: BBL.-GA SHUT-INI INSTANT

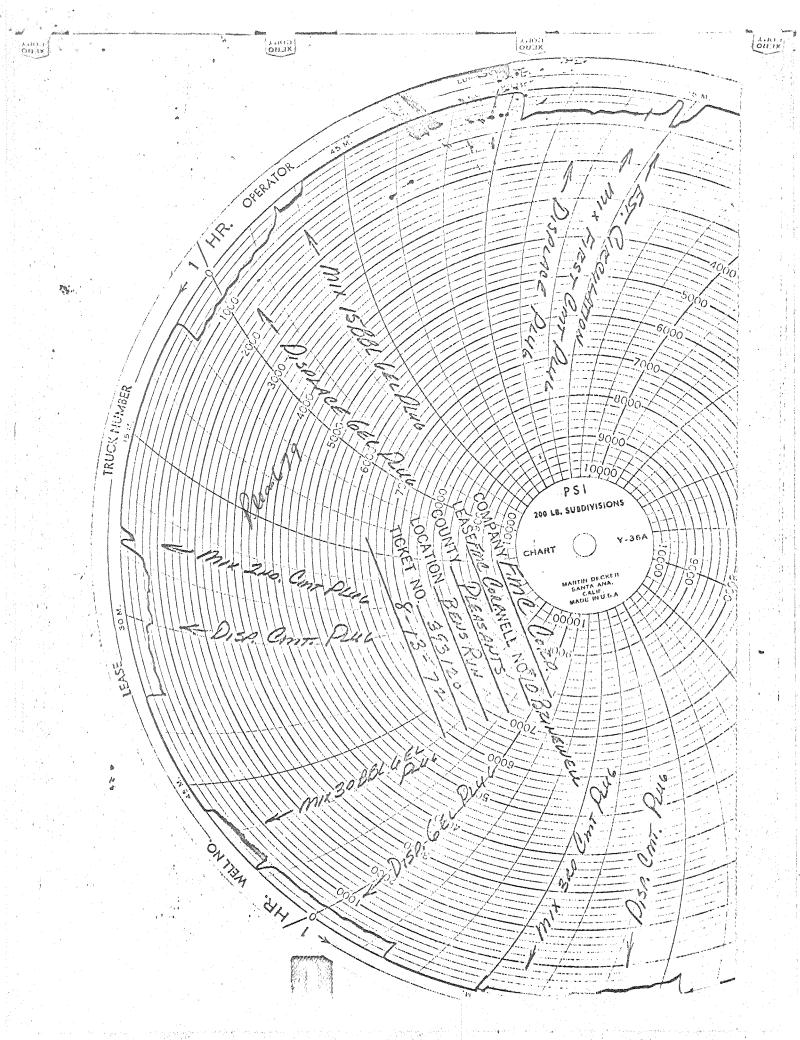
REMARKS

HYDRAULIC HORSEPOWER

AVERAGE RATES IN DPM

CEMENT LEFT IN PIPE

.. MEABON.



KEBO LSALT 6500 PIPE 6372 6778 NEWBURG HORIZON 6700 25 Mes KEEFER 15 We ROSE HILL PACKED SHELL 7500 7636-7644 7630 1698 7795-7835 7876 RED SHL TOP ORD, LOGGER DRILLER 7858 12 AUG 72 DP - VEC XILEO XERO XITRO