

WELL:

X L , No. 1

LOCATION:

G Sec 20 T22s R 27e

COUNTY:

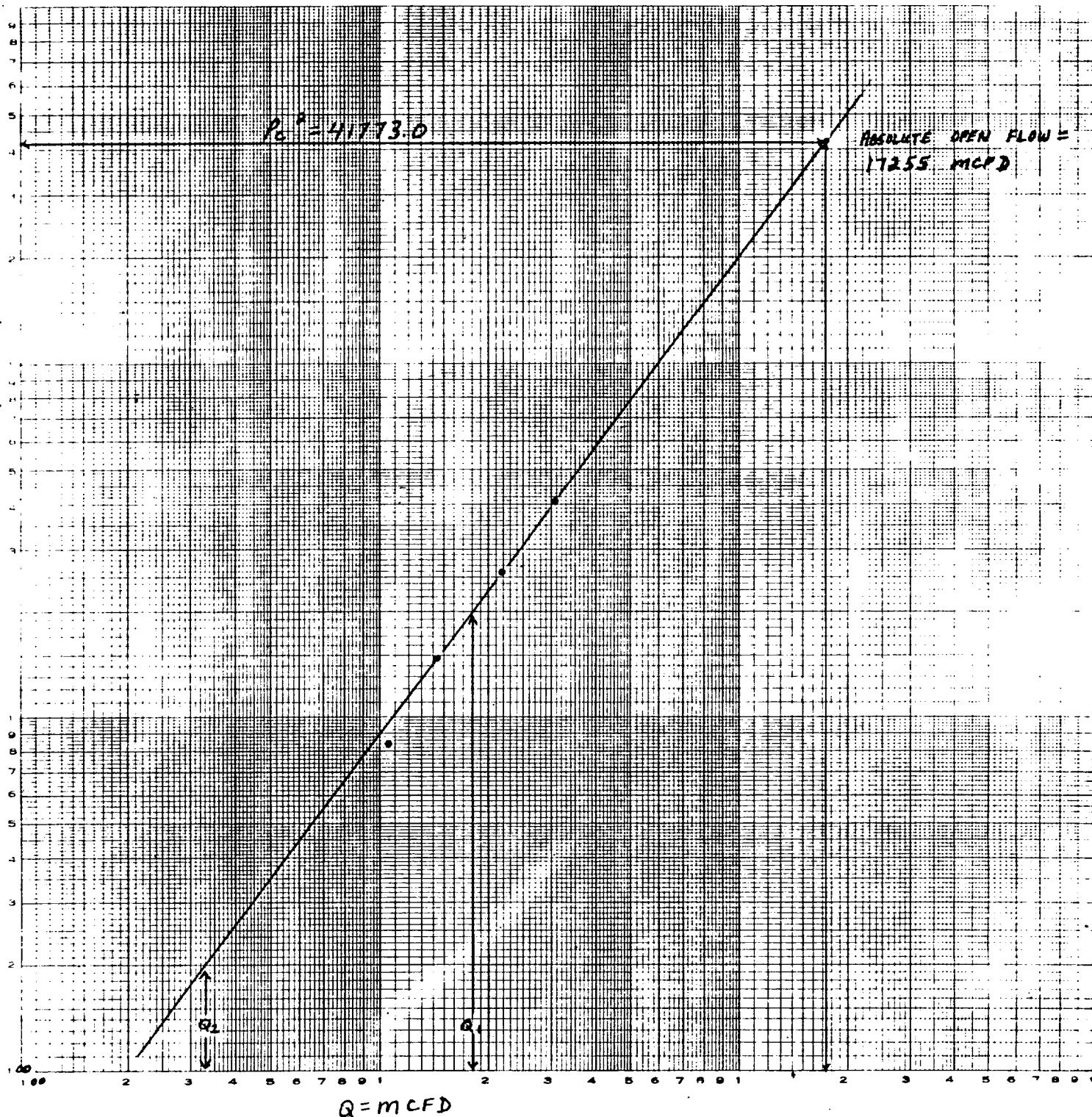
Eddy

DATE:

February 17, 1981

USINE 0 073 N 00

NO 140R-L33 DIETZEN (GRAPH) PAPER

LOGARITHMIC
3 CYCLES X 3 CYCLES $P_c^2 - P_w^2$ (thousand)

$$Q_1 = 1800 \text{ mCFD}; \log Q_1 = 3.25527$$

$$Q_2 = 330 \text{ mCFD}; \log Q_2 = 2.51851$$

$$n = 0.73676 = 0.737$$

Roe, W. T. Fred.

FEB 24 1981

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 2/17/81		FEB 26 1981							
Company Delta Drilling Co.		Formation El Paso Natural Gas Company		O. C. D.							
Pool South Carlsbad Canyon Canyon Wolfcamp		Formation Canyon Wolfcamp		Unit ARTESIA, OFFICE							
Completion Date 2/12/81		Total Depth 11782'		Plug Back TD 9912'							
Elevation 3128' GL		Packer Set At 9622'		Well No. 1							
Casing Size 7 5/8"		Set At 10240'		Perforations: From 9722' To 9756'							
Tubing Size 2 3/8"		Set At 9622'		Perforations: Open Ended							
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single		Packer Set At 9622'		County Eddy							
Producing thru Tubing		Reservoir Temp. °F 167° @ 9739'		Mean Annual Temp. °F 60							
Baro. Press. - P _a 13.2		State New Mexico									
L 9739		H -		G _g 0.6987							
% CO ₂ 1.026		% N ₂ 0.955		% H ₂ S -							
Prove. -		Meter Run 4.026		Taps F							
FLOW DATA											
NO.	Prove Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							4727	61	PACKER		45.5 hrs
1.	4	7/64	1.750	462	7	73	4639	65			1.0 hr
2.	4	9/64	1.750	510	11	74	4589	65			1.0 hr
3.	4	10/64	1.750	532	25	72	4431	65			1.0 hr
4.	4	11/64	1.750	500	52	66	4257	65			1.0 hr
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mscf/D				
1	14.93	57.67	475.2	0.9877	1.196	1.048	1065.93				
2	14.93	77.86	523.2	0.9868	1.196	1.052	1443.28				
3	14.93	116.75	545.2	0.9887	1.196	1.057	2178.65				
4	14.93	163.36	513.2	0.9943	1.196	1.055	3059.90				
5											
NO.	R ₁	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 19.589 Mscf/tbi.						
1	0.70	533	1.40	0.911	A.P.I. Gravity of Liquid Hydrocarbons -						
2	0.77	534	1.40	0.903	Specific Gravity Separator Gas 0.6987		X X X X X X X X				
3	0.81	532	1.39	0.895	Specific Gravity Flowing Fluid X X X X X						
4	0.76	526	1.38	0.898	Critical Pressure 676 P.S.I.A.		- P.S.I.A.				
5					Critical Temperature 382 °F		- °F				
P _c 6463.2		P _c ² 41773.2									
NO.	P _w *	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 16.575$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 7.920$					
1	6398.2	40937.0	836.0								
2	6348.2	40299.6	1473.4								
3	6265.2	39252.7	2520.3								
4	6141.2	37714.3	4058.7								
5											
Absolute Open Flow 17255		Mscf @ 15.025		Angle of Slope @ 53° 37'		Slope, n 0.737					
Remarks: * BOTTOM HOLE PRESSURE @ (-6611) 9739' USED FOR PRESSURE CALCULATION											
PRODUCED 20.60 BD IN 5.0 hours = 98.88 BD/D											
Approved By Division		Conducted By: JARREL SERVICES, INC.		Calculated By: Joe A. Coleman		Checked By: Joe A. Coleman		PE # 2208			

NEW-TEX LAB

P. O. BOX 1181
HOBBS, N.M. 88240

No. 4548
Run No. _____
Date of Run 2-18-81
Date Secured 2-17-81

CERTIFICATE OF ANALYSIS

A Sample of Delta Drilling "XL" #1
Secured from Jarrel Well Testing
At Box 1654 Secured by _____
Hobbs, NM 88240 Time _____ Date _____
Sampling conditions _____ Press _____
Temp. _____

FRACTIONAL ANALYSIS

Percentage Composition

	MOL %	LIQ. %	G.P.M.
Carbon Dioxide	1.026		
Air	.955		
Nitrogen			
Oxygen			
Hydrogen sulfide			
Hydrogen			
Methane	80.058		
Ethane	12.083		3.223
Propane	3.703		1.016
Butanes			
Iso-Butane	.460		.150
N-Butane	1.030		.324
Pentanes			
Iso-Pentane	.212		.077
N-Pentane	.188		.058
Hexanes	.094		.039
Heptanes	Plus .190		.087
Octanes			
TOTAL	100.000		4.984

Calc. Sp. Gr. 0.6987
Calc. A.P.I. _____
Calc. Vapor Press. _____ PSIA
Sp. Gr. _____
Mol. Wt. 20.25

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M. 1.016
Butanes Calc. G.P.M. .474
Pentanes Plus. G.P.M. .261
Ethane Calc. G.P.M. 3.223
RVP Gasoline G.P.M. _____
B.T.U./Cu. Ft. @ 14.696 P.S.I.A.
Dry Basis 1194
Wet Basis 1173
Sulfur Analysis by Titration
Gr./100 Cu. Ft. _____
Hydrogen Sulfide _____
Mercaptans _____
Sulfides _____
Residual Sulfur _____
Total Sulfur _____

Run by Deane Simpson Checked by _____

Additional Data and Remarks

Approved by Deane Simpson
Rec'd. V. T. _____
FEB 24 1981

J. AREL SERVICES, INC.

POST OFFICE BOX 1654

PHONE 505 393-5396

HOBBS, NEW MEXICO 88240

COMPANY: Delta Drilling Company

WELL: XL No. 1

FIELD: und. Wolfcamp
South Carlsbad Canyon

CHRONOLOGICAL PRESSURE DATA

DATE	STATUS OF WELL	TIME	ELAPSED TIME HRS.	MIN.	SURFACE PRESSURE TBG	CSG	BHP @ (-6611) 9739' PSIG
1981							
2/17	Shut in 45.5 hours.						
	Run Tandem Bombs &						
	hung bombs @ 9739'	3:30 PM	-	-	4727 DWT	PKR	6450
	Started 1st Rate	4:30	1	00	4727 DWT	MCF/D	6450
	Finished 1st Rate &						
	Started 2nd Rate	5:30	1	00	4639 DWT	1065.93	6385
	Finished 2nd Rate &						
	Started 3rd Rate	6:30	1	00	4589 DWT	1443.28	6335
	Finished 3rd Rate &						
	Started 4th Rate	7:30	1	00	4431 DWT	2178.65	6252
	Finished 4th Rate &						
	Continued Flowing	8:30	1	00	4257 DWT	3059.90	6128
	Shut in for Buildup	9:30	1	00	4175 DWT		5995
	Shut in	9:45	0	15	-	-	6234
	"	10:00	0	30	-	-	6257
	"	10:30	1	00	-	-	6289
	"	11:30	2	00	-	-	6317
2/18	"	12:30 AM	3	00	-	-	6339
	"	1:30	4	00	-	-	6349
	"	2:30	5	00	-	-	6358
	"	3:30	6	00	-	-	6362
	"	4:30	7	00	-	-	6367
	"	5:30	8	00	-	-	6372
	"	6:30	9	00	-	-	6376
	"	7:30	10	00	-	-	6376
	"	8:30	11	00	-	-	6381
	"	9:30	12	00	-	-	6381
	"	10:30	13	00	-	-	6381
	"	11:30	14	00	-	-	6385
	"	12:30 PM	15	00	-	-	6385
	"	1:30	16	00	-	-	6385
	"	2:30	17	00	-	-	6385
	"	3:30	18	00	-	-	6385
	"	4:30	19	00	-	-	6385
	"	5:30	20	00	-	-	6385
	"	6:30	21	00	-	-	6390
	"	7:30	22	00	-	-	6390
	"	8:30	23	00	-	-	6390
	"	9:30	24	00	-	-	6390
	"	10:30	25	00	-	-	6395
	"	11:30	26	00	-	-	6395

Rec'd W. Tom Fred.

FEB 24 1981

WELL: XI., No. 1PAGE: 2

DATE	STATUS OF WELL	TIME	ELAPSED TIME		SURFACE PRESSURE		BHP @ (-6611) 9739' PSIG
			HRS.	MIN.	TBG	CSG	
2/19	Shut in	12:30 AM	27	00	-	-	6395
	"	1:30	28	00	-	-	6395
	"	2:30	29	00	-	-	6395
	"	3:30	30	00	-	-	6395
	"	4:30	31	00	-	-	6395
	"	5:30	32	00	-	-	6395
	"	6:30	33	00	-	-	6399
	"	7:30	34	00	-	-	6399
	"	8:30	35	00	-	-	6399
	"	9:30	36	00	-	-	6399
	"	10:30	37	00	-	-	6399
	"	11:30	38	00	-	-	6399
	"	12:30 PM	39	00	-	-	6399
	"	1:30	40	00	-	-	6399
	"	2:30	41	00	-	-	6404
	"	3:30	42	00	-	-	6404
	"	4:30	43	00	-	-	6404
	"	5:30	44	00	-	-	6404
	"	6:30	45	00	-	-	6404
	"	7:30	46	00	-	-	6404
	"	8:30	47	00	-	-	6404
	"	9:30	48	00	-	-	6404
	"	10:30	49	00	-	-	6408
	"	11:30	50	00	-	-	6408
2/20	"	12:30 MN	51	00	-	-	6408
	"	1:30	52	00	-	-	6408
	"	2:30	53	00	-	-	6408
	"	3:30	54	00	-	-	6408
	"	4:30	55	00	-	-	6408
	"	5:30	56	00	-	-	6408
	"	6:30	57	00	-	-	6408
	"	7:30	58	00	-	-	6408
	"	8:30	59	00	-	-	6408
	"	9:30	60	00	-	-	6408
	"	10:30	61	00	-	-	6408
	Pulled Bombs	11:30	62	00	-	-	6408
	Ran Static Gradient	1:30	64	00	4686 B	-	6408

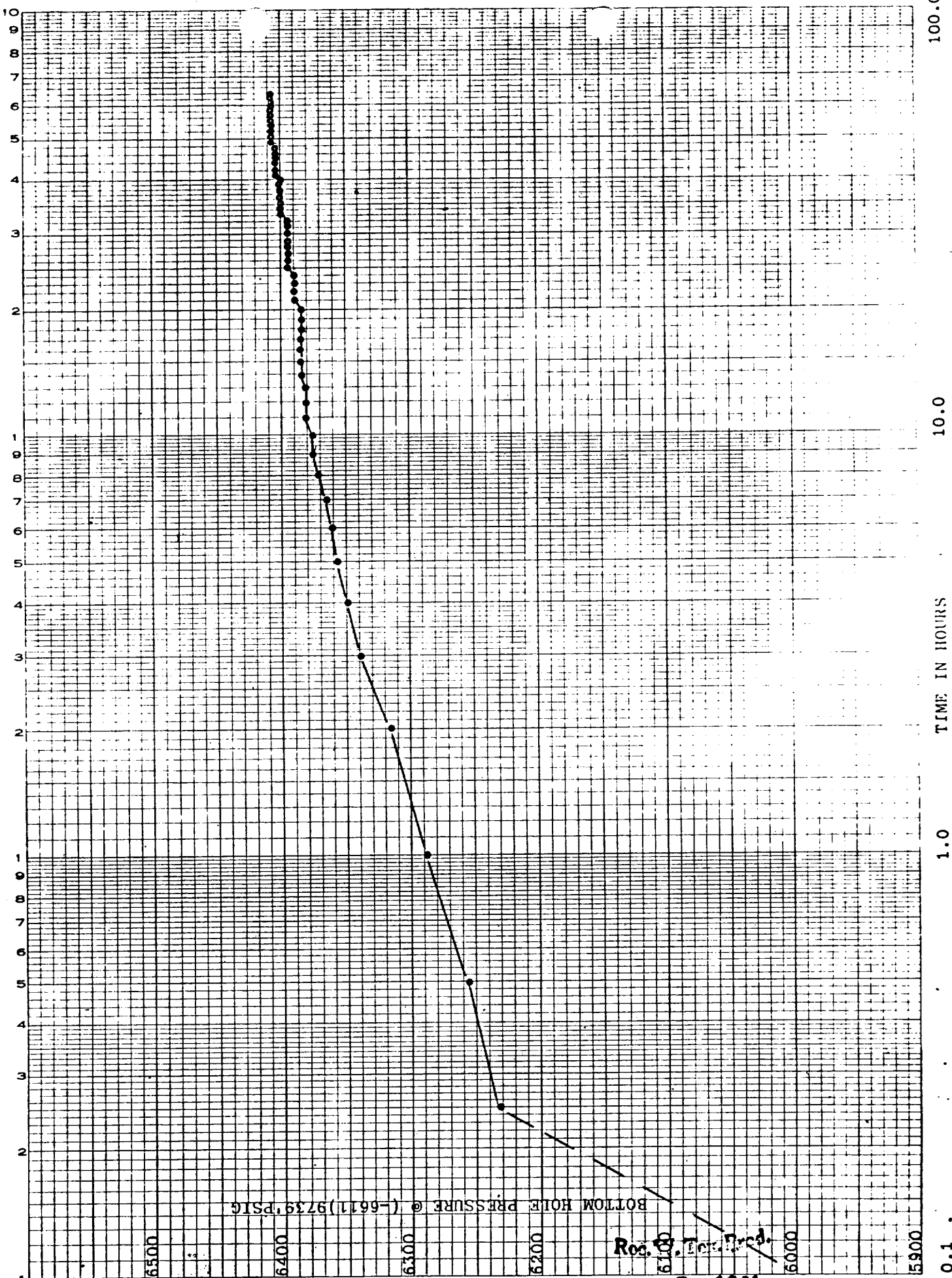
Rec'd. W. Tex. Prod.

FEB 24 1961

DIETZGEN CORPORATION
MADE IN U.S.A.

NO. 340R-L310 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
3 CYCLES X 10 DIVISIONS PER INCH

JARREL SERVICES, INC.



Rec'd. Feb. 24, 1961
FEB 24 1961

JAYREL SERVICES, INC.

POST OFFICE BOX 1854

PHONES 505 393-5396 — 393-8274

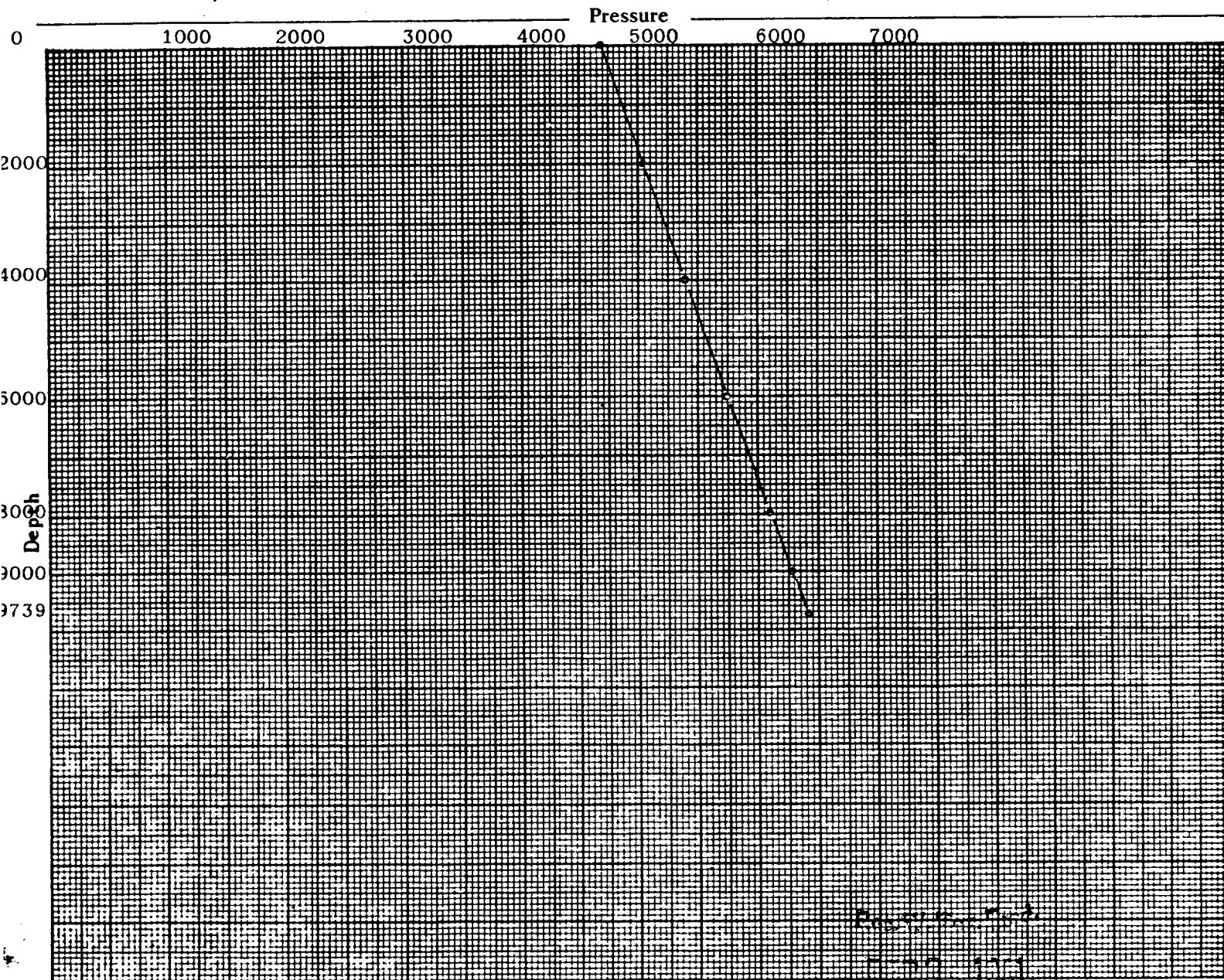
HOBBS, NEW MEXICO 88240

BOTTOM HOLE PRESSURE RECORD

OPERATOR Delta Drilling Company
 FIELD South Carlsbad
 FORMATION Canyon w/comp
 LEASE X-L WELL #1
 COUNTY Eddy STATE New Mexico
 DATE 2/20/81 TIME 1:30 PM
 Status Shut in
 Test Depth 9739'
 Time S. I. 64.0 hrs Last test date 2/17/81
 Tub Pres. 4686 BHP last test 6450'
 Cas. Pres. PKR BHP change 42# Loss
 Elev. 3128' GL Fluid top None
 Datum (-6611)** Water top None
 Temp. @ 167° F Run by JSI #12
 Cal. No. A7758N Chart No. 1

Depth	Pressure	Gradient
0	4686	-
2000	5038	.176
4000	5390	.176
6000	5744	.177
8000	6098	.177
9000	6276	.178
9739 (-6611)	6408 **	.179

** MIDPOINT OF CASING PERFORATIONS





STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
ARTESIA DISTRICT OFFICE

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

March 5, 1981

P.O. DRAWER DD
ARTESIA, NEW MEXICO 88210
(505) 746-4861

Delta Drilling Co.
P.O. Box 3467
Midland, TX 79702

Re: XL
#1-G-20-22-27
Eddy County, NM

Gentlemen:

The Logs on the subject well have been correlated with the Industry Committee Cross Sections and according to our Geologist Mr. Larry Brooks, the tops are as follows: Wolfcamp-8753, Penn.-9942, Strawn -10118, Atoka-10505, Morrow-11062, Morrow Clastics-11236.

Therefore as a result of said correlation we have changed the Pool Name and Producing Formation on the recently submitted reports on the subject well. We are in the process of changing the name of the Carlsbad Canyon Pool and will notify you when this has been accomplished.

If you have any questions concerning this matter please feel free to call upon me.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. A. Gressett".

W. A. Gressett
Supervisor, District II

WAG:br