

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE.

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

b. TYPE OF COMPLETION:

NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other Re-Entry

2. NAME OF OPERATOR

BLACKROCK OIL COMPANY

3. ADDRESS OF OPERATOR

1000 V & J Tower, Midland, Tx 79701

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 660 FSL & 1980 FEL

At top prod. interval reported below - same

At total depth - same

14. PERMIT NO.

DATE ISSUED

12. COUNTY OR PARISH
Lea

13. STATE

New Mexico

15. DATE SPUDDED

9-14-71

16. DATE T.D. REACHED

9-17-71

17. DATE COMPL. (Ready to prod.)

10-6-71

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*

3340 G.L.

19. ELEV. CASINGHEAD

3338

20. TOTAL DEPTH, MD & TVD

4632

21. PLUG, BACK T.D., MD & TVD

4579

22. IF MULTIPLE COMPL., HOW MANY*

23. INTERVALS DRILLED BY

→

ROTARY TOOLS

0-4632

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

Top 4575

Bottom 4589

Delaware Sand

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

Gamma Ray - Neutron

27. WAS WELL CORED

When Originally Drilled

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8	24	885	12-1/4	Cement Circulated	None
4-1/2	9.5	4632	7-7/8	125 sx.	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
	NONE				2-3/8	4585	4555

31. PERFORATION RECORDED (Interval, size and number)

4577 - 4580, 4 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
4577-4581	500 gal. acid.

33.* PRODUCTION

DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) _____ WELL STATUS (Producing or shut-in) _____

Form C-122 Attached

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
			→				
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
		→					

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Shut in, negotiating gas contract

TEST WITNESSED BY

Phillips Petroleum Company

35. LIST OF ATTACHMENTS

C-122 w/attachments, C-123, logs and core descriptions

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

O.D. Butler

TITLE

President

DATE

November 4, 1971

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. GEOLOGIC MARKERS		
				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
Delaware	4575	4589	Sand, gas productive			

RECEIVED

1971

OIL CONSUMPTION OF AIR.
HEDLEY, N. H.

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND IE POINT BACK PRESSURE TEST : GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 10-28-71	
Company BLACKROCK OIL COMPANY				Connection TO AIR		
Pool Jennings Delaware				Formation DELAWARE		Unit 0
Completion Date 10-6-71		Total Depth 4632		Plug Back TD 4602		Elevation 3340' G.L.
Farm or Lease Name JENNINGS FEDERAL						Well No. 1
Cas. Size 4-1/2"	Wt. 9.5#	d 4.09	Set At 4632	Perforations: From 4577 To 4580		
Cas. Size 2-3/8"	Wt. 4.6#	d 1.995	Set At 4584	Perforations: From OPEN To ENDED		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE				Packer Set At 4549		County LEA
Producing Thru TUBING		Reservoir Temp. °F 96 @ 4540		Mean Annual Temp. °F 75		Baro. Press. - P _g 13.2
State NEW MEXICO						
L 4584	H 4584	G _g .745	% CO ₂ 0.00	% N ₂ 24.60	% H ₂ S 0.00	Motor Run 4" OWT
Taps						

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	XXXXXX Line Size	X	Orifice Size	Press. XXXXXX	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI			(Mercury)				1781.0		CHOKE		16 DAYS
1.	4" OWT		1.50"	13.0		88	1571.0	84	10/64"		0.75 HRS
2.	4" OWT		1.50"	20.0		86	1526.0	84	11/64"		0.50 HRS
3.	4" OWT		1.50"	30.0		83	1448.0	83	13/64"		0.50 HRS
4.	4" OWT		1.50"	44.0		78	1340.0	80	15/64"		0.75 HRS
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	VOLUMES OBTAINED FROM GOR MANUAL-PAGES 22/23 AND						711.3
2	CORRECTED FOR TEMPERATURE						913.5
3							1172
4							1510
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1					754	
2					54.9	
3					0.745	XXXXXX
4					XXXXXX	
5					626	P.S.I.A.
					339	R

P _r 1794.2 P _r ² 3219.2				
NO.	P _w ²	P _w	P _w ²	P _r ² - P _w ²
1	2509.7		2518.4	700.8
2	2369.1		2383.6	835.6
3	2135.1		2159.0	1060.2
4	1831.2		1870.7	1348.5
5				

(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 2.387$

AOI = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 3605$

(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 2.387$

Absolute Open Flow	3605	Mcf/d @ 15.025	Angle of Slope θ	45.0	Slope, n	1.00 LIMITED
--------------------	------	----------------	------------------	------	----------	--------------

Remarks:

Approved by Commission:	Conducted By: John West Engineering	Calculated By: <i>[Signature]</i>	Checked By: <i>[Signature]</i>
-------------------------	--	--------------------------------------	-----------------------------------

RECEIVED

FEB 10 1971

OIL CONSERVATION COM.
HEER, D. D.

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (P_w)

COMPANY BLACKROCK OIL COMPANY LEASE JENNINGS FEDERAL WELL NO. 1 DATE 10-28-71

LOCATION: Unit SW SE "O" Section 33 Township 25-S Range 32-E

L 4584 H 4584 L/H 1.00 G 0.745 % CO₂ 0.00 % N₂ 24.60 % H₂S 0.00

d 1.995 F_r .018231 GH 3415 P_{cr} 626 T_{cr} 339

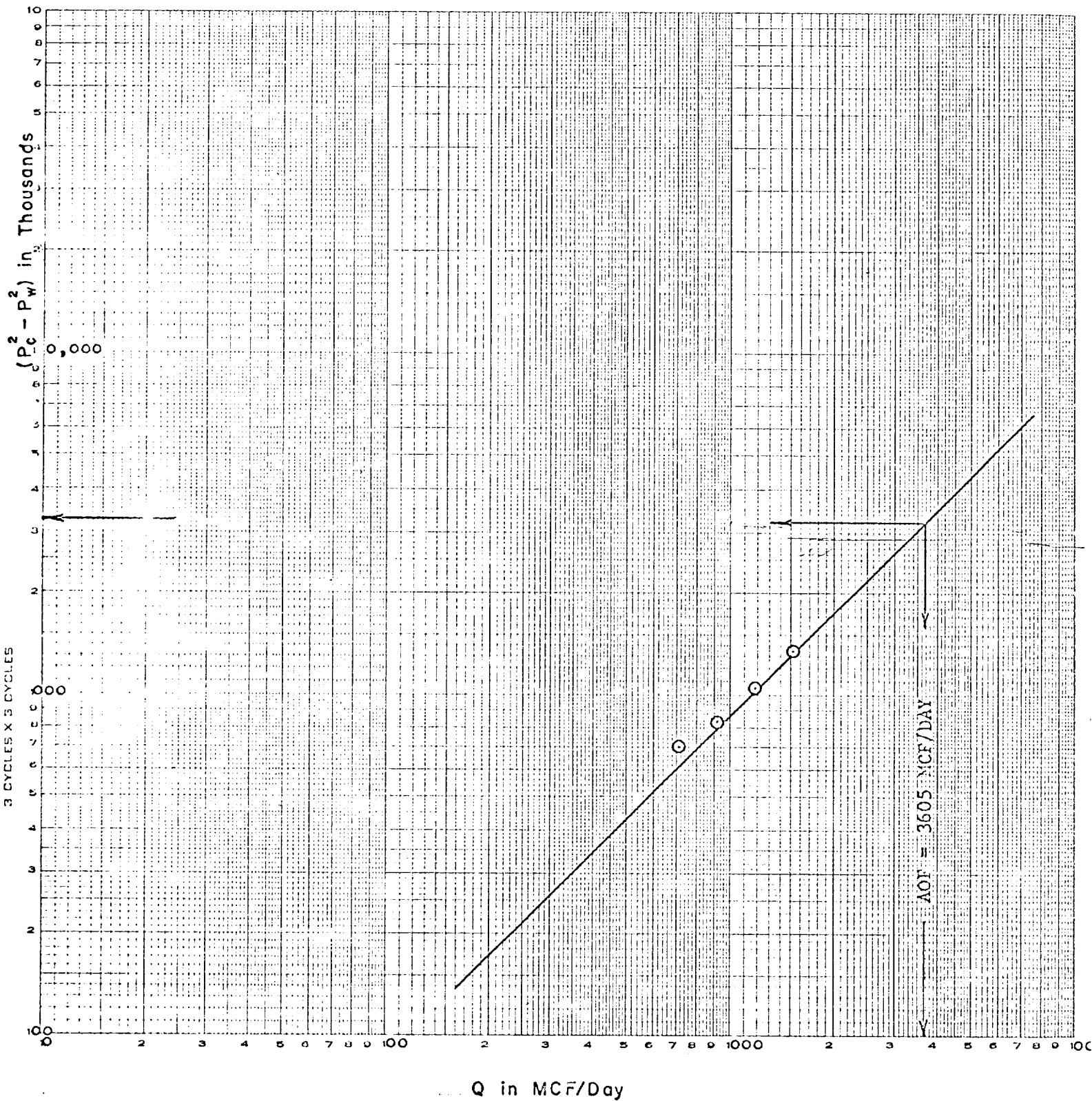
LINE	FIRST RATE			SECOND RATE			THIRD RATE			FOURTH RATE		
	TRIAL 1	TRIAL 2	TRIAL 1	TRIAL 2	TRIAL 1	TRIAL 2	TRIAL 1	TRIAL 2	TRIAL 1	TRIAL 2	TRIAL 1	TRIAL 2
1 Q _m	.7113	.7113	.9135	.9135	1.172	1.172	1.172	1.172	1.510	1.510		
2 T _w (W.H. °R)	544	544	546	546	543	543	543	543	538	538		
3 T _s (B.H. °R)	556	556	556	556	556	556	556	556	556	556		
4 T = $\frac{T_w + T_s}{2}$	550	550	551	551	550	550	550	550	547	547		
5 Z (Est.)	.850	.841	.835	.846	.850	.847	.847	.847	.849	.850		
6 TZ	467.5	462.6	460.1	466.1	467.5	465.9	465.9	465.9	464.4	465.0		
7 GH/TZ	7.305	7.382	7.422	7.327	7.305	7.330	7.330	7.330	7.354	7.344		
8 e ^s (Table XIV)	1.316	1.319	1.321	1.316	1.315	1.316	1.316	1.316	1.318	1.317		
9 1-e ^s (Table XIV)	.240	.242	.243	.240	.240	.240	.240	.240	.241	.241		
10 P _t	1584.2	1548.2	1539.2	1539.2	1461.2	1461.2	1461.2	1461.2	1353.2	1353.2		
11 P _t 2/1000	2509.7	2509.7	2369.1	2369.1	2135.2	2135.2	2135.2	2135.2	1831.2	1831.2		
12 F _r (Table XV)	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231	.018231		
13 F _c = F _r TZ	8.522	8.434	8.388	8.497	8.523	8.494	8.494	8.494	8.466	8.477		
14 F _c Q _m	6.062	5.999	7.662	7.762	9.989	9.955	9.955	9.955	12.78	12.80		
15 L/H (F _c Q _m) ²	36.75	35.99	58.71	60.25	99.78	99.10	99.10	99.10	163.3	163.8		
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	8.820	8.710	14.27	14.46	23.95	23.78	23.78	23.78	39.36	39.48		
17 P _w 2 = P _t 2 + F _w	2518.5	2518.4	2383.4	2383.6	2159.1	2159.0	2159.0	2159.0	1870.6	1870.7		
18 P _s 2 = e ^s P _w 2	3314.3	3321.7	3148.4	3136.8	2839.2	2841.2	2841.2	2841.2	2465.5	2463.7		
19 P _s	1820.5	1822.6	1774.4	1771.2	1684.9	1685.5	1685.5	1685.5	1570.2	1569.6		
20 P = $\frac{P_t + P_s}{2}$	1702.3	1703.4	1656.8	1655.2	1573.1	1573.4	1573.4	1573.4	1461.7	1461.4		
21 P ₁ = (P/P _{cr})	2.72	2.72	2.65	2.64	2.51	2.51	2.51	2.51	2.33	2.33		
22 T _r = (1/T _{cr})	1.62	1.62	1.63	1.63	1.62	1.62	1.62	1.62	1.61	1.61		
23 Z (Table XI)	.841	.841	.846	.846	.847	.847	.847	.847	.850	.850		

RECEIVED

APR 10 1971

OIL CONSERVATION COMM.
HOLES, H. H.

NO. 341-L33 DIETZGEN GRAPH PAPER
LOGARITHMIC
EUGENE DIETZGEN CO.
MADE IN U. S. A.



RECEIVED

APR 9 1971

OIL CONSERVATION COMM.
HOOVER, IL. IL

Analysis Results Summary

Location Odessa, Texas

Run No. 829
 Date Run 10-11-71
 Date Secured 10-12-71
 Time _____
 Sampler's Ident. _____

A Sample of: Gas Well Gas, Jennings Delaware Gas, Delaware Gas Formation,
Blackrock Oil Co.

Secured from Well #1 Jennings Federal
 Location 660' S & 1983' E 33-25-32 County Lee State New Mexico
 Purpose Survey Secured by Cooper
 Sampling Conditions: Atmos. Temp. 72 °F; Pressure on Bomb _____ lbs./sq. in.; Bbls oil/day _____
 Volume/day 1,015 Mcf ; Weather conditions at time of sampling _____
 Field Gas Pressure _____ PSIG; Line Pressure _____ PSIG.

Chromo Analysis 14.65 PSI at 60°F

	Mol. %	Liq. %		
Carbon Dioxide			Propane	Calc. G.P.M. <u>.862</u>
Oxygen			Iso-Butane	Calc. G.P.M. <u>.111</u>
Nitrogen	<u>24.60</u>		Nor-Butane	Calc. G.P.M. <u>.257</u>
Hydrogen Sulfide			Pentane+	Calc. G.P.M. <u>.212</u>
			Propane +	Calc. G.P.M. <u>1.475</u>
			Test Car (Date _____	
Methane	<u>64.03</u>		B.T.U./_____ cu. ft. W.B.	<u>886</u>
Ethane	<u>6.43</u>		Calc. Specific Gravity	<u>.748</u>
Propane	<u>3.15</u>		Calc. A.P.I. @ 60°F	
Iso-Butane	<u>.35</u>		Observed A.P.I. Av.	
Nor-Butane	<u>.82</u>			
			H ₂ S + CO ₂ by orsat	<u>Negative</u>
Iso-Pentane	<u>.18</u>		H ₂ S grains/100 cu. ft.	<u>Negative</u>
Nor-Pentane	<u>.19</u>		Mercaptans gr/100 cu. ft.	
Hexanes	<u>.13</u>		Calc. Vap. Press. #/sq. in.	
			Reid Vap. Press. #/sq. in.	
Heptanes Plus	<u>.12</u>			
			Cu. Ft. gas/Gal. Liq.	
Total	<u>100.00</u>	<u>100.00</u>	Calc. Gasoline Factors	

Run by McGee Calculated by _____ 26-70 Gasoline 0.
 Excess Butane 0.
 Checked by _____ Approved by _____ Excess Propane 0.
 Excess Ethane & Lighter 0.
 1.0000

Additional Data and Remarks: Conventional Test Trap Pressure 270#
Line Heater Temp. 93°
Gas Temp. 71°
Choke 16/64"
Flowing Tubing Pressure 1277#
Shut-in Tubing Pressure 2160#

Distribution:

RECEIVED

DEC 1 1971

OIL CONSTITUTION COMM.
WASH. D. C.

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

Blackrock Oil Company

~~WISCONSIN PETROLEUM CORPORATION~~

COMPANY. ~~(S-1125)~~

WELL JENNINGS NO. 3 1

FIELD _____ JENNINGS - DELAWARE

COUNTY LEA STATE TEXAS

LOCATION__SEC 33, T25S, R32E

DATE ON 4-5-57

FILE NO. HP-L-299 3

DATE OFF 4-7-57

ENGRS. BENNETT-14

FORMATION DELAWARE

ELEV. 33461 DF 3

ORLG. FLD. SALT BASE MUD CORES DIAMOND 2

REMARKS SAMPLED BY REPRESENTATIVE OF CLIENT

Special Analysis

CORE REPORT

SAND 

LIMESTONE

CONGLOMERATE

CHERT SHALE DOLOMITE

nk - DAEK

Gr - GRAY

FG - FINE GRAIN

These analyses, diagrams and interpretations are based on observations and material furnished by the client to whom, and for whose exclusive and confidential use, the report is made. The interpretations and opinions expressed represent the best judgment of Core Laboratories, Inc. and its officers and employees, of certain regular basis and of other situations as the productivity, proper operation, or profitability of any bit, guns or other material will or would in connection with wells with hydrocarbons.

PERMEABILITY, Maximum $\bigcirc - \bigcirc$
MILLIDARCS

TOTAL WATER 0.
PERCENT POHL SEAS

40 30 20 10 0

PERCENT PORE SPACE

80 60 40 20

POROSITY X---X
PERCENT

OIL SATURATION X--
PERCENT PORE SPACE

40 30 20 10 0

0 20 40 60 80

CONVENTIONAL ANALYSIS

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY'S		POROSITY %	RESIDUAL SATURATION % PORE SPACE		VISUAL DESCRIP- TION	POROSITY X---X PERCENT					OIL SATURATION X-- PERCENT PORE SPACE				
		H	V		OIL	TOTAL WATER		40	30	20	10	0	0	20	40	60	80
CONVENTIONAL ANALYSIS																	
1	4576.5	54	47	26.4			Gr, FG										
2	77.5	<0.1	<0.1	7.6			DkGr, FG										
3	78.5	38	33	26.7	10.5	41.1	Gr, FG										
4	79.5	43	29	27.5	12.0	42.5	Gr, FG										
5	80.5	21	17	26.1	14.2	42.9	Gr, FG										
6	81.5	17	12	26.7	12.7	46.8	Gr, FG										
7	82.5	13	11	26.4	12.1	48.9	Gr, FG										
8	83.5	7.1	5.6	26.9	10.8	49.0	Gr, FG										
9	84.5	4.1	2.8	25.3	9.9	51.1	Gr, FG										
10	4585.5	4.0	3.9	25.1	11.9	53.0	Gr, FG										

RECEIVED

MAY 6 1971

OIL CONSERVATION COMM.
HOUSTON, TEX.