CORE LABORATORIES. INC. Petroleum Reservoir Engineering DALLAS. TEXAS

Company Skelly Oil Company	Formation	Gallup	Page 1 of 1
Well Jicarilla B - 3	Cores	Diamond Conv.	
Field Unnamed			
County Rio Arriba State New Mexico			
Location Sec. 5- 21.N - 5W 660 NEWI.	Remarks	Service #4 (F	reliminary Report

CORE ANALYSIS RESULTS
(Figures in parentheses refer to foolnote remarks)

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SAMPLE	SAMPLE DEPTH	PERMEABILITY	POROSITY	RESIDUAL SATURATION		PROBABLE		
NUMBER	PEET	MILLIDARCYS	PERCENT	OIL % VOLUME % PORE	TOTAL WATER % PORE	PRODUCTION	REMARKS	
1	58 56 - 59	0.01	4.4	38.6	59.2			
2	58 6 0 - 61	0.01	7.6	38.2-	60.6			
3	5862 - 63	0.01	7.6	40.8	57.9		\sim	
4	5 864 - 65	0.01	8.3	35.0	63.9		(4)	
5	5866-67	0.01	2.8	21.4	67.8			
6	67–6 8	0.02	4.2	28.6	64.3		() () () () () () () () () ()	
7	68 - 69	C.02	7.7	41.5	55.9		C/E/CA/	
- 8	69-70	C.02	5.4	35.2	61.1		Charles of the	
9	70 - 71	0.C1	7.4	30.4	63.5	·	TO THE OWNER OF THE PARTY OF TH	
10	71-72	<0.01	3.8	. 3 5.2	61.4		1 2 3 4	
11	72 - 73	0.01	7.5	40.0	57.3			
12	73-74	0.01	6.9	37.მ	58.0		SCHOOL CASE OF ANIANT SOLVER S	
13	74-75	0.02	5.7	38.6	52.6		16: 14: 12	
14	75-76	0.01	3.2	53.1	28.1		12/2 (2)	
15	76-77	0.01	5.4	40.8	51.8		1 84	
16	77-78	0.01	4.9	30.6	57.2			
17	78 - 79	0.01	2.7	կն.2	48.2			
18	5879-80	0.02	3.3	55.5	63.0			

5858-5880-

This interval has the following average properties: porosity 5.8%, permeability 0.01 md/ft, residual oil saturations 36.2% and total water saturations 57.3%. The matrix is interpreted to be essentially non-productive due to low permeability and porosity. However, there is a good continuous fracture system present which should be further tested in order to evaluate the amount and type of fluid present in the fractures.

NOTE

*) REFER TO ATTACHED LETTER.

1) INCOMPLETE CORE RECOVERY—INTERPRETATION RESERVED.

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⁽²⁾ OFF LOCATION ANALYSES-NO INTERPRETATION OF RESULTS

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CORE LABORATORIES. INC Petroleum Reservoir Engineering DALLAS, TEXAS

Formation Gallup Page 1 of Company Skelly 011 Company Diamond Conv. File__ RP-3-569 __ Cores____ Drilling Fluid Water Base Mid _ Date Report __8/27/57 Field Unnamed Analysts FK100 6659 DF Rio Arriba State New Mexico Elevation County... Service # 4 (Preliminary Report)

Remarks

CORE ANALYSIS RESULTS (Figures in parentheses refer to footnote remarks)

	(rightes in parenaeses refer to journee remarks)							
SAMPLE	DEFTH	PERMEASILITY	POROSITY	RESIDUAL SATURATION		PROBABLE	REMARKS	
NUMBER	PEET	MILLIDARGYS	PERCENT	OIL % PORE	TOTAL WATER % PORE	PRODUCTION	REMARKS	
19 22122 22 22 22 22 23 23 23 23 23 23 23 23 2	5880-81 81-82 82-83 83-84 84-85 85-86 5909-10 10-11 11-12 12-13 13-14 14-15 15-16 16-17 17-18 18-19	0.01 0.01 0.01 1.4 0.8 0.01 0.28 0.03 0.01 0.02 0.03 0.01 0.06 0.06	5 46-558456685757503	38.0 32.5 20.7 34.1 33.9 31.4 36.8 20.0 24.9 29.2 33.3 41.2 19.7 40.2 37.1 34.2	56.1 65.0 78.6 58.9 58.9 58.8 70.1 59.8 50.7 43.1		BEFORE EXAMINER NUTTER SE NO. EXHIBIT NO MMISSION EXCEPTION SE NO. EXHIBIT NO MMISSION	
35 36 37 38	19-20 20-21 5921-22 5928-29	0.02 0.02 0.04 0.01	7.3 7.2 6.2 5.5	43.9 19.4 12.8 14.5	37.1 51.3 43.9 69.5 72.3 76.4			

5880-5912-

Location Sec 5- 2hN - 5W

This interval has the following average properties: porosity 5.7%, permeability 0.28 md/ft, residual oil saturation 30.2% and total water saturation 62.3%. The interval is interpreted to be essentially non productive. Further testing should be done to evaluate the fracture system.

5912-5920-

Low porosity (6.5% average) low permeability (0,02 md/ft average) high oil saturation (36.1% average) and high water saturation (46.3% average) make this zone look interesting. Although the matrix rock is essentially non productive, further testing should be done to evaluate the fractures.

5920-5929-

This interval has the following average properties: perosity 0.3%, permeability 0.02 md/ft, residual oil saturation 15.5% and total water saturation 72.7%. This interval is interpreted to be essentially non productive and should be excluded from any completion attempts.

NOTE

REFER TO ATTACHED LETTER. (1) INCOMPLETE CORE RECOVERY—INTERPRETATION RESERVED. (2) OFF LOCATION ANALYSES-NO INTERPRETATION OF RESULTS

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CORE LABORATORIES. INC. Petroleum Reservoir Engineering DALLAS, TEXAS

Company	Skelly	Oil Compa	my .		Formation_	Gallup		Page_ 2of 2	
Well	Jicari	11a B - 3	3		Cores	Diamond	Conv.	File RP-3-569	
Field	Unname	d	## <u></u>		Drilling Flu	id Water B	ase Mud	Date Report_8/29/57	
County	Rio Ar	riba Stat	e New	Mexico	Elevation	6659D	P	Analysts_FK:QD	
•		21N - 5W		,		Service		(Preliminary Report)	
CORE ANALYSIS RESULTS (Figures in parentheses refer to footnote remarks)									
AMPLE	DEPTH	PERMEABILITY	POROGITY	RESID: SATURA		PROBABLE			
UMBER	PERT	MILLIDARCYS PERCENT	011	TOTAL	PRODUCTION	REMARKS	REMARKS		

% VOLUME % PORE

5930-5940- Continued -

productive. A vertical fracture system present throughout the zone may warrant further testing to determine the amount and type of fluids present within the system. Other properties of this zone are: permeability (.25 md/ft average), residual oil saturation (27.5% average), total water saturation (67.3% average).

5940-5946-

This zone exhibits fairly low porosity (8.7% average) but the residual oil saturation (35.8% average) and total water saturation (34.4% average) indicate the zone to be oil productive. The permeability is low (.07 md/ft average) and production will depend on success of formation fracturing treatment to in crease permeability. The vertical fracture system extends into this zone and further testing would evaluate whether the system would increase the productive capacity of the zone.

5946-5954-

Low porosity (6.0% average) and high total water saturations (57.2% average) show this zone to be of no commercial value. Other properties of this some are: permeability (.06 md/ft average), and residual oil saturations (27.8% average).

5960-5961-

Low porosity (4.8%) and high total water saturation (83.8%) show the foot to be of no commercial value. Other properties of this foot are: permeability (<0.01 md.) residual oil saturation (14.6%). A vertical fracture system also extends through this foot.

(2) OFF LOCATION ANALYSES—NO INTERPRETATION OF RESULT

one or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and can interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions acc, and its officers and epployees, assume no responsibility and make no warranty or representations, as to the productivity, property of the productivity of t

REFER TO ATTACHED LETTER.
INCOMPLETE CORE RECOVERY—INTERPRETATION RESERVED.

BEFORE EXAMINER NUTTER CASE NO. EXHIBIT NO. 600

CORE LABORATORIES. INC.

Petroleum Reservoir Engineering DALLAS. TEXAS

Company Skelly Oil Company	Formation	Gallup	Page1of2
Well Jicarilla B - 3			Pile_RP-3-569
FieldUnnamed	Drilling Fluid	Water Base Mud	_ * *
County Rio Arriba State New Mexico			
Location Sec. 5- 211N - 5W		_	

CORE ANALYSIS RESULTS

PAMPLE	DEPTH	PERMEABILITY	POROSITY	RESIDUAL SATURATION		PROBABLE	
NUMBER	PEET	MILLIDARCYS	PERCENT	OIL % VOLUME % FORE	TOTAL WATER % PORE	PRODUCTION	REMARKS
39	59 3 0-31	<0.01	5.2	25.0	73.2		
70	31- 32	0.01	5.9	22.1	76.3		
加	32-33	0.03	9.2	13.0	86.0		·
42	33 - 34	0.03	3.7	18.9	78.5		
43	34-35	*	5.1	23.5	72,5		
1111	35 - 36	0 .0 8	4.6	26.1	71.8		
45	36-3 7	0.03	5.0	3 0.0	66.2		^
46	37 -3 8	0.10	5.1	35.3	60. 8		ORE EXAMINER NUTTER NO. SERVATION COMMISSION ENON COMMISSION E
47	38- 39	1.9	5.3	49.2	47.3		
48	39-40	0.04	5.0	32.0	40.0		CONSERVATION COMMISSION COMMISSION
49	40-41	0.07	8.2	35 •4	45.1		CONSERVATION COMMISSIONED
50	41-42	0.04	8.8	36.4	27.3	14	ONSERVA MINES
51	42-43	0.07	9.2	35. 9	33.8		1/26/19/1/
5 2	43-44	0.08	9. 8	36.7	32.7		THE ON THE
53	44-45	0.07	8.1	34.6	34.6		1 S 1
54	45-46	0.07	8.3	36.2	33.8		TEO MILES
55	46-47	0.13	3.5	34.3	11.1		
56	47-48	0.01	3.5	28.7	54.4		
57	48-49	0.07	5.9	25.1	62.7		
58	49-50	0.01	8.4	34.6	53.5		
59	50-51	0.02	6.1	36.1	54.2		
60	51 -5 2	0.08	6.5	26.2	64.7		
61	52 - 53	0.01	5.1	23.5	74.6		
62	53-54	0.16	8.6	13.8	82.6		
63	5960-61	<0.01	4.8	14.6	83.8		

Fractured Plug.

5930-5940-

Low porosity (5.4% average) and failure of the matrix to yield any appreciable fluids during the change from bottom hole pressure to normal atmospheric pressure show the matrix of this sone to be non-

(2) OFF LOCATION ANALYSES-NO INTERPRETATION OF RESULTS.

e: Reper to attached letter. Incomplete core recovery—interpretation reserved.

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BEFORE EXAMINER NUTTER

CASE NO. EXHIBIT NO. EXHIBIT NO.