

Tenneco Oil
Exploration and Production
A Tenneco Company

6162 South Willow Drive
P.O. Box 3249
Englewood, Colorado 80155
(303) 740-4800



Western Rocky Mountain Division

June 11, 1985

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

Attention: Ernie Busch

Re: Hospah 39-Step Rate Test Results
Section 12, T17N-R9W
McKinley County, New Mexico

Gentlemen:

Enclosed for your review please find the results of a step rate injection test performed on Hospah 39 on May 21, 1985.

The graph of Surface Injection Rate vs. Bottom Hole Injection Pressure indicates a formation parting pressure of 930 psi. The Lower Hospah formation parting pressure will not be exceeded as long as the surface injection rate is less than or equal to 2 BPM (2880 BWPD).

Sincerely,

TENNECO OIL COMPANY

A handwritten signature in dark ink, appearing to read "P. A. Doyle".

P. A. Doyle
Division Production Engineer
Western Rocky Mountain Division

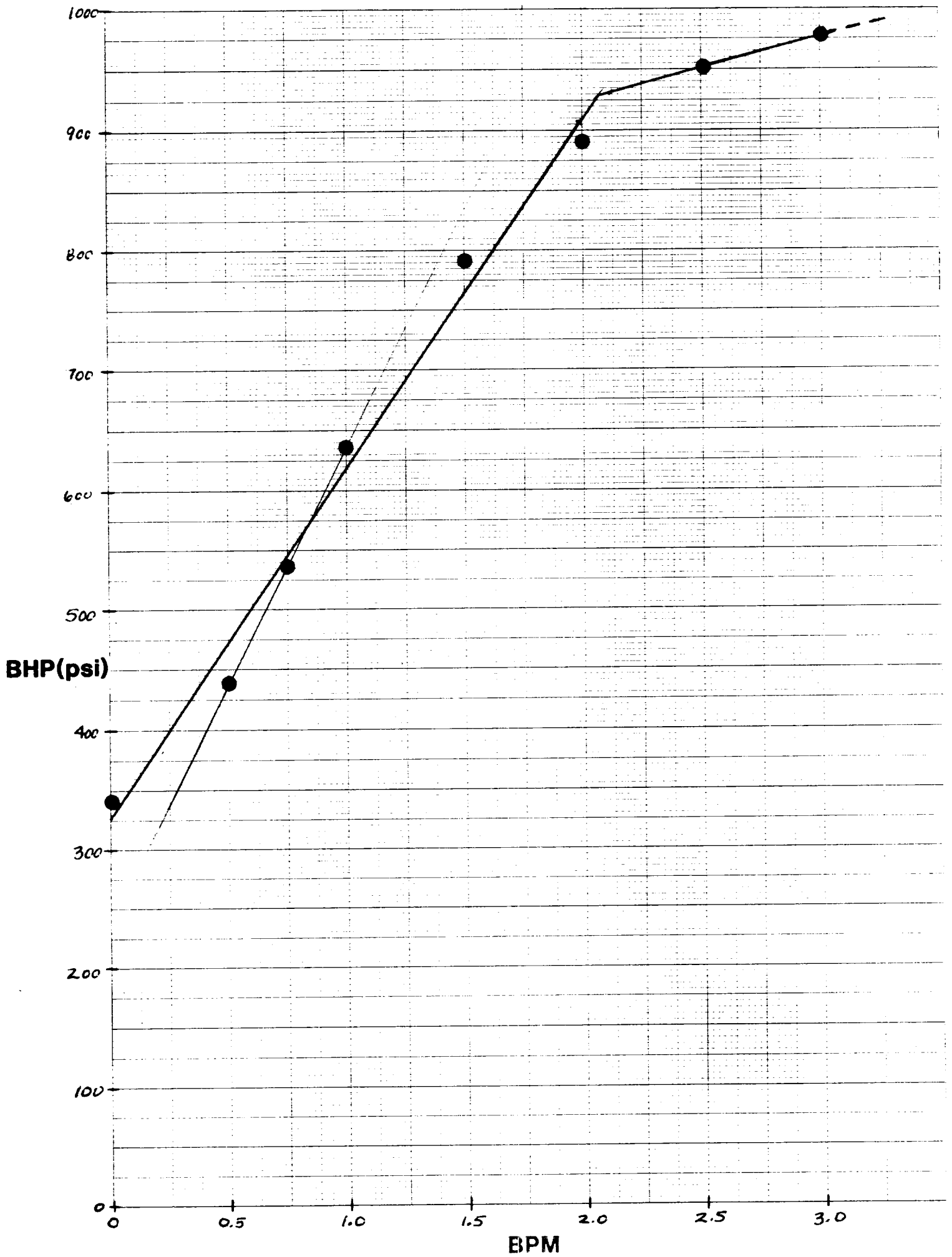
JWC/dw:0194

cc: Hospah 39 Well File
Scott McKinney
Joe Ramey, NMOCD, P. O. Box 2088,
Santa Fe, New Mexico

RECEIVED
JUN 20 1985
OIL CON. DIV.
DIST. 3

HOSPAH 39

5-21-85



WELL TREATMENT REPORT

DOWELL

DWL-494-N PRINTED IN U.S.A.

DOWELL DIVISION OF DOW CHEMICAL U.S.A.

DATE

5-21-85

WELL NAME AND NUMBER

Hospah # 39

LOCATION (LEGAL)

Sec 12 T17N R9W

DOWELL LOCATION

TREATMENT NUMBER

0289

POOL / FIELD

FORMATION

Upper Hospah

JOB DONE DOWN

TUBING

CASING

ANNULUS

PAGE 2 OF 3 PAGES

ALLOWABLE PRESSURE

T.B.G. 1000

CSG:

COUNTY / PARISH

Mc

STATE

NM.

TYPE OF WELL

OIL

GAS

WATER

OIL: API GRAVITY

VAPOR PSI

TYPE OF SERVICE

☐ Acidizing
☐ Fracturing☐ Sand Control
☐ Other

SERVICE NAME

AGE OF WELL

NEW WELL

REWORK

TOTAL DEPTH

BHT (LOG)

CASING SIZE

WT.

DEPTH

TUBING SIZE

WT.

DEPTH

TYPE OR GRADE

LINER SIZE

WT.

TOP-BOTTOM

TYPE OR GRADE

PACKER TYPE

PACKER DEPTH

OPEN HOLE

CASING VOL.

TUBING VOL.

ANNULAR VOL.

PERFORATED INTERVALS

TOP	TO	BOTTOM	NO OF HOLES	TOP	TO	BOTTOM	NO OF HOLES
	TO				TO		
	TO				TO		
	TO				TO		
	TO				TO		

SERVICE INSTRUCTIONS:

Step Rate Test

1/2 - 3/4 - 1 - 1 1/2 - 2 - 2 1/2 - 3
BPM injection tests

FOR CONVERSION PURPOSES 24 BBLS EQUALS 1000 GALLONS

ARRIVED ON LOCATION: 0715 LEFT LOCATION: 13.00

DIAMETER OF PERFORATIONS =

TIME (0001 to 2400)	INJECTION RECORD						PRESSURE		NOTATIONS	
	RATE BPM	TYPE OF FLUID	DENSITY	INCREMENT VOL. BBLS	CUM. VOL. BBLS	PROP TYPE	PROP #/GAL	CSG.		TBG.
										Pre-Job Safety Meeting
										Pre-Job Pressure Test To _____ psi
0930	1/2	Lease water			0	None		0	0	Start Pumping - 1/2 BPM
0935	1/2	}						0	0	1/2 BPM - 0 Press.
0955	3/4			7 1/2	7 1/2			0	0	Increase rate 3/4 BPM
10:00	3/4							0	0	3/4 BPM - 0 Press
10:12	1			13	20 1/2			0	0	Increase rate - 1 BPM
10:20	1							0	0	1 BPM - 0 Press
10:28	2			16	36 1/2			0	0	Increase rate - 2 BPM
10:29	2							0	300	Caught press. 300 psi
10:31	0			6	42 1/2			0	0	Shutdown - lost press gauge
10:37	1							0	0	Start Pumping - 1 BPM
10:42	1							0	0	1 BPM - 0 Press.
10:47	1.5		10	52 1/2						Increase rate - 1.5 BPM
10:52	1.5							150		1.5 BPM - 150 psi
11:02	0		22.5	75				0		Shutdown - Fix leak at well ON casing valve.

FRAC. GRADIENT

AVG. INJECTION RATES

LIQ.

W/PROP

TOTAL FLUID

TOTAL PROP

BBLS

LBS.

TREATING PRESSURE SUMMARY

MAX.

FINAL

AVG.

IMMED.
S.D.P.15 MIN.
SIP

PRODUCTION PRIOR TO THIS TR.

☐ Test
☐ Stabilized

CUSTOMER REPRESENTATIVE

DOWELL SERVICE SUPERVISOR

MATERIALS CHARGED FOR:

MTRL

QUANTITY

MTRL

QUANTITY

None

WELL TREATMENT REPORT

DOWELL

DWL-494-N PRINTED IN U.S.A.

DOWELL DIVISION OF DOW CHEMICAL U.S.A.

DATE

5-21-85

WELL NAME AND NUMBER

Hospach # 39

LOCATION (LEGAL)

FORMATION

STATE

SERVICE NAME

COUNTY / PARISH

TYPE OF SERVICE

☐ Acidizing
☐ Fracturing☐ Sand Control
☐ OtherCUST.
NAME

Tenneco Oil Co.

ADDRESS

CITY, STATE
ZIP CODE

SERVICE INSTRUCTIONS: Step Rate Test page 2

DOWELL LOCATION

JOB DONE DOWN
☒ TUBING ☐ CASING ☐ ANNULUSTYPE OF WELL
☐ OIL ☐ GAS ☐ WATER ☒ INJ.
AGE OF WELLNEW WELL ☐ RERWORK ☐

CASING SIZE WT. DEPTH

TYPE OR GRADE

LINER SIZE WT. TOP-BOTTOM

OPEN HOLE CASING VOL.

TREATMENT NUMBER

PAGE 3 OF 3 PAGES

ALLOWABLE PRESSURE

TBG: CSG: VAPOR PSI

OIL: API GRAVITY

TOTAL DEPTH BHT. (LOG)

TUBING SIZE WT. DEPTH

TYPE OR GRADE

PACKER TYPE PACKER DEPTH

TUBING VOL. ANNULAR VOL.

PERFORATED INTERVALS

TOP	TO	BOTTOM	NO. OF HOLES	TOP	TO	BOTTOM	NO. OF HOLES
	TO				TO		
	TO				TO		
	TO				TO		
	TO				TO		

FOR CONVERSION PURPOSES 24 BBLs EQUALS 1000 GALLONS

ARRIVED ON LOCATION:

LEFT LOCATION:

DIAMETER OF PERFORATIONS =

TIME (0001 to 2400)	INJECTION RECORD							PRESSURE		NOTATIONS
	RATE BPM	TYPE OF FLUID	DENSITY	INCREMENT VOL BBLs	CUM. VOL BBLs	PROP. TYPE	PROP. #/GAL	CSG.	TBG.	
										Pre-Job Safety Meeting
										Pre-Job Pressure Test To _____ psi
11:06	1.5	water		75	75	None		0	0	Start pumping 1.5 BPM
11:15	1.5							0	150	1.5 BPM - 150 psi
11:21	2			15	90			0	150	Increase rate - 2 BPM
11:26	2							0	300	2 BPM - 300 psi
11:42	2 1/2			32	122			0	300	Increase rate - 2 1/2 BPM
11:47	2 1/2							0	500	2 1/2 BPM - 500 psi
11:57	3			37.5	159.5			0	500	Increase rate - 3 BPM
12:02	3							0	750	3 BPM - 750 psi
12:10	0			39	198			0	750	Shutdown - instant vacuum
										5 min - 0 psi
										10 min 0 psi
										15 min 0 psi
					198					Pump - during step rate
				20						20 Bbls pumped with
					218					centrifugal - tried to fill hole

FRAC. GRADIENT

AVG. INJECTION RATES

LIQ.

W/PROP

TOTAL FLUID

TOTAL PROP

198 + 20 = 218

BBLs

None

LBS.

TREATING PRESSURE SUMMARY

MAX. 750

FINAL 750

AVG.

IMMED. S.D.P.

15 MIN. SIP

PRODUCTION PRIOR TO THIS TR.

☐ Test
☐ Stabilized

CUSTOMER REPRESENTATIVE

DOWELL SERVICE SUPERVISOR

R. L. Orkrecht

MATERIALS CHARGED FOR:

MTRL

QUANTITY

MTRL

QUANTITY

None

B & R SERVICE, INC.
P.O. BOX 1048
FARMINGTON, NEW MEXICO 87499

TENNECO OIL COMPANY
HOSPAH 39
McKINLEY COUNTY, N.M.

BOMB HUNG @ 1604' G.L.
0 HRS. 8:44 A.M. 5-21-85

<u>Rate</u> BPM	<u>TIME</u> HR:MIN	<u>PSIG</u>	<u>Rate</u> BPM	<u>TIME</u> HR:MIN	<u>PSIG</u>
	0:00	342.0		2:12	758.9
.5	0:38	342.0	0	2:14	763.5
	0:40	356.0		2:16	623.1
	0:42	362.2		2:18	547.1
	0:44	352.8	1.5	2:19	525.4
	0:46	248.2		2:20	601.5
	0:48	393.3		2:21	663.2
	0:50	401.0		2:22	746.5
	0:52	413.5		2:23	755.8
	0:54	419.7		2:24	763.5
	0:56	421.2		2:25	768.1
	0:58	425.9		2:26	772.8
	1:00	432.1		2:27	775.8
.75	1:02	438.3		2:28	777.4
	1:04	444.6		2:29	778.9
	1:06	452.3		2:30	780.5
	1:08	460.1		2:31	783.5
	1:10	467.9		2:32	786.6
	1:12	471.0		2:33	788.2
	1:14	500.5		2:34	789.7
	1:16	519.2	2.0	2:35	791.3
	1:18	528.5		2:36	860.7
1.0	1:20	534.7		2:37	865.3
	1:22	539.4		2:38	868.4
	1:24	544.0		2:39	871.5
	1:26	547.1		2:40	874.6
	1:28	562.7		2:41	876.1
	1:30	575.1		2:42	877.6
	1:32	581.3		2:43	879.2
	1:34	586.0		2:44	880.7
	1:36	590.7		2:45	882.3
2.0	1:38	593.8		2:46	885.3
	1:40	596.9		2:47	885.3
0	1:42	600.0		2:48	886.9
	1:44	762.0		2:49	888.4
	1:46	741.9		2:50	890.0
1.0	1:48	575.1		2:51	890.0
	1:50	503.6		2:52	890.0
	1:52	526.9	2.5	2:53	906.9
	1:54	582.9		2:54	908.5
	1:56	613.9		2:55	914.7
	1:58	627.8		2:56	925.5
1.5	2:00	635.5		2:57	928.5
	2:02	687.9		2:58	930.1
	2:04	734.2		2:59	931.6
	2:06	743.4		3:00	934.7
	2:08	748.1		3:01	937.8
	2:10	754.2		3:02	939.3

B & R SERVICE, INC.
P.O. BOX 1048
FARMINGTON, NEW MEXICO 87499

	<u>TIME</u> HR:MIN	<u>PSIG</u>
	3:03	940.9
	3:04	942.4
	3:05	944.0
	3:06	945.0
	3:07	945.0
	3:08	947.0
	3:09	948.6
	3:10	950.1
	3:11	951.7
	<u>3:12</u>	<u>951.7</u>
3.0	3:13	953.2
	3:14	956.3
	3:15	957.8
	3:16	959.4
	3:17	964.0
	3:18	965.6
	3:19	968.6
	3:20	970.2
	3:21	971.7
	3:22	973.3
	3:23	976.4
	<u>3:24</u>	<u>977.9</u>
0	3:25	894.6
	3:26	655.5
	3:28	612.3
	3:30	576.7
	3:32	545.6
	3:34	525.4
	3:36	505.2
	3:38	489.6
	3:40	475.6
	3:42	461.7
	3:44	457.0