

Release 11-30-93 DHC

**MERIDIAN OIL**

OIL CONSERVATION DIVISION  
RECEIVED

November 9, 1993

NOV 12 AM 10 18

Mr William J. LeMay  
N. M. Oil Conservation Division  
P. O. Box 2088  
Santa Fe, N.M. 87501-2088

Re: Storey C #11 MV-PC  
1748' FNL; 1750' FEL  
Section 34, T28N R09W  
San Juan County, N. M.

Dear Mr. LeMay:

Meridian Oil Inc. is applying for an administrative downhole commingling order for the referenced well in the Blanco Mesaverde and South Blanco Pictured Cliffs fields. The ownership of the zones to be commingled is common. The offset operator to the north, northwest, and northeast is Amoco Production Company. All the other offset acreage is Meridian Oil. The Bureau of Land Management and this offset operator will receive notification of this proposed downhole commingling.

This well has produced as a dual well since December 1958 from the Mesaverde and Pictured Cliffs intervals. With a maximum producing capacity of 30 MCF/D from the Pictured Cliffs, and 0 MCF/D from the Mesaverde, the well is a marginal producer in both zones. The Mesaverde interval is currently blind plated by the pipeline due to no production.

Meridian Oil plans to open some thin lower Mesaverde intervals and after commingling, install compression. We believe that these salvage operations will combine to increase the well's producing efficiency and gas production thus preventing waste of gas reserves from both intervals.

Meridian Oil recently completed a reservoir study of the Mesaverde in this well. We concluded that although substantial gas reserves are present in the Mesaverde reservoir, they definitely can not be produced through the current wellbore configuration. Commingling the Pictured Cliffs with the Mesaverde in this well will enable the well to produce its Mesaverde reserves which otherwise would probably be wasted.

Granting this application will be in the best interest of conservation, the prevention of waste, and the protection of correlative rights.

Commingling Application -- Storey C #11 MV-PC  
Page 2

We plan to commingle this well by pulling both the Pictured Cliffs and Mesaverde tubing strings, perforate and stimulate the additional thin lower Mesaverde zones, and run a single string of tubing.

The reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed downhole commingling. The fluids from each zone are compatible and no precipitates will be formed to cause damage to either reservoir. The Pictured Cliffs produces no liquids. The daily production will not exceed the limit of Rule 303c, Section 1a, Part 1.

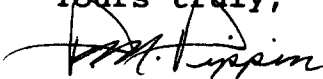
The shut-in pressure for the Mesaverde and Pictured Cliffs are 422 psi and 231 psi, respectively.

The District Office in Aztec will be notified anytime the commingled well is shut-in for seven (7) consecutive days.

To allocate the commingled production to each of the zones, Meridian will consult with the District Supervisor of the Aztec District Office of the Division to determine an allocation formula for each of the productive zones. This will be done using flow tests from the Mesaverde and Pictured Cliffs during field operations.

Included with this letter are plats showing ownership of offsetting leases for both the Mesaverde and Pictured Cliffs, a copy of the letters to the offset operator and BLM, wellbore diagrams, production curves, a pertinent data sheet, workover procedure, and maps indicating the offset Mesaverde and Chacra wells in the area.

Yours truly,



P. M. Pippin  
Senior Production Engineer

PMP:pmp  
attachments

cc: Frank Chavez - OCD

# MERIDIAN OIL

November 9, 1993

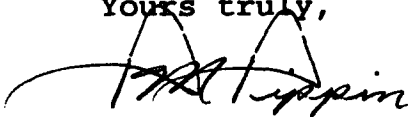
Amoco Production Company  
Attn: Mr. Larry Emmons  
P.O. Box 800  
Denver, Colorado 80201

Dear Mr. Emmons:

Meridian Oil, Inc. is in the process of applying for a downhole commingling order for their Storey C #11 MV/PC well located 1748' FNL 1750' FEL, Section 34 T28N R09W, N.M.P.M., San Juan County, New Mexico, in the Blanco Mesaverde and South Blanco Pictured Cliffs.

The purpose of this letter is to notify you of such action.

Yours truly,

A handwritten signature in dark ink, appearing to read "P. M. Pippin", with a stylized flourish extending from the left side.

P. M. Pippin  
Senior Production Engineer

PMP:pmp

# MERIDIAN OIL

November 9, 1993

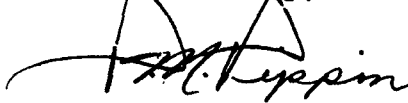
Bureau of Land Management  
1235 La Plata Hwy.  
Farmington, N. M. 87401

Gentlemen:

Meridian Oil, Inc. is in the process of applying for a downhole commingling order for their Storey C #11 MV/PC located 1748' FNL 1750' FEL, Section 34 T28N R09W, N.M.P.M., San Juan County, New Mexico, in the Blanco Mesaverde and South Blanco Pictured Cliffs.

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Yours truly,



P. M. Pippin  
Senior Production Engineer

PMP:pmp

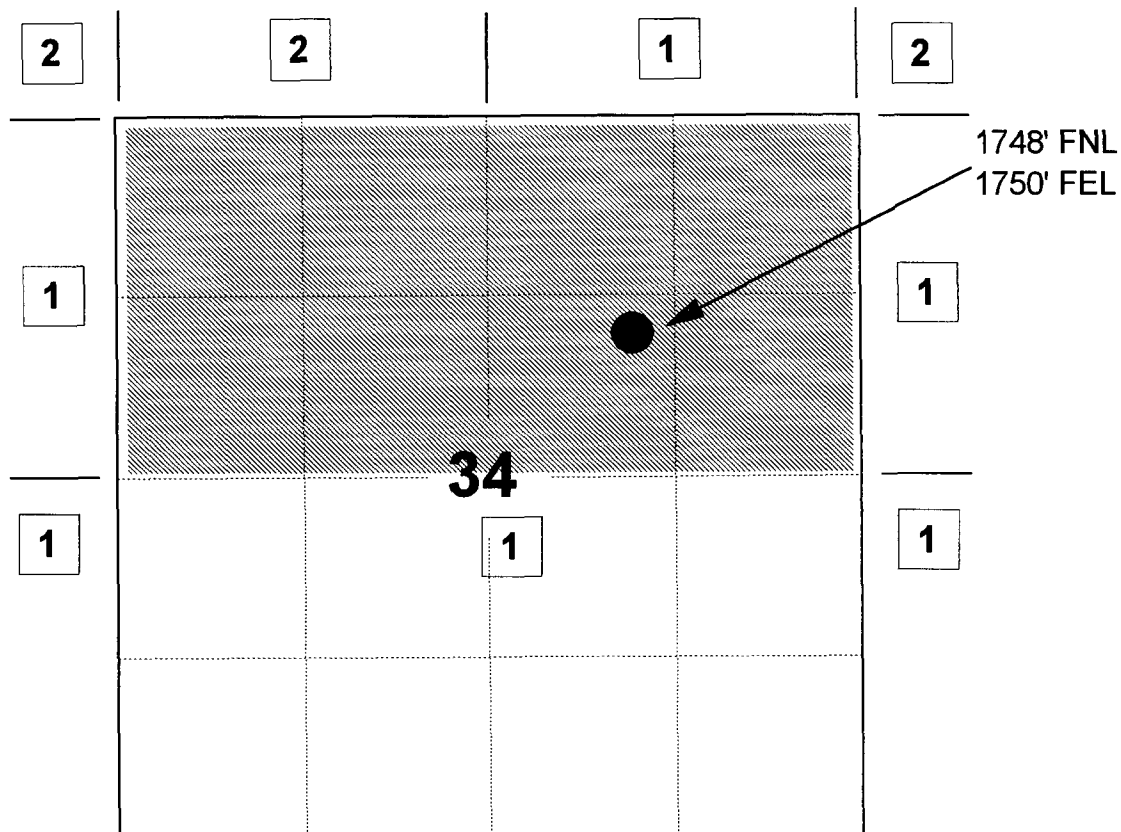
# MERIDIAN OIL INC

## STOREY C #11

OFFSET OPERATOR \ OWNER PLAT

Pictured Cliffs / Mesaverde Formations Commingle

Township 28 North, Range 9 West



1) Meridian Oil Inc

2) Amoco Production Company

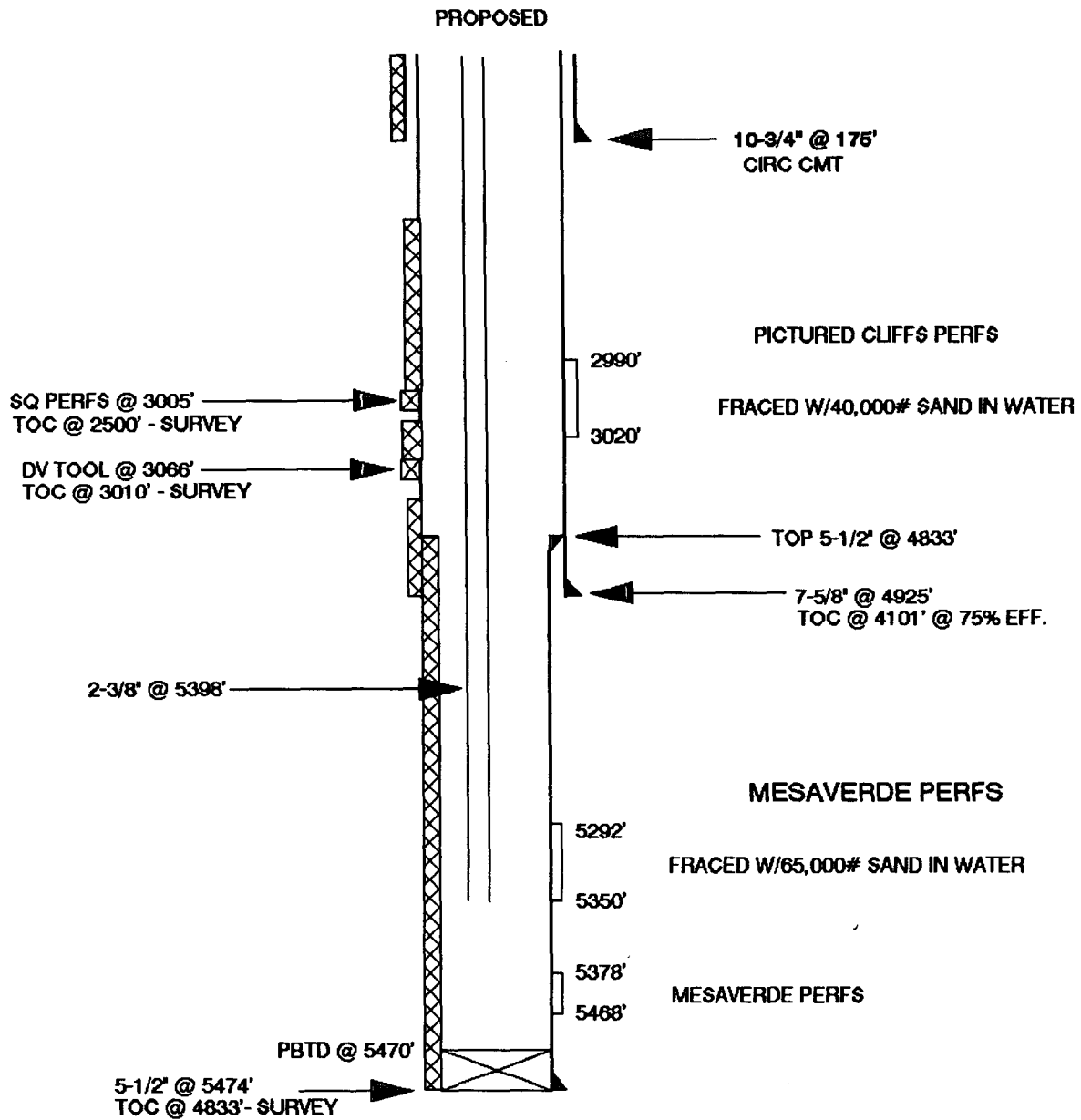
PO Box 800, Denver, CO 80201

Conoco, Inc.

10 Desta Dr, Suite 100W, Midland, TX 79705

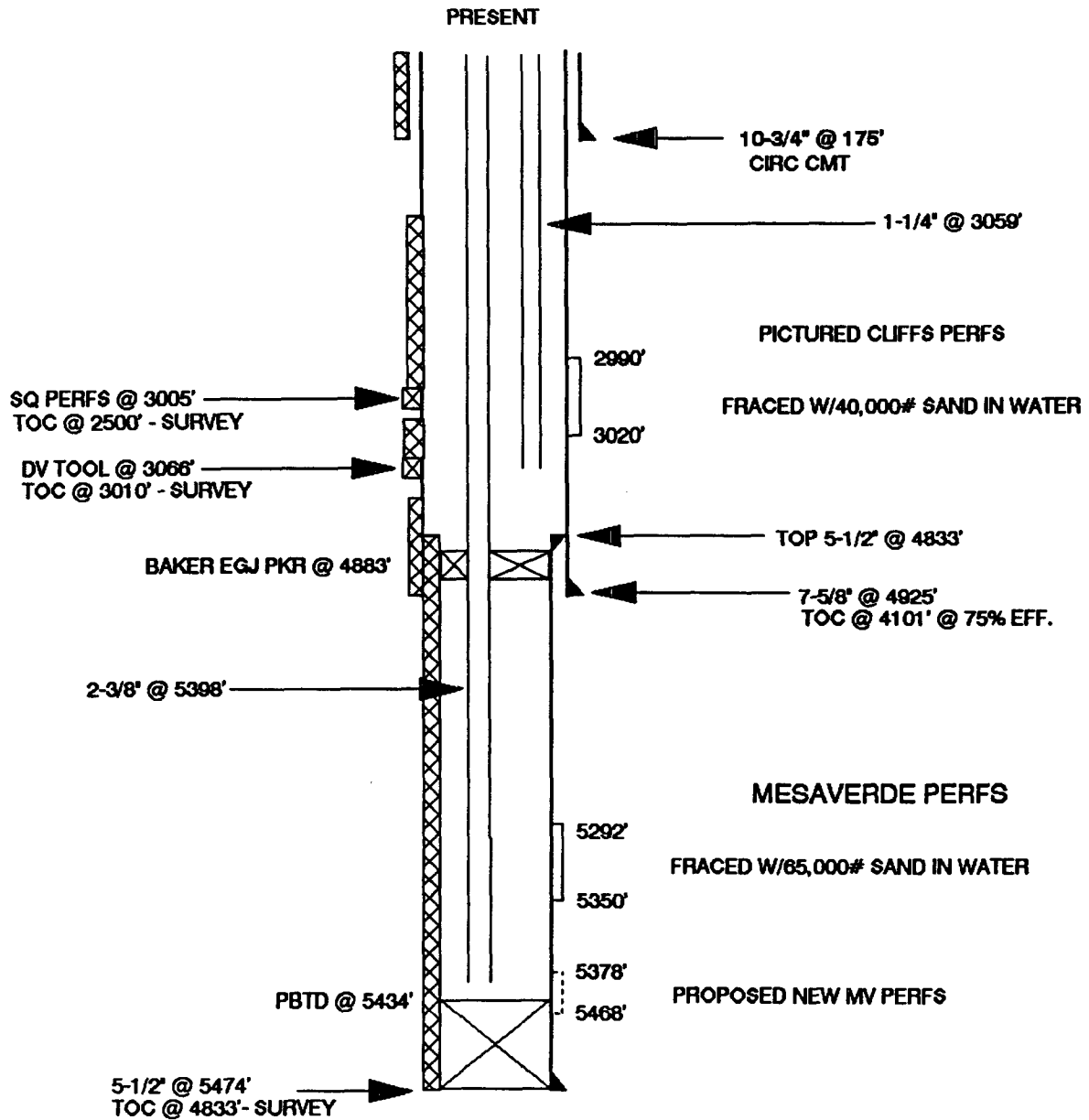
# STOREY C #11 MV/PC

UNIT G SECTION 34 T28N R9W  
SAN JUAN COUNTY, NEW MEXICO



# STOREY C #11 MV/PC

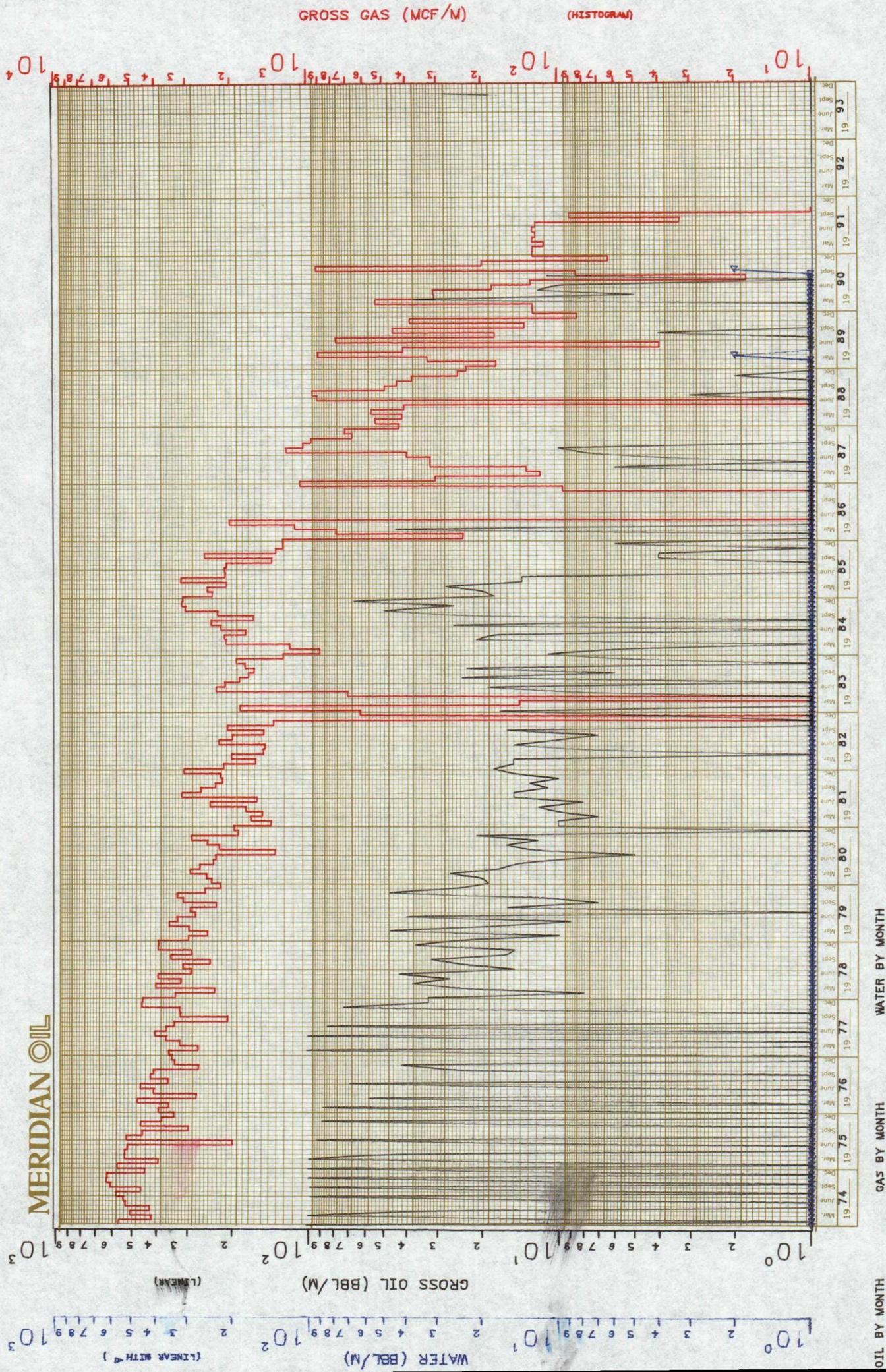
UNIT G SECTION 34 T28N R9W  
SAN JUAN COUNTY, NEW MEXICO





DWIGHTS NUMBER	:	30428N09W34G00MV
LEASE/WELL NAME	:	BLANCO (MESAVERDE)
RESERVOIR	:	
FIELD	:	STOREY C
OPERATOR	:	MERIDIAN OIL INC

000011

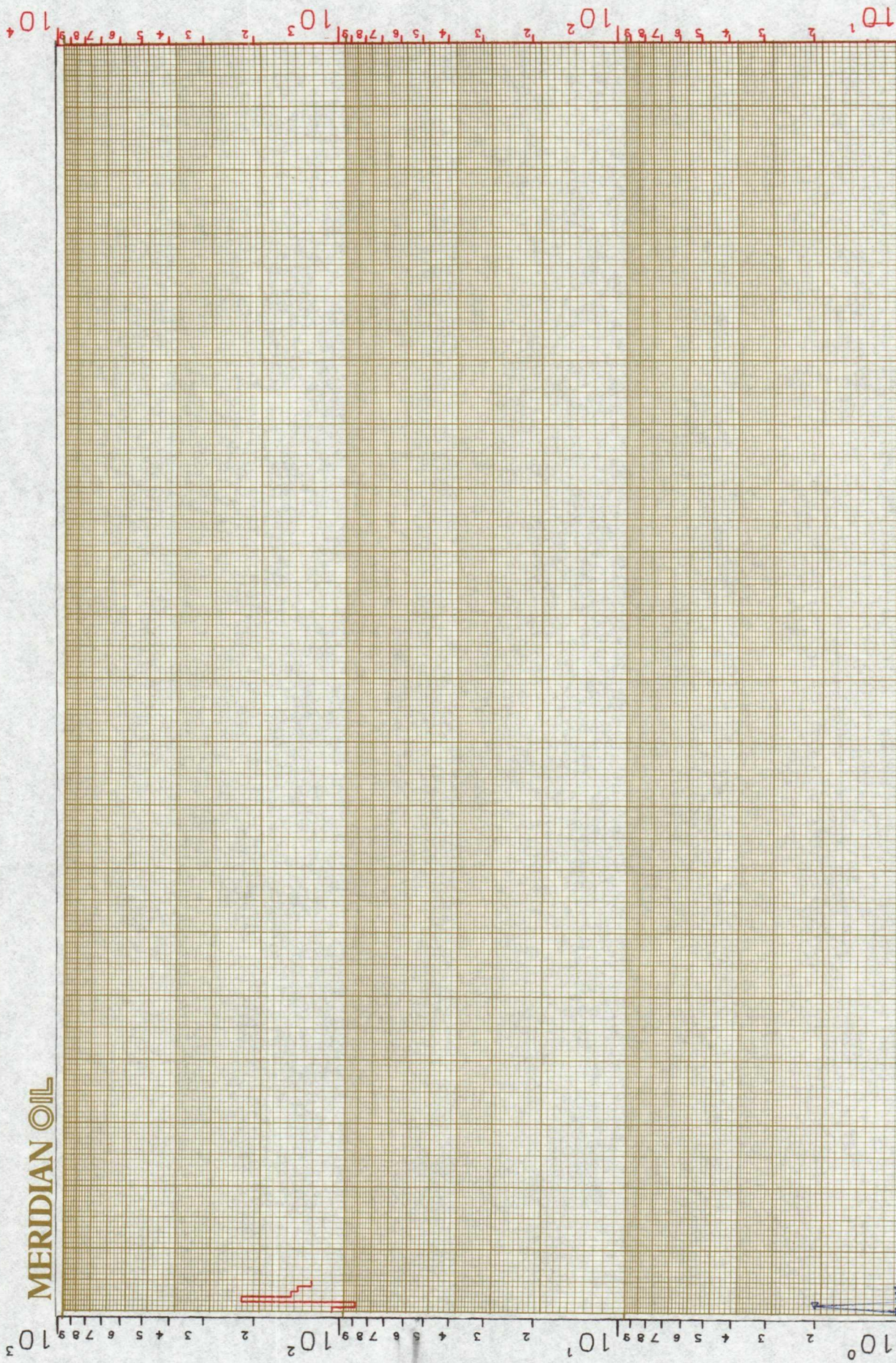
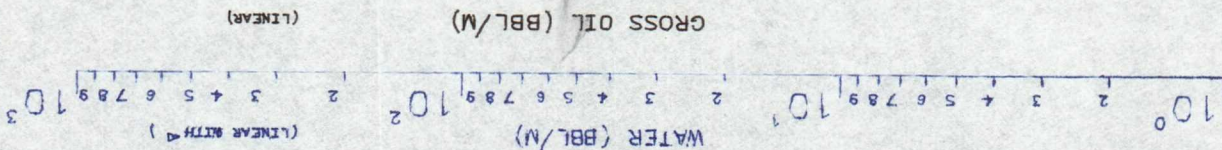




PROJECT : NO STATE FOUND  
STATE : SAN JUAN  
COUNTY : 34C 28N  
LOCATION :  
PAGE NUMBER : 0000001-B

DWIGHTS NUMBER : 30428N09W34G00PC  
LEASE/WELL NAME : BLANCO SOUTH (PICTURE CLIFF 000011  
RESERVOIR :  
FIELD : STOREY C  
OPERATOR : MERIDIAN OIL INC

# MERIDIAN OIL



1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar	Mar
Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun	Jun
Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep	Sep
Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec	Dec

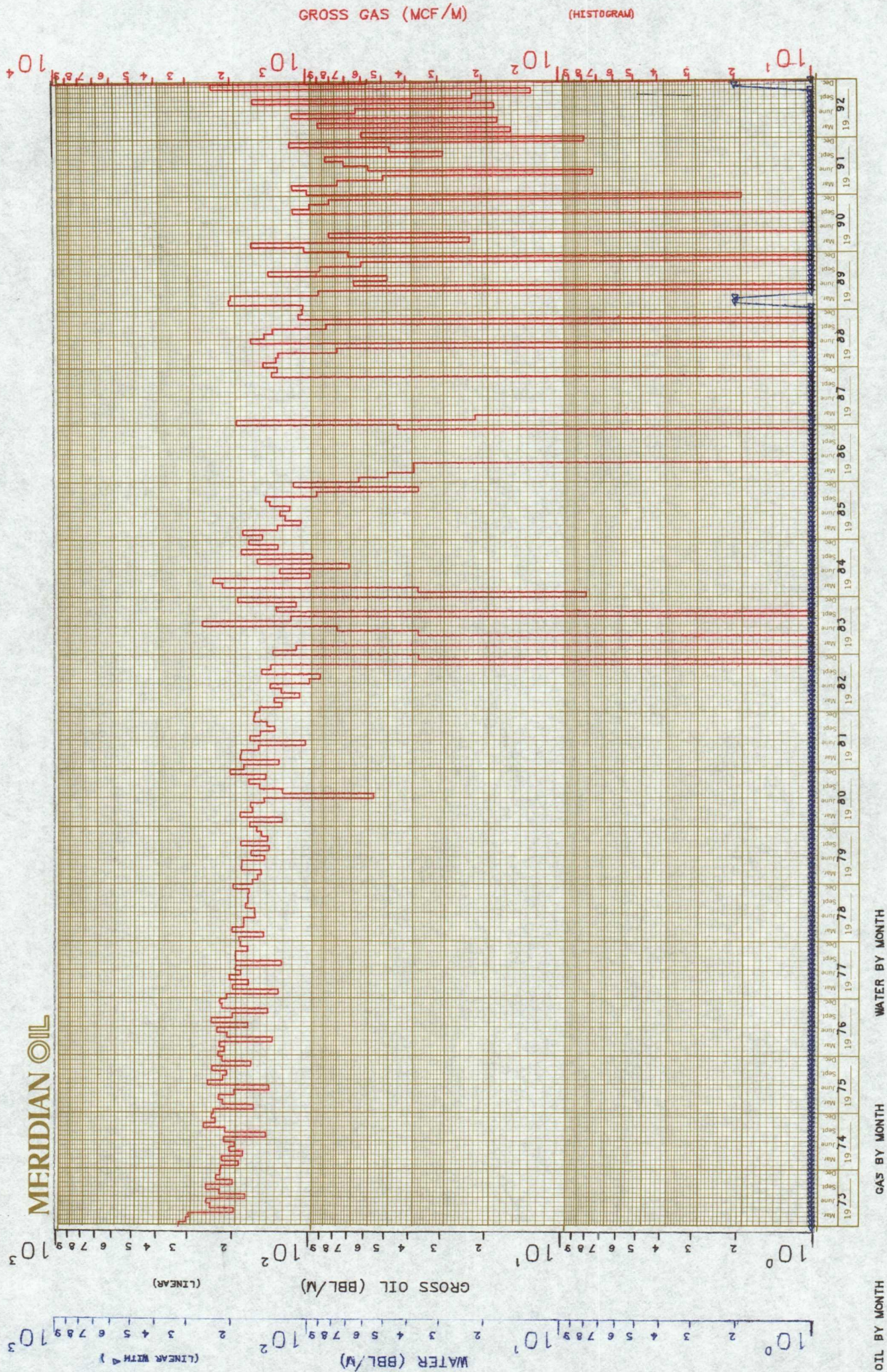
OIL BY MONTH

GAS BY MONTH

WATER BY MONTH



DWIGHTS NUMBER	:	30428N09W34G00PC
LEASE/WELL NAME	:	BLANCO SOUTH (PICTURE CLIFF 000011
RESERVOIR	:	
FIELD	:	STOREY C
OPERATOR	:	MERIDIAN OIL INC





Pertinent Data Sheet - STOREY C #11 MV/PC

Location: 1748' FNL 1750' FEL SEC. 34 T28N R09W, SAN JUAN COUNTY, N.M.

Field: South Blanco Pictured Cliffs  
Blanco Mesaverde

Elevation: 6824' TD: 5474'  
10' KB PBTD: 5434'

LEASE: Federal SF-077111  
DP#: PC=53612B MV=53612A  
GWI: 86.50%  
NRI: 71.36%

Completed: 6-6-58

Initial Potential:

PC: AOF=4015 MCF/D, Q=3474 MCF/D, SICP= 743 PSI  
MV: AOF=5045 MCF/D, Q=3568 MCF/D, SICP= 994 PSI

Casing Record:

Hole Size	Csq. Size	Wt. & Grade	Depth Set	Cement	Top/Cmt
15"	10-3/4"	32.75# S.W.	175'	150 sx	Circ Cmt
9-7/8"	7-5/8"	26.4# J-55	4925'	200 sx	4101' @ 75% Eff.
		Stage Tool @ 3066'		150 sx*	2500' Survey
6-3/4"	5-1/2"	15.5# J-55	4833'-5474'	200 sx	4833' Survey

Tubing Record: 2-3/8" 4.7# J-55 5398' 171 Jts S.N. @ 5361'  
Baker EGJ PKR @ 4883'  
1-1/4" 2.4# J-55 3059' 99 Jts

Formation Tops:

Ojo Alamo	Undeveloped
Kirtland	2094'
Fruitland	2705'
Pictured Cliffs	2978'
Mesaverde	4620'
Menefee	4647'
Point Lookout	5248'
Mancos	5436'

Logging Record: Electric Log, Microlog, Log

Stimulation: \*Initial survey showed TOC @ only 3010'. Perf 2 sq holes @ 3005' & sq w/150 sx. Resq w/ 80 sx cmt. Final survey has TOC @ 2500'.  
Perf Point Lookout 5748'-70', 5292'-5312', 5338'-50' w/2 spf & fraced w/65,000# sand in water. Perf PC 2990'-3020' & fraced w/40,000# sand in water.

Workover History: None

Production History: First Delivery: PC=10-1-58 MV=11-1-58. Cumulative: PC=875 MMCF & 243 BO MV=1605 MMCF & 15,255 BO. Capacity w/o compression: PC=30 MCF/D MV=0 MCF/D. PC tbg pressure = 178 psi. PC csg pressure = 183 psi. Line Pressure = 140 psi. Bradenhead = 0 psi. MV tbg = 0 psi (blindplated).

Pipeline: EPNG

PMP

STOREY C #11 MV/PC  
Recommended Procedure  
Open Lower MV & Commingle w/PC  
G 34 28 9

1. Comply to all NMOC, BLM, & MOI, rules & regulations. MOL and RU completion rig. Blow well down. NU 7-1/16" 900 series BOP with flow tee and stripping head. Test operation of rams. NU blooie line and 2-7/8" relief line.
2. TOH W/ 99 Jts 1-1/4" tbg & lay down. Set blanking plug in 2-3/8" tbg in S.N. @ 5361' & pressure test to 2500 psi. TOH w/171 Jts 2-3/8" tbg & Baker EGJ pkr (@ 4883').
3. Run 4-3/4" bit on tested 2-3/8" tbg. Drill & C.O. to new PBTD of 5470' w/air mist. Spot 12 bbls 2% KCL water on bottom for logging.
4. MI Wireline Truck. Run dual spaced neutron log from 5470'-5000'. Correlate to open hole Electric log. Hot-shot logs to Production Engr Dept before perforating.
5. Perf Lower MV w/ 2 spf @ 5468', 53', 35', 34', 33', 32', 31', 30', 20', 09', 5399', 91', 78'. Total 26-0.33 holes. Perf w/Tolson jets.
6. Spot and fill 7 - 400 bbl. frac tanks with 2% KCL water. Filter all water to 25 microns. Six tanks for gel and one for breakdown. Usable water required for frac is 2,071 bbls.
7. Run 5-1/2" pkr on 3-1/2" 9.3# P-110 w/shaved collars (4.25" O.D. 2.992" I.D.) rental frac string & set @ 5370'. Breakdown & attempt to balloff w/2000 gal 15% HCL acid & 65 perf balls. Acid to contain 1 gal/1000 gals water of F75N (surfactant) & 10#/1000 of L58 (corrosion inhibitor). Maximum pressure = 4500 psi. Record breakdown pressures. Lower pkr to 5470' to knock off perf balls. Reset pkr @ 5370'.
8. W/backside open, fracture treat well down rental frac string with 85,000 gals. of 20# gel water and 60,000# Arizona sand. Pump at 40 BPM. Sand to be tagged with 0.4 mCi/1000# Ir-192 tracer. Max. pressure (@ 40 BPM) is 6000 psi and estimated treating pressure is 4000 psi. Frac string friction @ 40 BPM is 3490 psi. Treat per the following schedule:

<u>Stage</u>	<u>Liquid (Gals.)</u>	<u>Sand Vol. (lbs.)</u>
Pad	25,000	----
0.5 ppg	10,000	5,000
1.0 ppg	40,000	40,000
1.5 ppg	10,000	15,000
Flush	<u>(1,961)</u>	----
Totals	85,000	60,000#

Cut flush by 25-30% if frac gradient is less than static water.



STOREY C #11 MV/PC WORKOVER PROCEDURE  
Page 2

Treat frac fluid with the following additives per 1000 gallons:

- \* 4.6 gal J877 (Base 20# Guar Gel)
- \* 1.0 gal. F75N (Non-ionic Surfactant)
- \* 1.0# J134 (Enzyme Breaker)
- \* 0.35# M275 (Bacteriacide)

9. Open well through choke manifold and monitor flow. Flow @ 20 bbl/hr, or less if sand is observed.
10. When well stops flowing, TOH w/frac string & pkr. TIH w/notched collar on 2-3/8" tbg & C.O. w/air/mist to 5470'. Take pitot gauges when possible.
11. When wellbore is sufficiently clean, TOH and run after frac gamma-ray log from 5470'-5000'.
12. TIH with 2-3/8" production tbg with standard seating nipple one joint off bottom. Land tbg @ 5350'. Again blow well clean. Take final pitot gauges, water & oil samples, and gas samples.
13. ND BOP and NU wellhead. Replace any bad valves on wellhead. Rig down & release rig.
14. Install wellhead compressor.

Approved: 

J. A. Howieson

VENDORS:

Wireline:	Blue Jet	325-5584
Frac & Acid:	Dowell	325-5096
RA Tagging:	Pro-Technics	326-7133

PMP

DATE: May 21, 1993

FORM: PICTURED CLIFFS

LOCATION

UNIT: 34  
SEC: 34  
TWN: 28N  
RNG: 09W

LEGEND

COMPLETION DATE

WELL NAME

IWHSIP-WHSIP-YEAR

MCF/D-Pwp FLOW-CUM (MMCF)

AS OF 12/1/92

MRJ 5/21/93

<p>AMOCO 56 MICHENER A LS #3 688-195-85 48-99-1425</p> <p>MOI 71 [28] HANCOCK B #10 680-221-85 28-99-675</p> <p>AMOCO 57 MICHENER A LS #4 INACTIVE 3/86 CUM 619 MMCF</p>	<p>MOI 62 HANCOCK B #8 P&amp;A 2/88 CUM 596 MMCF</p> <p>AMOCO 57 STOREY C LS #7 791-220-85 68-99-1528</p> <p>MOI 59 HANCOCK #5 755-180-85 43-99-1189</p> <p>AMOCO 56 STOREY C LS #2 749-242-83 37-169-612</p>	<p>MOI 62 HANCOCK B #9 P&amp;A 4/82 CUM 394 MMCF</p> <p>AMOCO 52 MICHENER A LS #1 1051-214-90 32-170-1029</p> <p>MOI 57 MICHENER B LS #1 709-210-88 0.1-143-792</p> <p>AMOCO 56 STOREY C LS #8 700-280-90 22-177-787</p>	<p>MOI 72 HANCOCK #9 793-201-90 75-146-961</p> <p>MOI 62 HANCOCK A #6 760-207-88 6-348-453</p> <p>MOI 72 LACKEY #5 INACTIVE 2/89 CUM 449 MMCF</p> <p>AMOCO 56 STOREY C LS #5 743-234-88 40-145-989</p> <p>MOI 71 HANCOCK A #5 658-223-90 88-132-1016</p>	<p>MOI 61 STOREY C #12 754-205-90 35-155-1080</p> <p>AMOCO 57 STOREY C #11 744-231-90 24-145-876</p> <p>AMOCO 56 STOREY C LS #9 700-258-88 3-144-833</p> <p>AMOCO 56 STOREY C LS #4 774-170-90 53-132-1322</p>	<p>MOI 56 STOREY C LS #3 INACTIVE 1/89 CUM 688 MMCF</p> <p>MOI 56 TURNER HUGHES #6 720-252-90 6-152-590</p> <p>MOI 55 INACTIVE 9/89 CUM 742 MMCF</p> <p>MOI 55 P&amp;A CUM 393 MMCF</p>	<p>AMOCO 57 STOREY C LS #10 739-198-88 1-144-1196</p> <p>MOI 61 HANCOCK A #3 801-190-90 24-153-792</p> <p>TEXACO 62 HOBBS C #1 788-175-90 19-139-1293</p> <p>AMOCO 57 FARMING C COM #1 708-246-90 19-163-1032</p>	<p>MOI 75 TURNER HUGHES #19 359-201-90 46-126-375</p> <p>AMOCO 55 FARMING D COM #1R N/A-167-90 32-131-97</p> <p>AMOCO 55 FARMING D COM #1 P&amp;A 4/79 CUM 339 MMCF</p>	<p>MOI 56 TURNER HUGHES #5 732-222-90 11-155-641</p> <p>MOI 55 FARMING D COM #1 757-240-90 15-128-353</p> <p>MOI 52 FARMING D COM #1 603-210-90 16-140-443</p>
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R-09-W

DATE: May 21, 1993

FORM: MESAVERDE

LOCATION

UNIT:

SEC: 34

TWN: 28N

RNG: 09W

LEGEND

COMPLETION DATE

WELL NAME

IWHSIP-WHSIP-YEAR

MC/FD-Pwp FLOW-CUM (MMCF)

AS OF 12/1/92

MRJ 5/21/93

<p>MOI 52 HANCOCK B #1 INACTIVE 4/90 CUM 1079 MMCF</p> <p>[28]</p> <p>AMOCO 57 MICHENER A LS #4 INACTIVE 4/90 CUM 1421 MMCF MOI 85 HANCOCK B #1A N/A-447-91 76-398-155</p>	<p>AMOCO 57 STOREY C LS #7 1058-490-89 62-358-1448</p> <p>MOI 85 HANCOCK #5A N/A-474-91 78-380-234 [27]</p> <p>AMOCO 86 STOREY C LS #7A N/A-271-91 70-412-265</p> <p>MOI 59 HANCOCK #5 938-361-91 48-191-1182</p> <p>MOI 85 STOREY C #11A N/A-226-91 9-439-228</p> <p>AMOCO 57 STOREY C LS #9 1031-434-89 28-298-1710</p>	<p>MOI 85 LACKEY #1A N/A-630-91 153-354-525 [26]</p> <p>55 HANCOCK A #2 0-524-91 49-358-1284 [26]</p> <p>50 LACKEY #1 INACTIVE 4/91 CUM 1067 MMCF</p> <p>85 HANCOCK A #2A N/A-452-91 120-347-444</p>	<p>MOI 52 HANCOCK A #1 P&amp;A 576 CUM 65 MMCF</p> <p>[35]</p> <p>AMOCO 57 STOREY C LS #10 INACTIVE 7/89 CUM 2117 MMCF</p> <p>TEXACO</p>	<p>MOI 58 STOREY C #11 INACTIVE 8/91 CUM 1604 MMCF [34]</p> <p>AMOCO 86 STOREY C LS #9A N/A-319-91 45-422-200</p> <p>MOI 63 TURNER HUGHES #15 916-334-91 101-287-1635</p> <p>85 HUGHES #10A N/A-482-89 85-333-176</p> <p>59 HUGHES #10 1040-483-91 23-181-1053</p> <p>85 TURNER HUGHES #15A N/A-293-91 30-363-133</p>	<p>AMOCO 86 MICHENER A #7 N/A-448-89 42-0-158</p> <p>AMOCO 57 [33] STOREY C LS #8 1045-472-86 31-305-2442</p> <p>MOI 85 TURNER HUGHES #21A N/A-513-91 115-404-302</p> <p>85 [4] #21 N/A-543-91 71-401-158</p> <p>85 #14A N/A-514-91 134-401-405</p>	<p>62 BLANCO COM #5 932-368-84 86-283-1466</p> <p>[2]</p> <p>64 BURROUGHS COM B #4 INACTIVE 12/87 CUM 1346 MMCF</p>	<p>85 #14 N/A-494-91 19-412-2095</p> <p>85 #14A N/A-514-91 134-401-405</p>
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R-08-W



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION  
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD  
AZTEC, NEW MEXICO 87410  
(505) 334-6178

Date: 11-10-93

*Attn: Ben Stone*

Oil Conservation Division  
P.O. Box 2088  
Santa Fe, NM 87504-2088

RE: Proposed MC \_\_\_\_\_  
Proposed NSL \_\_\_\_\_  
Proposed WFX \_\_\_\_\_  
Proposed NSP \_\_\_\_\_

Proposed DHC X \_\_\_\_\_  
Proposed SWD \_\_\_\_\_  
Proposed PMX \_\_\_\_\_  
Proposed DD \_\_\_\_\_

Gentlemen:

I have examined the application received on 11-10-93  
for the Meridian Oil Inc. Storey C#11  
OPERATOR LEASE & WELL NO.

G-34-28N-09W and my recommendations are as follows:  
UL-S-T-R

*Approve*

Yours truly,

*Emil Brash*