

071-06085

## LABORATORY WATER ANALYSIS



02144607

Proj 1594

To AMOCO Production  
1313 NORTH DENVER AVE.  
FT. LUTON, CO. 80621

Date 1-7-65

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Well No. MGP ENTERPRISE #1 Formation RATON SAND ??Location TRINIDAD, CO

Field \_\_\_\_\_ Sample Source \_\_\_\_\_

Remarks: ATT: MR. SAATHOFFSpecific Gravity 1.000pH..... 8.5Chlorides..... 241 mpl\*Calcium..... 20.7 mplMagnesium..... NEG mplBicarbonates.... — mplSulfates..... NEG. mplIron..... NEG. mplResistivity @ 72 °F 3.50 Ohm-cm

\* milligrams per liter

Respectfully submitted,

HALLIBURTON COMP

Laboratory analyst: [Signature]

By \_\_\_\_\_

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# CORE LABORATORIES, INC

1300 SOUTH POTOMAC ST. SUITE 130  
AURORA, CO, 80012

PHONE: (303) 751-1780



## ANALYTICAL REPORT

071-06085

COMPANY: AMOCO PRODUCTION COMPANY

DATE SAMPLED: 9/12/85

WELL NAME:

DATE RECEIVED: 9/24/85

TYPE OF WATER:

DEPTH:

DATE ANALYZED: 9/25/85

LEASE: MGP ENTERPRISES #1

LOCATION:

FILE NUMBER: 6307-W85657

FORMATION:

COUNTY:

SAMPLE #: 4

## CONSTITUENTS

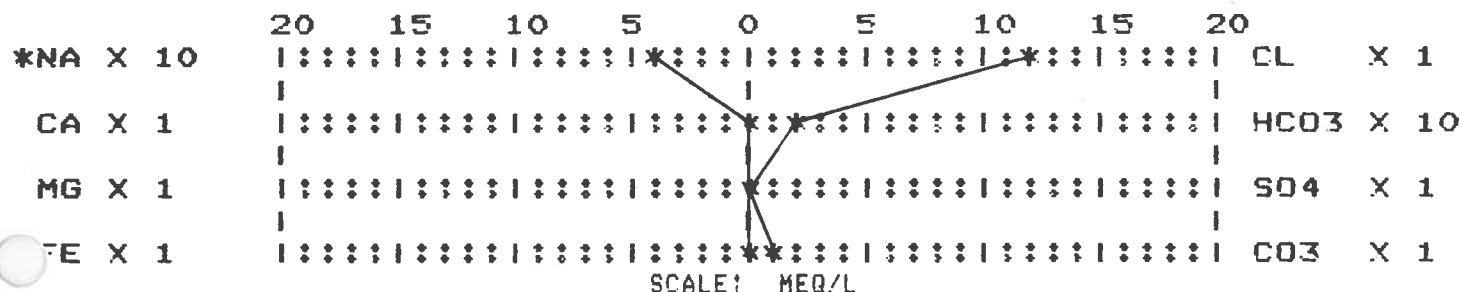
CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
CALC. SODIUM (NA)	798	34.3	CHLORIDE (CL)	429	12.1
CALCIUM (CA)	7.0	0.3	SULFATE (SO4)	15	0.3
MAGNESIUM (MG)	1.2	0.1	CARBONATE (CO3)	20	0.7
IRON (FE)	0.2	0.0	BICARBONATE (HCO3)	1384	22.7
POTASSIUM (K)	40	1.0	HYDROXIDE (OH)	<0.1	0.0

TOTAL DISSOLVED SOLIDS (CALC.) 2684 MG/L

HYDROGEN SULFIDE: NEGATIVE

## PHYSICAL PROPERTIES

PH 8.43  
SPECIFIC GRAVITY @ 77 F 1.0019  
RESISTIVITY (OHM-METERS) @ 77 F 3.06



\*-INCLUDES POTASSIUM MEQ

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## ANALYTICAL REPORT

071-06685

COMPANY: AMOCO PRODUCTION COMPANY

DATE SAMPLED: 9/18/85

WELL NAME:  
TYPE OF WATER:

DATE RECEIVED: 9/24/85

DEPTH:  
LEASE: MGP ENTERPRISES #1

DATE ANALYZED: 9/25/85

LOCATION:

FILE NUMBER: 6307-W85658

FORMATION:

COUNTY:

SAMPLE #: 7

## CONSTITUENTS

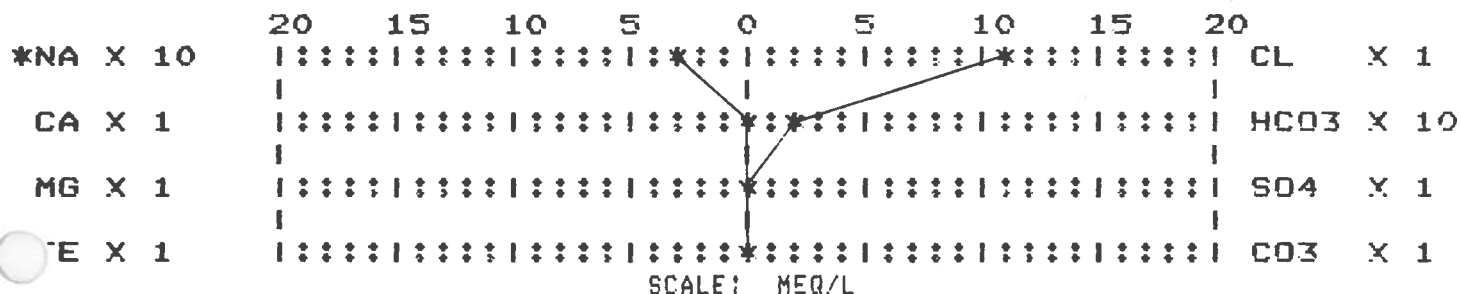
CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
CALC. SODIUM (NA)	768	33.4	CHLORIDE (CL)	384	10.8
CALCIUM (CA)	8.5	0.4	SULFATE (SO4)	17	0.4
MAGNESIUM (MG)	1.1	0.1	CARBONATE (CO3)	11	0.4
IRON (FE)	0.1	0.0	BICARBONATE (HCO3)	1408	23.1
POTASSIUM (K)	28	0.7	HYDROXIDE (OH)	<0.1	0.0

TOTAL DISSOLVED SOLIDS (CALC.) 2625 MG/L

HYDROGEN SULFIDE: NEGATIVE

## PHYSICAL PROPERTIES

PH 8.37  
SPECIFIC GRAVITY @ 77 F 1.0019  
RESISTIVITY (OHM-METERS) @ 77 F 3.19



\*-INCLUDES POTASSIUM MEQ

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## ANALYTICAL REPORT

071-66085

COMPANY: AMOCO PRODUCTION COMPANY

DATE SAMPLED: 9/24/85

WELL NAME:  
TYPE OF WATER:  
DEPTH:

DATE RECEIVED: 9/30/85

LEASE: MGP ENTERPRISES #1  
LOCATION:  
FORMATION:  
COUNTY:

DATE ANALYZED: 9/30/85

FILE NUMBER: 6307-W85679

SAMPLE #: 6

## CONSTITUENTS

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
Na, SODIUM (NA)	702	30.5	CHLORIDE (CL)	304	8.6
CALCIUM (CA)	2.6	0.1	SULFATE (SO4)	25	0.5
MAGNESIUM (MG)	0.5	0.0	CARBONATE (CO3)	285	9.5
IRON (FE)	<0.1	0.0	BICARBONATE (HCO3)	789	12.9
POTASSIUM (K)	32	0.8	HYDROXIDE (OH)	<0.1	0.0

TOTAL DISSOLVED SOLIDS (CALC.) 2140 MG/L

HYDROGEN SULFIDE: NEGATIVE

## PHYSICAL PROPERTIES

PH 9.57  
SPECIFIC GRAVITY @ 77 F 1.0017  
RESISTIVITY (OHM-METERS) @ 77 F 3.45

	20	15	10	5	0	5	10	15	20		
*NA X 10		:	:	:	:	:	:	:	:		CL X 1
CA X 1		:	:	:	:	:	:	:	:		HCO3 X 1
MG X 1		:	:	:	:	:	:	:	:		SO4 X 1
FE X 1		:	:	:	:	:	:	:	:		CO3 X 1
SCALE: MEQ/L											

\*-INCLUDES POTASSIUM MEQ

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## ANALYTICAL REPORT

071-06085

COMPANY: AMOCO PRODUCTION COMPANY

DATE SAMPLED: 10/5/85

WELL NAME:

DATE RECEIVED: 10/9/85

TYPE OF WATER:

DEPTH:

DATE ANALYZED: 10/9/85

LEASE: MGP ENTERPRISES #1

LOCATION:

FILE NUMBER: 6307-W85723

FORMATION:

COUNTY:

SAMPLE #: 6

## CONSTITUENTS

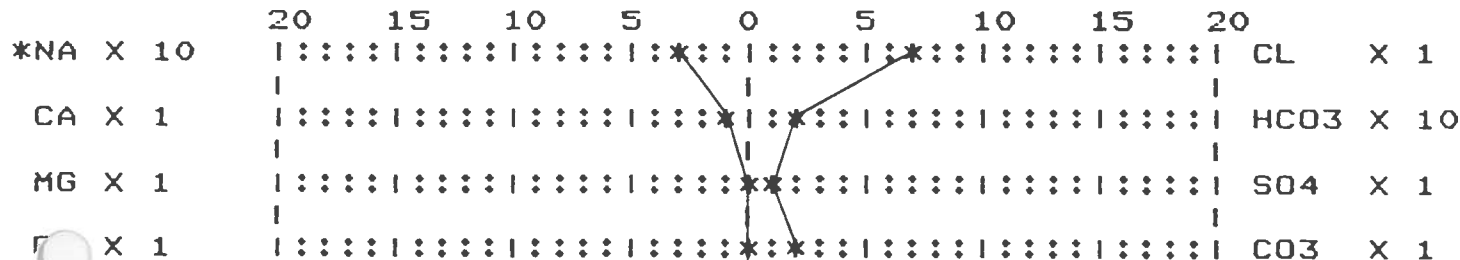
CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
CALC. SODIUM (NA)	714	31.0	CHLORIDE (CL)	254	7.2
CALCIUM (CA)	9.6	0.5	SULFATE (SO4)	44	0.9
MAGNESIUM (MG)	1.0	0.1	CARBONATE (CO3)	51	1.7
IRON (FE)	0.2	0.0	BICARBONATE (HCO3)	1371	22.5
POTASSIUM (K)	25	0.6	HYDROXIDE (OH)	<0.1	0.0

TOTAL DISSOLVED SOLIDS (CALC.) 2469 MG/L

HYDROGEN SULFIDE: NEGATIVE

## PHYSICAL PROPERTIES

PH	8.64
SPECIFIC GRAVITY @ 77 F	1.0017
RESISTIVITY (OHM-METERS) @ 77 F	3.57



(-INCLUDES POTASSIUM MEQ)

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## ANALYTICAL REPORT

071-06085

COMPANY: AMOCO PRODUCTION COMPANY

DATE SAMPLED: 10/14/85

WELL NAME:

DATE RECEIVED: 10/24/85

TYPE OF WATER:

DEPTH:

DATE ANALYZED: 10/24/85

LEASE: MGP ENTERPRISES #1

LOCATION:

FILE NUMBER: 6307-W85778

FORMATION:

COUNTY:

SAMPLE #: 4

## CONSTITUENTS

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
CALC. SODIUM (NA)	655	28.5	CHLORIDE (CL)	193	5.4
CALCIUM (CA)	6.2	0.3	SULFATE (SO4)	11	0.2
MAGNESIUM (MG)	0.8	0.1	CARBONATE (CO3)	25	0.8
IRON (FE)	<0.1	0.0	BICARBONATE (HCO3)	1399	22.9
POTASSIUM (K)	22	0.6	HYDROXIDE (OH)	<0.1	0.0

TOTAL DISSOLVED SOLIDS (CALC.) 2312 MG/L

HYDROGEN SULFIDE: NEGATIVE

## PHYSICAL PROPERTIES

PH	8.48
SPECIFIC GRAVITY @ 77 F	1.0015
RESISTIVITY (OHM-METERS) @ 77 F	3.85

	20	15	10	5	0	5	10	15	20		
*NA X 10		:	:	:	:	:	:	:	:		CL X 1
CA X 1		:	:	:	:	:	:	:	:		HCO3 X 10
MG X 1		:	:	:	:	:	:	:	:		SO4 X 1
X 1		:	:	:	:	:	:	:	:		CO3 X 1

SCALE: MEQ/L

\*-INCLUDES POTASSIUM MEQ

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## ANALYTICAL REPORT

071-06085

COMPANY: AMOCO PRODUCTION CO.

DATE SAMPLED: 15-DEC-85

WELL NAME: M.G.P. ENT. #1

DATE RECEIVED: 30-DEC-85

TYPE OF WATER:

DEPTH:

LEASE:

DATE ANALYZED: 31-DEC-85

LOCATION:

14,183 TBNWR

FORMATION:

FILE NUMBER: 6307-W85928

COUNTY:

SAMPLE #: 1

## CONSTITUENTS

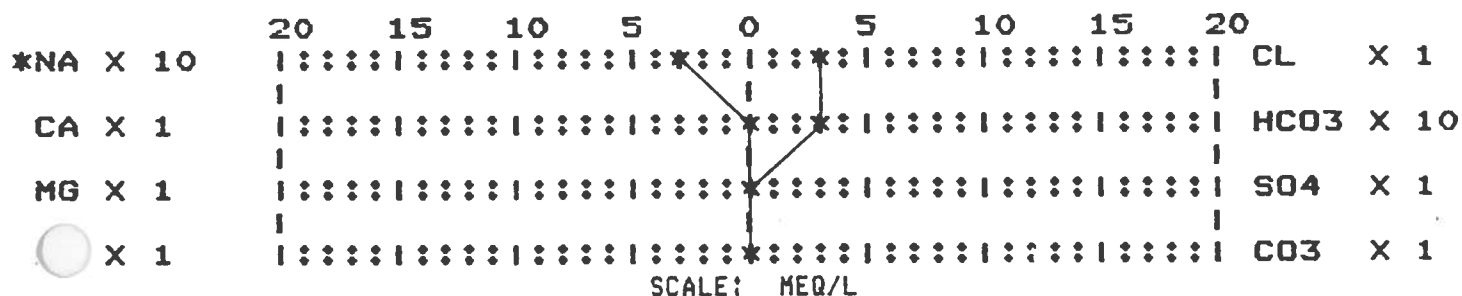
CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
SODIUM (NA)	646	28.1	CHLORIDE (CL)	115	3.2
CALCIUM (CA)	7.2	0.4	SULFATE (SO4)	21	0.4
MAGNESIUM (MG)	0.7	0.1	CARBONATE (CO3)	<0.1	0.0
IRON (FE)	<0.1	0.0	BICARBONATE (HCO3)	1540	25.2
POTASSIUM (K)	16	0.4	HYDROXIDE (OH)	<0.1	0.0

TOTAL DISSOLVED SOLIDS (CALC.) 2345 MG/L

HYDROGEN SULFIDE: NEGATIVE

## PHYSICAL PROPERTIES

PH 8.26  
SPECIFIC GRAVITY @ 77 F 1.0020  
RESISTIVITY (OHM-METERS) @ 77 F 4.08



K-INCLUDES POTASSIUM MEQ



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## ANALYTICAL REPORT

071-06085

COMPANY: AMOCO PRODUCTION CO.

DATE SAMPLED: 15-JAN-86

WELL NAME: M.G.P. ENT. #1

DATE RECEIVED: 17-JAN-86

TYPE OF WATER:

DEPTH:

DATE ANALYZED: 20-JAN-86

LEASE:

LOCATION:

FORMATION:

FILE NUMBER: 6307-W86047

COUNTY:

SAMPLE #: 1

## CONSTITUENTS

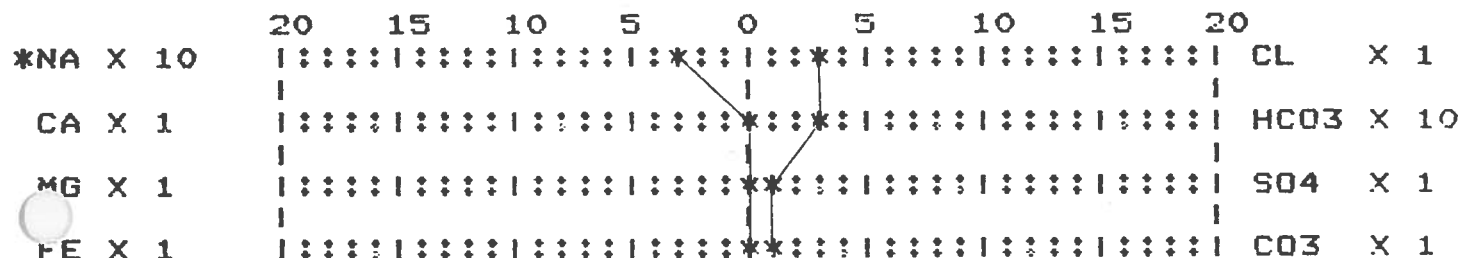
CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
CHLORIDE (CL)	671	29.2	CHLORIDE (CL)	119	3.4
CALCIUM (CA)	7.1	0.4	SULFATE (SO4)	22	0.5
MAGNESIUM (MG)	0.7	0.1	CARBONATE (CO3)	23	0.8
IRON (FE)	<0.1	0.0	BICARBONATE (HCO3)	1550	25.4
POTASSIUM (K)	15	0.4	HYDROXIDE (OH)	<0.1	0.0

TOTAL DISSOLVED SOLIDS (CALC.) 2407 MG/L

HYDROGEN SULFIDE: NEGATIVE

## PHYSICAL PROPERTIES

PH 8.43  
SPECIFIC GRAVITY @ 77 F 1.0017  
RESISTIVITY (OHM-METERS) @ 77 F 3.98



SCALE: MEQ/L

\*-INCLUDES POTASSIUM MEQ