

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
BENSON-MONTIN-GREER DRILLING CORPORATION
FOR ADMINISTRATIVE APPROVAL OF THE
CONVERSION OF TWO EXISTING WELLS AND
THE DRILLING OF ONE ADDITIONAL WELL
FOR PURPOSES OF GAS INJECTION IN THE
WEST PUERTO CHIQUITO MANCOS OIL POOL,
RIO ARriba COUNTY, NEW MEXICO.

PMX - 38
Filed July 5
CASE NO. 3743

A P P L I C A T I O N

Comes now Benson-Montin-Greer Drilling Corporation, by and
through its attorneys, Burr & Cooley, 152 Petroleum Center Building,
Farmington, New Mexico, and respectfully makes application to the
Commission pursuant to Rule 10 of the Special Rules and Regulations
for the Benson-Montin-Greer West Puerto Chiquito-Mancos Pressure
Maintenance Project (Order No. R-3401), for administrative approval
of:

1. The conversion of the following described existing wells to
gas injection wells, to wit:

- A. Canada Ojitos Unit Well No. 5 (Well No. B-18) located
835 feet from the north line and 1495 feet from the
east line of Section 18, Township 25 North, Range
1 East, N.M.P.M., Rio Arriba County, New Mexico;
- B. Canada Ojitos Unit Well No. 17 (Well No. G-1) located
1980 feet from the north line and 1880 feet from the
east line of Section 1, Township 24 North, Range 1
West, N.M.P.M., Rio Arriba County, New Mexico.

2. The drilling of the following described additional well for
purposes of gas injection:

- A. Canada Ojitos Unit Well No. 18 (Well No. C-5), to be
located 900 feet from the north line and 1700 feet
from the west line of Section 5, Township 25 North,
Range 1 East, N.M.P.M., Rio Arriba County, New
Mexico.

A plat showing the location of the proposed injection wells referred to above, all wells within the project area, all offset operators, and the location of all wells which offset the project area is attached hereto as Exhibit "A" and made a part hereof for all purposes.

Schematic drawings of each of the proposed injection wells which fully describe the casing, tubing, perforated interval, and depth showing that the injection of gas will be confined to the Niobrara member of the Mancos Shale are attached hereto as Exhibits "B", "C" and "D" respectively and made a part hereof for all purposes.

That the subject application is made by Benson-Montin-Greer Drilling Corporation as operator of the Canada Ojitos Unit Area and on behalf of all working interest owners in the Canada Ojitos Unit. All direct and diagonal drilling units which offset the proposed injection wells referred to above are situated in the Canada Ojitos Unit Area and are owned by the working interest owners of said unit in the same proportions as are the drilling blocks on which the proposed injection wells are located. In view of the fact that there are no third party offset operators to the proposed injection wells, there is no necessity for the letter notifications referred to in Rule 10 (3) of Commission Order No. R-3401, and the Secretary is hereby respectfully requested to grant immediate approval of the subject application.

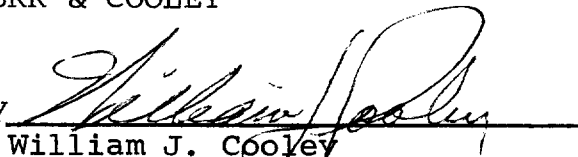
That the granting of the foregoing application will result in the prevention of waste and the protection of correlative rights and will in all respects be in harmony with good conservation practices.

WHEREFORE, good cause having been shown, and there being no third party offset operators to the proposed injection wells, the Applicant respectfully requests the Secretary-Director of the Commission to grant immediate administrative approval of the foregoing application.

Respectfully submitted,

BURR & COOLEY









By

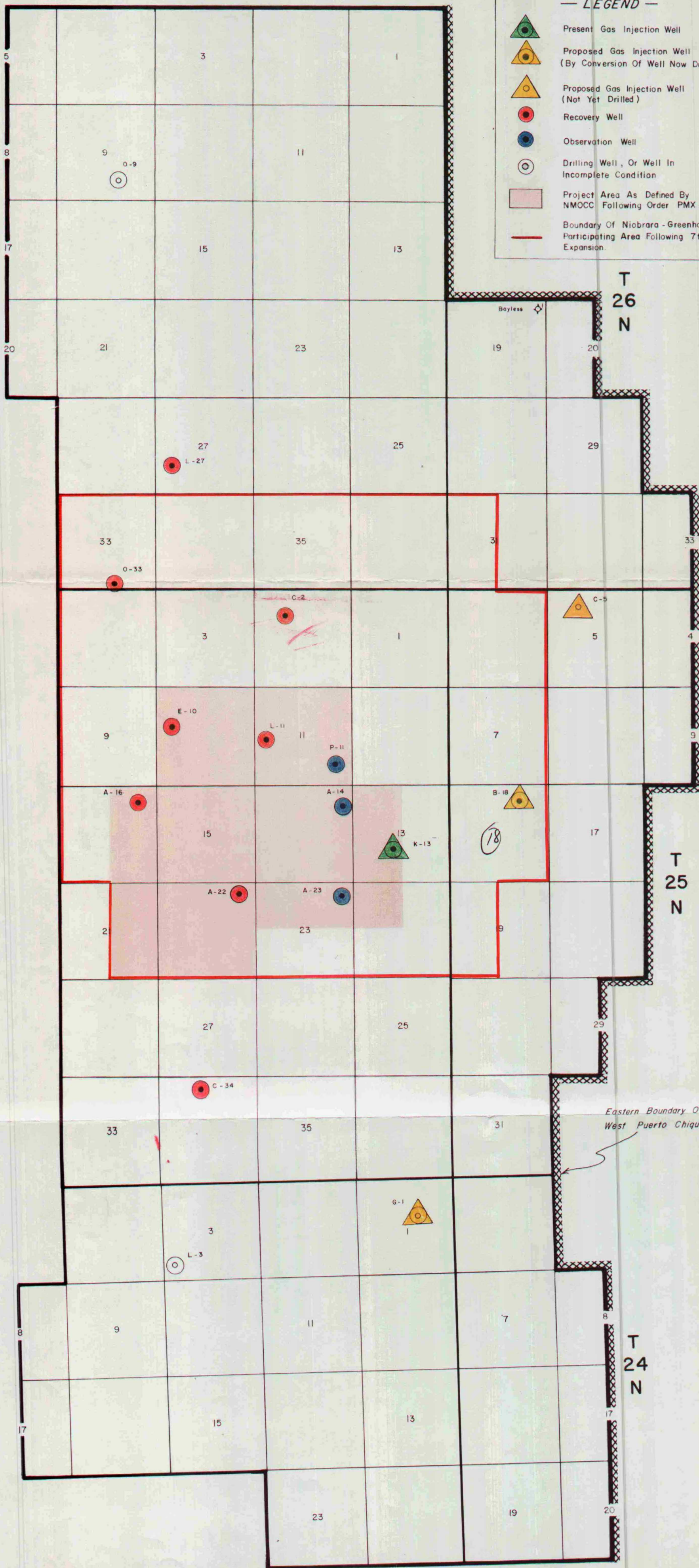
A handwritten signature in cursive script, appearing to read "William J. Cooley", is written over a horizontal line.

William J. Cooley

Attorneys for Applicant
152 Petroleum Center Building
Farmington, New Mexico 87401

— LEGEND —

-  Present Gas Injection Well
-  Proposed Gas Injection Well
(By Conversion Of Well Now Drilled)
-  Proposed Gas Injection Well
(Not Yet Drilled)
-  Recovery Well
-  Observation Well
-  Drilling Well, Or Well In
Incomplete Condition
-  Project Area As Defined By
NMOCC Following Order PMX-35
-  Boundary Of Niobrara - Greenhorn
Participating Area Following 7th
Expansion.



RIW

RIE

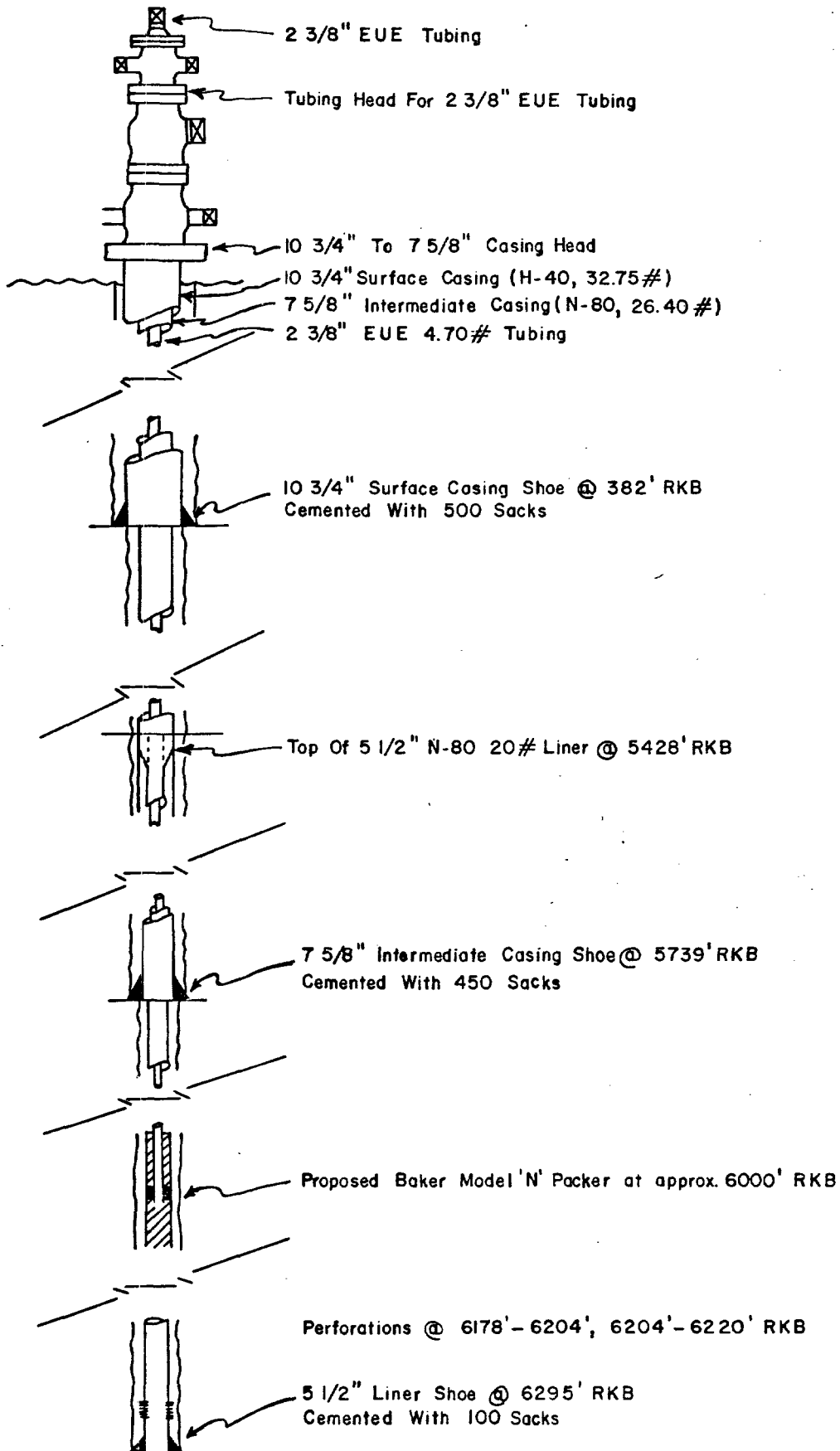
A

BENSON MONTIN GREER DRILLING CORP.
CAÑADA OJITOS UNIT #17 (G-I)

PROPOSED GAS INJECTION WELL

Top Niobrara 5600'±

Base Niobrara (est.) 6600'±



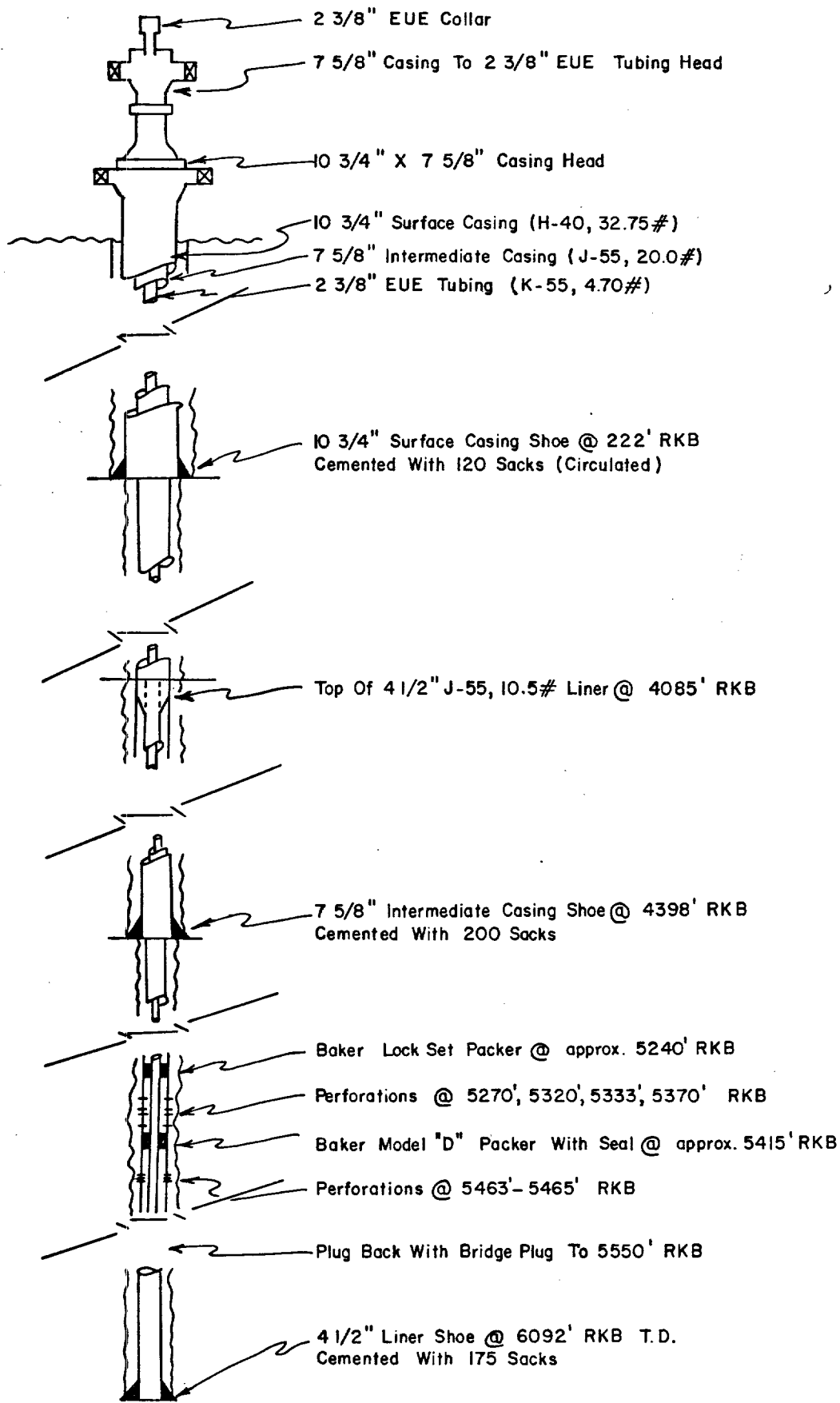
BENSON MONTIN GREER DRILLING CORP.

CANADA OJITOS UNIT # 5 (B-18)

PROPOSED GAS INJECTION WELL

Top Niobrara 4940' RKB

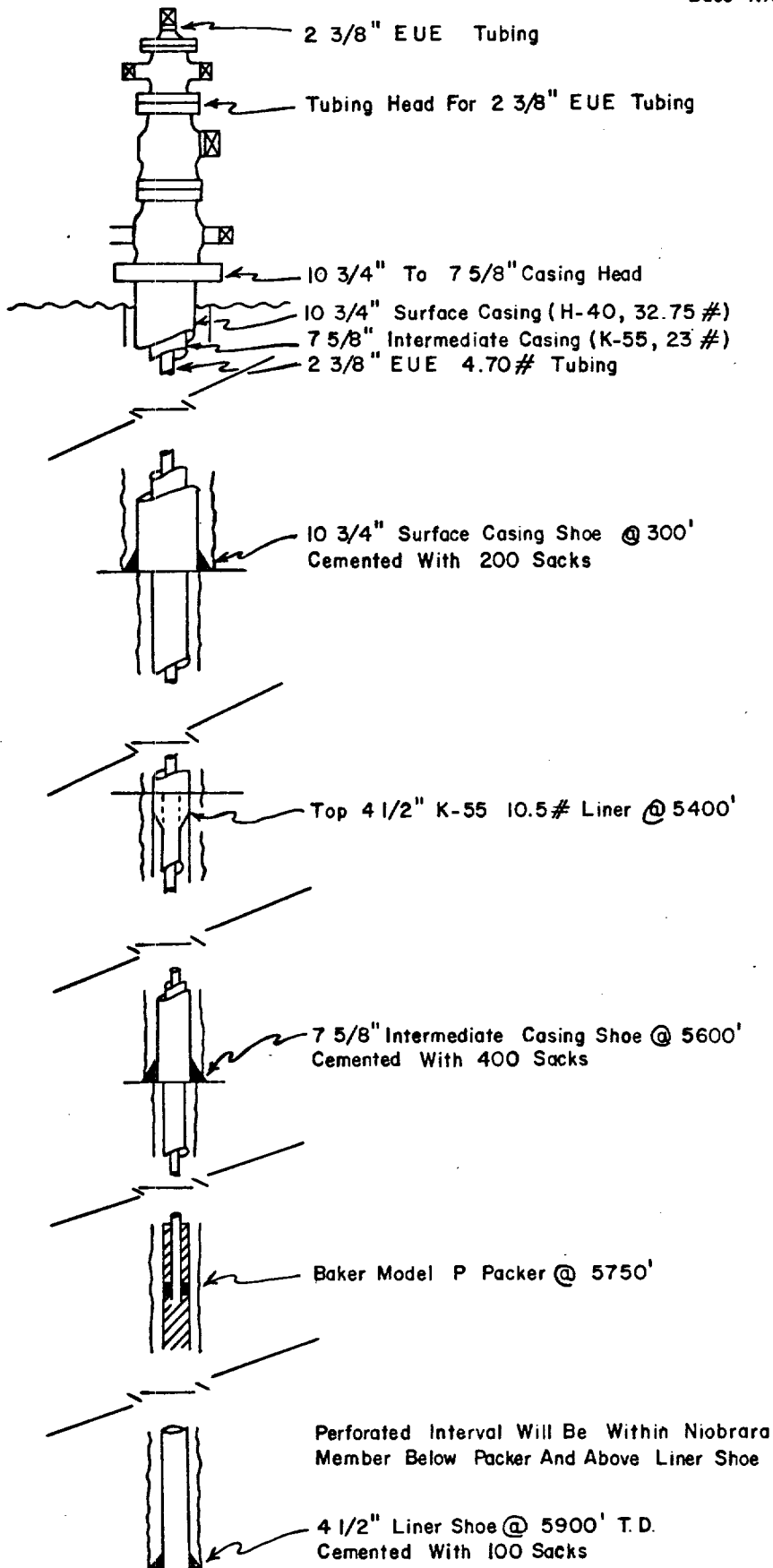
Base Niobrara 5950' RKB



BENSON MONTIN GREER DRILLING CORP.
CAÑADA OJITOS UNIT #18 (C-5)
PROPOSED GAS INJECTION WELL

NOTE: This Well Not Drilled - All Depths, etc. are estimated.

Top Niobrara (est.) 5000'
Base Niobrara (est.) 6000'



D

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION



January 5, 1987

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Benson-Montin-Greer Drilling Corp.
221 Petroleum Center Building
Farmington, New Mexico 87401

Attention: A. R. Greer

Re: Amendment of
Order No. PMX-38


Dear Sir:

Reference is made to your request dated December 3, 1986, to amend Division Order No. PMX-38. This order authorized the use of the Canada Ojitos Unit Well No. 17, located 1980 feet from the North and East lines of Section 1, Township 24 North, Range 1 West, NMPM, Rio Arriba County, New Mexico, as a gas injection well within the West Puerto Chiquitos-Mancos Pressure Maintenance Project. It is our understanding that you wish to change the mechanical configuration of the well so as to utilize the casing-tubing annulus for gas injection into the "A" and "B" zones of the Niobrara formation, and to further run a string of 2 3/8 inch tubing to be used for gas injection into the "C" zone of said Niobrara formation. From the gas analysis that was sent with the application, it appears that corrosion should not be a problem in the well.

You are therefore authorized to alter the mechanical configuration of the Canada Ojitos Unit Well No. 17, located as described above, so as to utilize the casing-tubing annulus for gas injection into the Niobrara formation, subject to the following conditions:

- 1) All planned mechanical changes in the well shall be submitted to the supervisor of the Division's Aztec District Office for approval.
- 2) The Division may require the running of a CBL, casing inspection log, or other log in order to determine mechanical integrity in the well.
- 3) This authority will terminate if it becomes apparent that the injected gas is not being confined to the injection interval.

Sincerely,


Charles Roybal,
Acting Director

xc: OCD-Aztec
D. Catanach

BENSON-MONTIN-GREER DRILLING CORP.

221 PETROLEUM CENTER BUILDING, FARMINGTON, NM. 87401 505-325-8874

December 3, 1986

Oil Conservation Division
310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87501

Attention: Mr. Dave Catanach

RE: CANADA OJITOS UNIT, RIO ARriba COUNTY
REQUEST TO WORKOVER INJECTION WELL
#17 (G-1) TO EXTEND INJECTION TO
NIOBRARA A AND B ZONES

Gentlemen:

Benson-Montin-Greer Drilling Corp., as operator of the Canada Ojitos Unit, requests authority to extend injection to the Niobrara A and B zones in accordance with the Sundry Notice dated 11/04/86, copy enclosed for your reference.

Also enclosed (yellow color) is a schematic diagram showing the existing casing strings; along with (pink color) schematic diagram showing arrangement after our proposed workover.

Since 1971 we have been injecting in the Niobrara C zone at approximately 6200' through 2" tubing set on packer with oil in the annulus (annulus is 7-5/8" 26# N-80 casing down to top of 5-1/2" liner at 5428').

Our present request is to open up Niobrara A and B zones and stimulate them with acid and sandfrac treatment; and then so complete the well as to be able to inject separately into the C zone through one tubing string, and the A and B zone through another string.

We are suggesting that to do this we run a new string of 5-1/2" 23# N-80 casing to the approximate depth of the 5-1/2" liner; and to either set this 5-1/2" casing on a packer or cement it to the surface.

We would then run a string of 2-3/8" EUE tubing set in a packer located between the B and C zones. We would then be able to selectively inject into the C zone through the 2-3/8" tubing and separately meter volumes into the A and B zones through the 2-3/8" - 5-1/2" annulus.

BENSON-MONTIN-GREER DRILLING CORP.

Oil Conservation Division
Mr. Dave Catanach

Page 2
December 3, 1986

Whether we cement the 5-1/2" casing or set it on a packer could depend on the results of the casing inspection log we propose to run as soon as we pull the tubing.

On initial completion of well in 1971 the temperature survey showed the primary cement job came up the hole to approximately 600' above the Mesa Verde formation.

The gas which we have been injecting is "sweet gas". A copy of a set of gas analyses which we have had run is enclosed.

Yours truly,

BENSON-MONTIN-GREER DRILLIN CORP.

BY:


Albert R. Greer
President

ARG/ep

Enclosures

cc: Mr. Ernie Bush
Oil Conservation Division
Aztec, New Mexico

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FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

38 48
35 49

5a. Indicate Type of Lease State <input type="checkbox"/> Fed. <input type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. NM 2975
7. Unit Agreement Name Canada Ojitos Unit
8. Farm or Lease Name
9. Well No. 17 (G-1)
10. Field and Pool, or Wildcat West Puerto Chiquito
12. County Rio Arriba

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>
2. Name of Operator Benson-Montin-Greer Drilling Corp.
3. Address of Operator 221 Petroleum Center Building, Farmington, NM 87401
4. Location of Well UNIT LETTER <u>G</u> , 1980 FEET FROM THE <u>north</u> LINE AND 1880 FEET FROM THE <u>east</u> LINE. SECTION <u>1</u> TOWNSHIP <u>24N</u> RANGE <u>1W</u> NMPM.
15. Elevation (Show whether DF, RT, GR, etc.) 7140' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input checked="" type="checkbox"/> Complete Niobrara A & B zones for pressure maintenance by gas injection	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1703.

Operator requests Oil Conservation Division administrative approval for following procedures.

Pull out of hole with gas injection tubing string and packer and run casing inspection log.

Perforate, acidize and sandfrac Niobrara A and B zones.

Set Model D packer between Niobrara C and B zones.

Run compression type packer on 5-1/2" 23# casing to top of Burns liner hanger.

Run 2-3/8" EUE tubing with stinger for Model D packer. Sting into Model D packer to inject pressure maintenance gas down tubing string into Niobrara C zone.

Use 5-1/2" casing by 2-3/8" tubing annulus as second tubing string to inject pressure maintenance gas into Niobrara A and B zones.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [Signature] TITLE Vice President DATE 11/04/36

APPROVED BY _____ TITLE _____ DATE _____

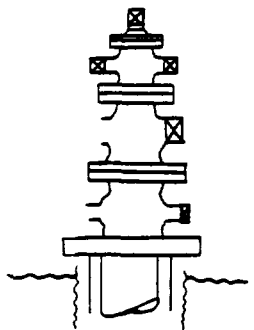
CONDITIONS OF APPROVAL, IF ANY:

BENSON-MONTIN-GREER DRILLING CORP
 WELL Canada Ojitos Unit #17 (G-1)
 SEC. 1 TOWNSHIP 24N RANGE 1W
 STATE NM COUNTY Rio Arriba

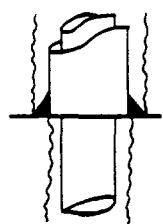
COUNTY RIO ARRIBA N.M. FIELD or LOCATION W. PUERTA CHIQUITA WELL CANADA OJITOS #17 G-1 COMPANY B-M-G DRILL CORP		COMPANY BENSON-MONTIN-GREER DRILLING CORPORATION WELL CANADA OJITOS #17 (G-1) FIELD WEST PUERTO CHIQUITO COUNTY RIO ARRIBA STATE NEW MEXICO LOCATION 1980 FNL 1980 FEL Sec. 1 Twp. 24N Rge. 1W Other Services: CORE SLICER
Permanent Datum: GL Log Measured From: KB Drilling Measured From: KB	Elev. 7140 14 ft. Above Perm. Datum Elev. K. 7154 D.F. 7140	
Date Run No. 1-10-71 Depth-Driller ONE Depth-Logger 5300 Btm. Log Interval 5279 Top Log Interval 5279 Casing-Driller 10 3/4 @ 384 Casing-Logger 385 Bit Size 9 7/8 Type Fluid in Hole FCM Dem. Visc. 9.1 52 pH Fluid Loss 11.5 4.4 ml Source of Sample CIRC R. at Meas Temp. 2.8 @ 67 F 5.25 @ 74 F R. at Meas Temp. 2.3 @ 78 F 2.75 @ 74 F R. at Meas Temp. 3.0 @ 66.7 F Source Ref. PRESS R. at Meas Temp. 2.5 @ 12 F 3.2 @ 12 F Time Since Circ. 5 HOURS 4 HOURS Max. Rec. Temp. 121 F 121 F Equip. Location 3874 FARM 56251 FARM 3874 FARM Recorded By PEARSON Witnessed By MR. STOBBS MR. STOBBS MR. STOBBS	Date Run No. 1-12-71 Depth-Driller TWO Depth-Logger 5240 Btm. Log Interval 5236 Top Log Interval 5279 Casing-Driller 10 3/4 @ 384 Casing-Logger 385 Bit Size 9 7/8 Type Fluid in Hole RETARDED GAS DRILLED Dem. Visc. 8.9 62 pH Fluid Loss 10.1 28 ml Source of Sample CIRC R. at Meas Temp. 2.8 @ 67 F 5.25 @ 74 F R. at Meas Temp. 2.3 @ 78 F 2.75 @ 74 F R. at Meas Temp. 3.0 @ 66.7 F Source Ref. PRESS R. at Meas Temp. 2.5 @ 12 F 3.2 @ 12 F Time Since Circ. 5 HOURS 4 HOURS Max. Rec. Temp. 121 F 121 F Equip. Location 3874 FARM 56251 FARM 3874 FARM Recorded By PEARSON Witnessed By MR. STOBBS MR. STOBBS MR. STOBBS	Date Run No. 1-16-71 Depth-Driller THREE Depth-Logger 6296 Btm. Log Interval 6289 Top Log Interval 5500 Casing-Driller 7 5/8 @ 5739 Casing-Logger 5749 Bit Size 6 3/4 Type Fluid in Hole GAS DRILLED Dem. Visc. 10.1 62 pH Fluid Loss 10.1 28 ml Source of Sample CIRC R. at Meas Temp. 2.8 @ 67 F 5.25 @ 74 F R. at Meas Temp. 2.3 @ 78 F 2.75 @ 74 F R. at Meas Temp. 3.0 @ 66.7 F Source Ref. PRESS R. at Meas Temp. 2.5 @ 12 F 3.2 @ 12 F Time Since Circ. 5 HOURS 4 HOURS Max. Rec. Temp. 121 F 121 F Equip. Location 3874 FARM 56251 FARM 3874 FARM Recorded By PEARSON Witnessed By MR. STOBBS MR. STOBBS MR. STOBBS

SCHUMBERGER

INDUCTION ELECTRICAL LOG
 INDUCTION GAMMA RAY LOG



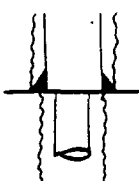
7140' GR



10-3/4" 32.75# H-40
 set @ 382' with 500 sacks
 cement



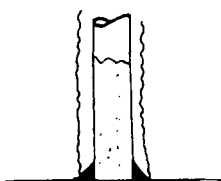
Top 5-1/2" liner
 @ 5428'



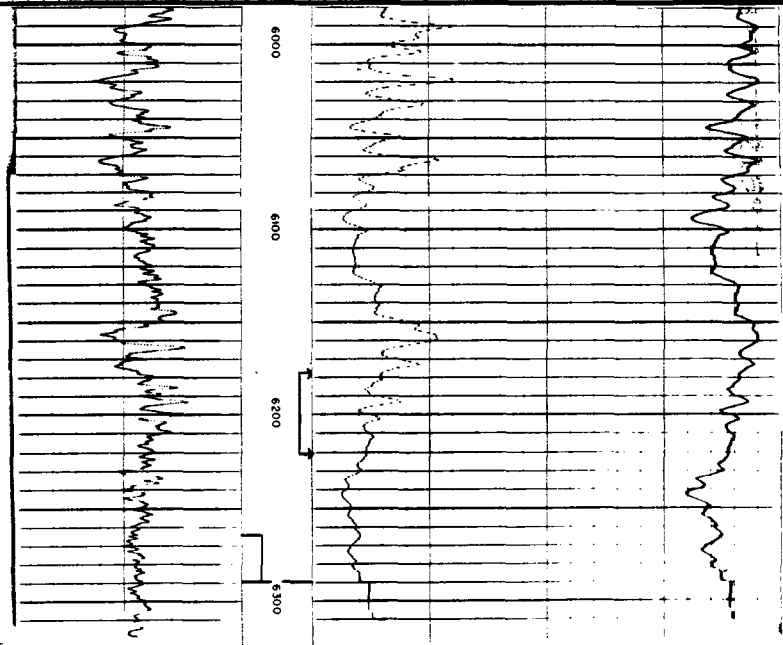
7-5/8" 26.40# N-80
 set @ 5739' with 450 sacks
 cement. Top of cement 3590'
 by temperature survey (top of
 Mesa Verde 4243').

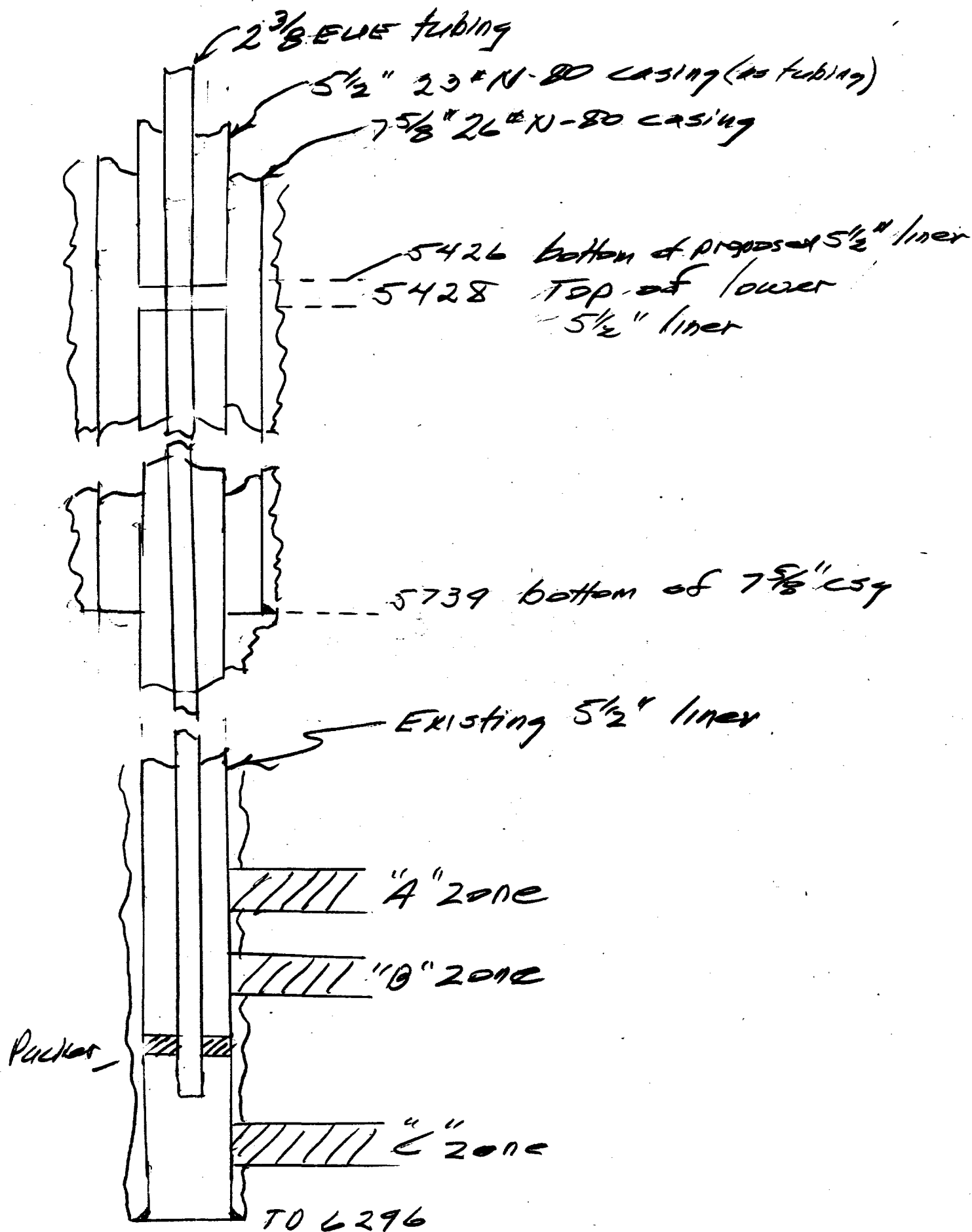


Perforations:
 6178-6204' 1 shot per foot
 6204-6220' 2 shots per foot



PBTB 6250'
 5-1/2" 20# N-80 liner
 5428-6295' with 100 sacks
 TD 6296'



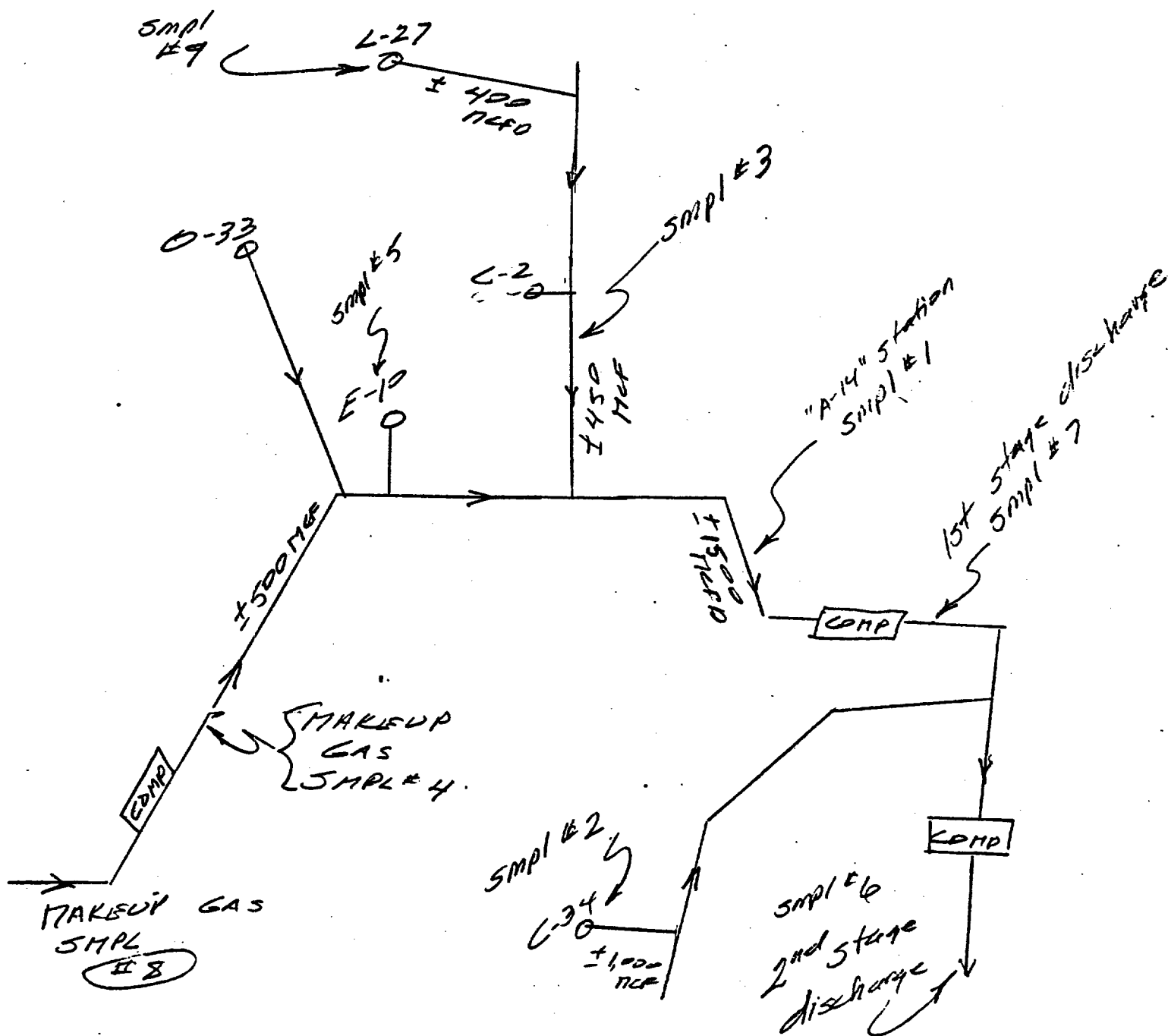


SKETCH

CANADA OXIDES UNIT

SHOWING GAS SAMPLING

4-7-78



"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

APR 24 1978

Run No. 1
Date Run 4/18/78
Date Sampled 4/7/78

Analysis For: BENSON MONTIN GREER DRILLING CORP
Lease: A-14 Producer _____
Location PIPELINE County SAN JUAN State NEW MEXICO
Purpose _____ Sampled By _____
Sampling Temp. _____ °F Atmos Temp. 57 °F
Volume/day _____ Formation _____
Pressure on Bomb 130 PSIG: Line Pressure 140 PSIG

GAS COMPONENT

Analysis

PRESS. BASE 14.696

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.286		0.000
Oxygen O ₂	0.000		0.000
Nitrogen N ₂	.679		0.000
Hydrogen Sulfide H ₂ S			
Methane C ₁	83.500		0.000
Ethane C ₂	9.707		2.592
Propane C ₃	4.024		1.103
Iso-Butane IC ₄	.505		.165
Nor-Butane NC ₄	.856		.269
Iso-Pentane IC ₅	.203		.074
Nor-Pentane NC ₅	.151		.055
Hexanes C ₆			
HEXANES PLUS	.089		.038
Heptanes Plus C ₇ +			
Total	100.000		4.295
Pentane + G.P.M.			.167
PROPANE + G.P.M.			1.703

BTU Dry 1179
BTU Wet 1159
Calc. Specific Gravity .674

Calc. Vap. Press. #/Sq.In. _____
Reid Vap. Press. #/Sq.In. _____

Run by NELSON ENGLISH

Calculated By NELSON ENGLISH

51041739

Additional Data and Remarks: _____

Distribution: _____

"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.

Flow Measurement Engineers

Analysis Results Summary

Casper, WY 82601

Run No. 2
Date Run 4/18/78
Date Sampled 4/7/78

Analysis For: **BENSON MONTIN GREER DRILLING CORP**

Lease: **G-34**

Location **CANADA O JITOS**

Purpose

Sampling Temp. **47** °F

Volume/day

Pressure on Bomb **350**

Producer

County **SAN JUAN**

State **NEW MEXICO**

Sampled By **L.H.**

Atmos Temp. **70** °F

Formation

PSIG; Line Pressure **360** PSIG

GAS COMPONENT

Analysis

PRESS. BASE 14.696

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.008		0.000
Oxygen O ₂	0.000		0.000
Nitrogen N ₂	.738		0.000
Hydrogen Sulfide H ₂ S			
Methane C ₁	84.029		0.000
Ethane C ₂	9.577		2.557
Propane C ₃	3.931		1.077
Iso-Butane IC ₄	.424		.138
Nor-Butane NC ₄	.801		.252
Iso-Pentane IC ₅	.179		.065
Nor-Pentane NC ₅	.144		.052
Hexanes C ₆			
HEXANES PLUS	.169		.073
Heptanes Plus C ₇ +			
Total	100.000		4.214
Pentane + G.P.M.			.190
PROPANE + G.P.M.			1.657

BTU Dry 1178
BTU Wet 1158
Calc. Specific Gravity .670

Calc. Vap. Press. #/Sq.In. _____
Reid Vap. Press. #/Sq.In. _____

Run by **NELSON ENGLISH**

Calculated By **NELSON ENGLISH**

51039215

Additional Data and Remarks:

Distribution:

"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.

Flow Measurement Engineers

Analysis Results Summary

Casper, WY 82601

Run No. 3

Date Run 4/18/78

Date Sampled 4/7/78

Analysis For: BENSON MONTIN GREER DRILLING CORP

Lease: C2-L27

Producer

Location PIPELINE

County SAN JUAN

State NEW MEXICO

Purpose

Sampled By

Sampling Temp. 65 °F

Atmos Temp. 70 °F

Volume/day

Formation

Pressure on Bomb 130

PSIG: Line Pressure 140 PSIG

GAS COMPONENT

Analysis

PRESS. BASE 14.696

Mol. %

Liq. %

GPM
Per MCF

Carbon Dioxide CO₂

.332

0.000

BTU Dry

1187

Oxygen O₂

0.000

0.000

BTU Wet

1166

Nitrogen N₂

.676

0.000

Calc. Specific Gravity

.680

Hydrogen Sulfide H₂S

Methane C₁

82.821

0.000

Ethane C₂

10.119

2.702

Propane C₃

4.224

1.157

Iso-Butane IC₄

.432

.141

Calc. Vap. Press. #/Sq.In.

Nor-Butane NC₄

.847

.266

Reid Vap. Press. #/Sq.In.

Iso-Pentane IC₅

.197

.072

Nor-Pentane NC₅

.190

.069

Hexanes C₆

HEXANES PLUS

.162

.070

Heptanes Plus C₇+

Total

100.000

4.476

Run by NELSON ENGLISH

Calculated By NELSON ENGLISH

Pentane + G.P.M.

.210

PROPANE + G.P.M.

1.774

51005869

Additional Data and Remarks:

Distribution:

"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

Run No. 4
Date Run 4/18/78
Date Sampled 4/7/78

Analysis For: **BENSON MONTIN GREER DRILLING CORP**
Lease: A-16
Location: PIPELINE
Purpose: _____
Sampling Temp. 50 °F
Volume/day: _____
Pressure on Bomb 153
Producer: _____
County: SAN JUAN State NEW MEXICO
Sampled By: _____
Atmos Temp. 69 °F
Formation: _____
PSIG; Line Pressure 163 PSIG

GAS COMPONENT

Analysis

PRESS. BASE 14.696

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.039		0.000
Oxygen O ₂	0.000		0.000
Nitrogen N ₂	.746		0.000
Hydrogen Sulfide H ₂ S			
Methane C ₁	81.974		0.000
Ethane C ₂	9.466		2.527
Propane C ₃	4.578		1.254
Iso-Butane IC ₄	.802		.261
Nor-Butane NC ₄	1.279		.402
Iso-Pentane IC ₅	.427		.155
Nor-Pentane NC ₅	.385		.139
Hexanes C ₆			
HEXANES PLUS	.304		.131
Heptanes Plus C ₇ +			
Total	100.000		4.870
Pentane + G.P.M.			.426
PROPANE + G.P.M.			2.343

BTU Dry 1226
BTU Wet 1205
Calc. Specific Gravity .701

Calc. Vap. Press. #/Sq.In. _____
Reid Vap. Press. #/Sq.In. _____

Run by NELSON ENGLISH
Calculated By NELSON ENGLISH

50999039

Additional Data and Remarks:

Distribution:

"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

Run No. 5
Date Run 4/18/78
Date Sampled 4/7/78

Analysis For: **BENSON MONTIN GREER DRILLING CORP**

Lease: E-10 Producer _____
Location _____ County SAN JUAN State NEW MEXICO
Purpose _____ Sampled By _____
Sampling Temp. 50 °F Atmos Temp. 70 °F
Volume/day _____ Formation _____
Pressure on Bomb 185 PSIG; Line Pressure 195 PSIG

GAS COMPONENT

Analysis

PRESS. BASE 14.696

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.356		0.000
Oxygen O ₂	0.000		0.000
Nitrogen N ₂	.645		0.000
Hydrogen Sulfide H ₂ S			
Methane C ₁	83.576		0.000
Ethane C ₂	9.689		2.587
Propane C ₃	4.005		1.097
Iso-Butane IC ₄	.399		.130
Nor-Butane NC ₄	.852		.268
Iso-Pentane IC ₅	.184		.067
Nor-Pentane NC ₅	.203		.073
Hexanes C ₆			
HEXANES PLUS	.091		.039
Heptanes Plus C ₇ +			
Total	100.000		4.261
Pentane + G.P.M.			.180
PROPANE + G.P.M.			1.675

BTU Dry 1177
BTU Wet 1156
Calc. Specific Gravity .674

Calc. Vap. Press. #/Sq.In. _____
Reid Vap. Press. #/Sq.In. _____

Run by NELSON ENGLISH

Calculated By NELSON ENGLISH

50976443

Additional Data and Remarks: _____

Distribution: _____

"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

Run No. 6
Date Run 4/18/78
Date Sampled 4/7/78

Analysis For: **BENSON MONTIN GREER DRILLING CORP**

Lease: **2ND DISCHARGE**

Location **PIPELINE**

Purpose

Sampling Temp. °F

Volume/day

Pressure on Bomb **795**

Producer

County **SAN JUAN**

State **NEW MEXICO**

Sampled By

Atmos Temp. **60** °F

Formation

PSIG; Line Pressure **805** PSIG

GAS COMPONENT

Analysis

PRESS. BASE 14.696

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.270		0.000
Oxygen O ₂	0.000		0.000
Nitrogen N ₂	.671		0.000
Hydrogen Sulfide H ₂ S			
Methane C ₁	83.584		0.000
Ethane C ₂	9.572		2.556
Propane C ₃	4.010		1.099
Iso-Butane IC ₄	.473		.154
Nor-Butane NC ₄	.864		.271
Iso-Pentane IC ₅	.221		.080
Nor-Pentane NC ₅	.218		.079
Hexanes C ₆			
HEXANES PLUS	.117		.050
Heptanes Plus C ₇ +			
Total	100.000		4.290
Pentane + G.P.M.			.210
PROPANE + G.P.M.			1.734

BTU Dry 1181
BTU Wet 1161
Calc. Specific Gravity .675

Calc. Vap. Press. #/Sq.In. _____
Reid Vap. Press. #/Sq.In. _____

Run by **NELSON ENGLISH**

Calculated By **NELSON ENGLISH**

50977681

Additional Data and Remarks:

Distribution:

"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

Run No. 7
Date Run 4/18/78
Date Sampled 4/7/78

Analysis For: BENSON MONTIN GREER DRILLING CORP
Lease: 1ST STAGE DISCHARGE Producer _____
Location PIPELINE County SAN JUAN State NEW MEXICO
Purpose _____ Sampled By _____
Sampling Temp. 112 °F Atmos Temp. 118 °F
Volume/day _____ Formation _____
Pressure on Bomb 280 PSIG; Line Pressure 290 PSIG

GAS COMPONENT

Analysis

PRESS. BASE 14.696

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.252		0.000
Oxygen O ₂	0.000		0.000
Nitrogen N ₂	.680		0.000
Hydrogen Sulfide H ₂ S			
Methane C ₁	82.834		0.000
Ethane C ₂	9.850		2.630
Propane C ₃	4.199		1.151
Iso-Butane IC ₄	.531		.173
Nor-Butane NC ₄	.947		.297
Iso-Pentane IC ₅	.271		.099
Nor-Pentane NC ₅	.264		.095
Hexanes C ₆			
HEXANES PLUS	.172		.074
Heptanes Plus C ₇ +			
Total	100.000		4.519
Pentane + G.P.M.			.268
PROPANE + G.P.M.			1.889

BTU Dry 1195
BTU Wet 1174
Calc. Specific Gravity .684

Calc. Vap. Press. #/Sq.In. _____
Reid Vap. Press. #/Sq.In. _____

Run by NELSON ENGLISH

Calculated By NELSON ENGLISH

50976524

Additional Data and Remarks:

Distribution:

Run No. 8
Date Run 4/18/78
Date Sampled 4/7/78

PRESS. BASE 14.696

50976172

Additional Data and Remarks:

Distribution:

"Let your Interest in Measurement be our Concern"



PRECISION SERVICE INC.
Flow Measurement Engineers
Analysis Results Summary
Casper, WY 82601

Run No. 9
Date Run 4/18/78
Date Sampled 4/7/78

Analysis For: BENSON MONTIN GREER DRILLING CORP
Lease: L-27 Producer _____
Location _____ County SAN JUAN State NEW MEXICO
Purpose _____ Sampled By L.H.
Sampling Temp. 49 °F Atmos Temp. 70 °F
Volume/day _____ Formation _____
Pressure on Bomb 145 PSIG; Line Pressure 155 PSIG

GAS COMPONENT

Analysis

PRESS. BASE 14.696

	Mol. %	Liq. %	GPM Per MCF
Carbon Dioxide CO ₂	.280		0.000
Oxygen O ₂	0.000		0.000
Nitrogen N ₂	.615		0.000
Hydrogen Sulfide H ₂ S			
Methane C ₁	82.450		0.000
Ethane C ₂	10.479		2.798
Propane C ₃	4.201		1.151
Iso-Butane IC ₄	.440		.143
Nor-Butane NC ₄	.905		.284
Iso-Pentane IC ₅	.217		.079
Nor-Pentane NC ₅	.211		.076
Hexanes C ₆			
HEXANES PLUS	.202		.087
Heptanes Plus C ₇ +			
Total	100.000		4.619
Pentane + G.P.M.			.242
PROPANE + G.P.M.			1.821

BTU Dry 1195
BTU Wet 1174
Calc. Specific Gravity .684

Calc. Vap. Press. #/Sq.In. _____
Reid Vap. Press. #/Sq.In. _____

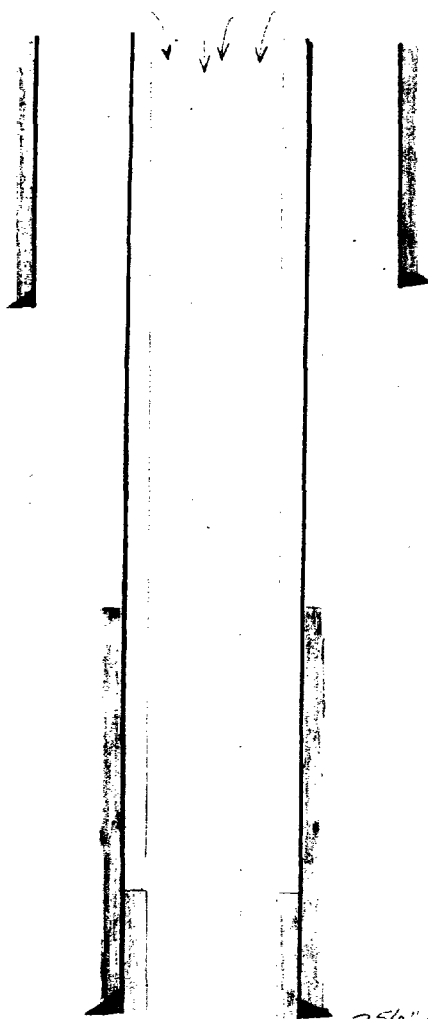
Run by NELSON ENGLISH
Calculated By NELSON ENGLISH

50973485

Additional Data and Remarks: _____

Distribution: _____

1a. Type of Work		7. Unit Agreement Name	
b. Type of Well DRILL <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Farm or Lease Name	
2. Name of Operator		9. Well No.	
3. Address of Operator		10. Field and Pool, or Wildcat	
4. Location of Well			
UNIT LETTER _____ LOCATED _____ FEET FROM THE _____ LINE AND _____ FEET FROM THE _____ LINE OF SEC. _____ TWP. _____ REG. _____ NMPM			



10 3/4" at
382'

SIZE OF HOLE _____ SIZE OF CASING _____

WEIGHT PER FOOT _____ SETTING DEPTH _____

SACKS OF CEMENT _____ EST. TOP _____

758" at
5739'

SIZE OF HOLE _____ SIZE OF CASING _____

WEIGHT PER FOOT _____ SETTING DEPTH _____

SACKS OF CEMENT _____ EST. TOP _____

= Agm

= Bm

= C Zone

58' 11" 7689'