DHC 7-31-95
1142

OIL CONSERVATION DIVISION
RECEIVED
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MERIDIAN OIL

June 30, 1995

New Mexico Oil Conservation Division
Attn: Mr. Bill LeMay
2040 South Pacheco Street
Santa Fe, New Mexico 87505

RE: Reid #10
Unit L, Section 17, T28N, R9W
San Juan County, New Mexico
Downhole Commingle Request
Fruitland Coal/Pictured Cliffs

Dear Mr. Bill LeMay,

Meridian Oil Inc., operator for the Southland Royalty Company, requests administrative approval to downhole commingle the Aztec Pictured Cliffs and Basin Fruitland Coal pools in the referenced well. Ownership for the producing intervals to be commingled is common. All offset interest owners shown on the attached plat and the Bureau of Land Management will receive notice of this commingling application.

Precedent for commingling the referenced intervals in this area and upon the subject lease has been established in the Reid #8 (Unit L, Section 19, T28N, R9W) per NMOCD Administrative Order #DHC-856, dated September 3, 1992, the Reid #13 (Unit I, Section 18, T28N, R9W) per NMOCD Administrative Order #DHC-1030, dated August 30, 1994, and the Reid #14 (Unit O, Section 7, T28N, R9W) per NMOCD Administrative Order #DHC-1029, dated August 30, 1994. These wells are producing without adverse effects.

The Reid #10 was completed in the Pictured Cliffs in 1956. Currently the well is inactive; Casing integrity is suspect from the low casing pressure of 60 psi and tubing pressure of 8 psi. The well has cumulative production of 1,319 MMCF. Meridian Oil proposes to restore the integrity of the existing wellbore, complete the Fruitland Coal interval, and commingle the Fruitland Coal production with the Pictured Cliffs production. Remaining Pictured Cliffs reserves are estimated to be 355 MMCF +/-.

Based upon previous Fruitland Coal completions in this area, ultimate reserves of 740 MMCF +/- are estimated for the Fruitland Coal interval in the Reid #10. Meridian Oil anticipates restoration of 50 MCFD in Pictured Cliffs production commingled with 200 MCFD in Fruitland Coal production, yielding a combined rate of 250 MCFD. Currently, the Pictured Cliffs is marginally economic. The addition of the Fruitland Coal interval will ensure continued Pictured Cliffs production and prevent waste of resources.

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

All produced fluids from these two reservoirs are compatible and no precipitates will be formed. The reservoir parameters of each zone are such that underground waste will not be caused by the proposed commingling. Bottom hole shut-in pressures for both the Pictured Cliffs and Fruitland Coal are estimated to be 250 psi.

The allocation of the commingled production will be calculated using flow tests from the Pictured Cliffs and Fruitland Coal intervals during completion operations, in addition to the 39 years of prior Pictured Cliffs production. Meridian Oil will consult with the district supervisor of the Aztec NMOCD office for approval of the attached Reid #10 Downhole Commingle Allocation Formula.

Approval of this commingling request will promote recoverable resources and protect correlative rights. Included with this letter are plats showing ownership of offsetting leases for both formations, copies of letters to offset operators and copies of the proposed workover procedure and wellbore diagram.

If you have any questions concerning this matter, please call me at (505) 326-9546. Your consideration is appreciated.

Sincerely,

Thomas E. Mullins
Reservoir Engineer

TEM:dlc

enclosures

xc: BLM (Farmington)
Frank T. Chavez, NMOCD (Aztec)
Peggy Bradfield
Well File

Reid #10

MONTHLY GAS PRODUCTION ALLOCATION FORMULA

GENERAL EQUATION

Qt = Qftc + Qpc

WHERE: Qt = TOTAL MONTHLY PRODUCTION (MCF/MONTH)

Qftc = FRUITLAND COAL (ftc) MONTHLY PRODUCTION
Qpc = PICTURED CLIFFS (pc) MONTHLY PRODUCTION (MCF/MONTH)

REARRANGING THE EQUATION TO SOLVE FOR Qftc:

Qftc = Qt - Qpc

ANY PRODUCTION RATE OVER WHAT IS CALCULATED FOR THE PICTURED CLIFFS (PC) USING THE APPLIED FORMULA IS FRUITLAND COAL (FTC) PRODUCTION.

PICTURED CLIFFS (PC) FORMATION PRODUCTION FORMULA IS:

Qpc = Qpci X e^{-(Dpc) X (t)}

WHERE: **Qpci** = INITIAL PC MONTHLY FLOW RATE (DETERMINED FROM LAST MONTH OF PC ONLY PRODUCTION, PRIOR TO RECOMPLETION & COMMINGLE)

Qpci = 50 MCFD X 30.4 = 1520 MCFM

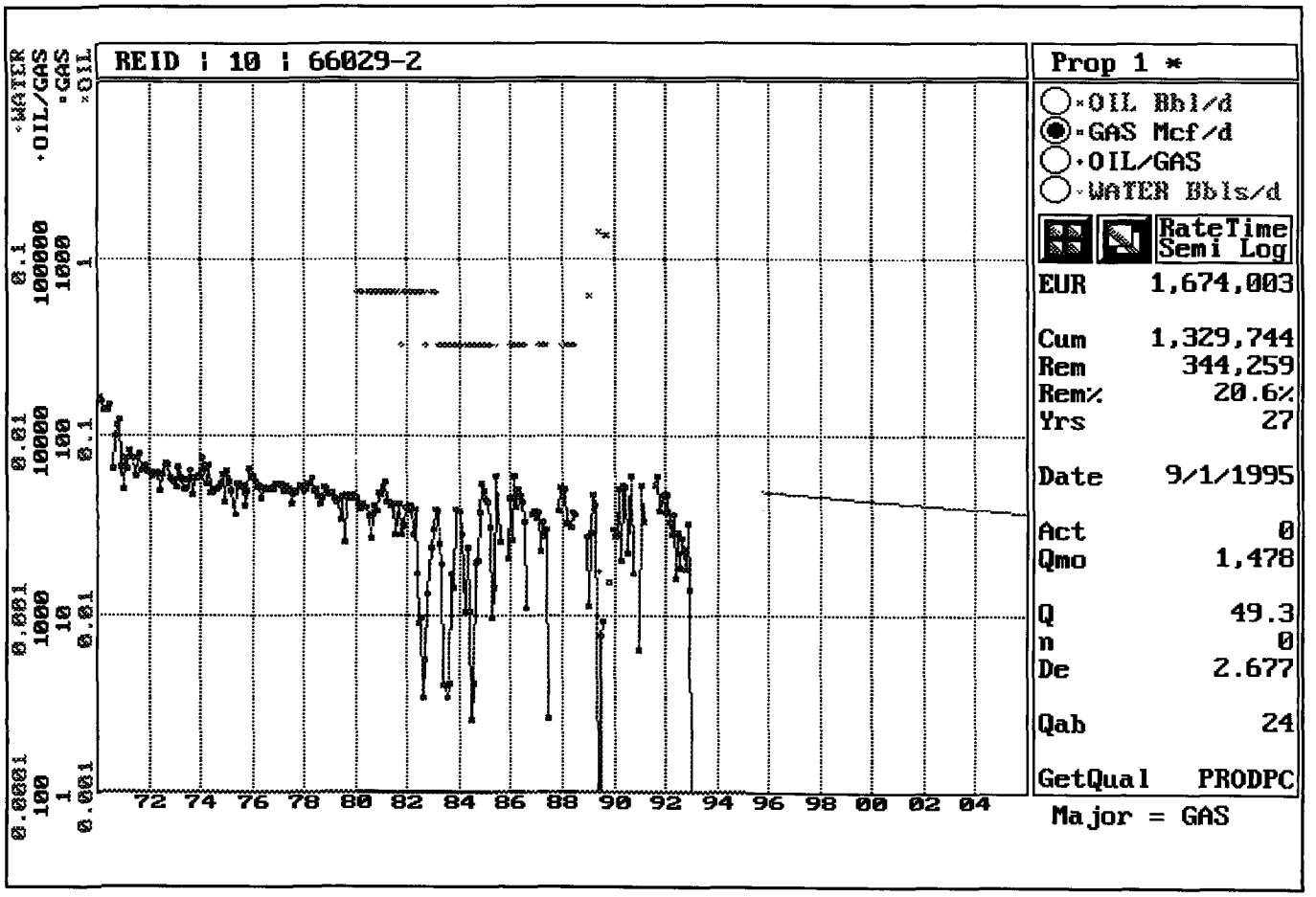
Dpc = PICTURED CLIFFS MONTHLY DECLINE RATE CALCULATED FROM DECLINE CURVE & MATERIAL BALANCE ANALYSIS:

Dpc = (0.02677/Yr) per year = (0.002231/M)

THUS: **Qftc = Qt - 1520 X e^{-(0.002231) X (t)}**

WHERE: **(t) IS IN MONTHS**

REFERENCE: Thompson, R.S., Wright, J.D., "Oil Property Evaluation", Pages 5-2, 5-3, 5-4.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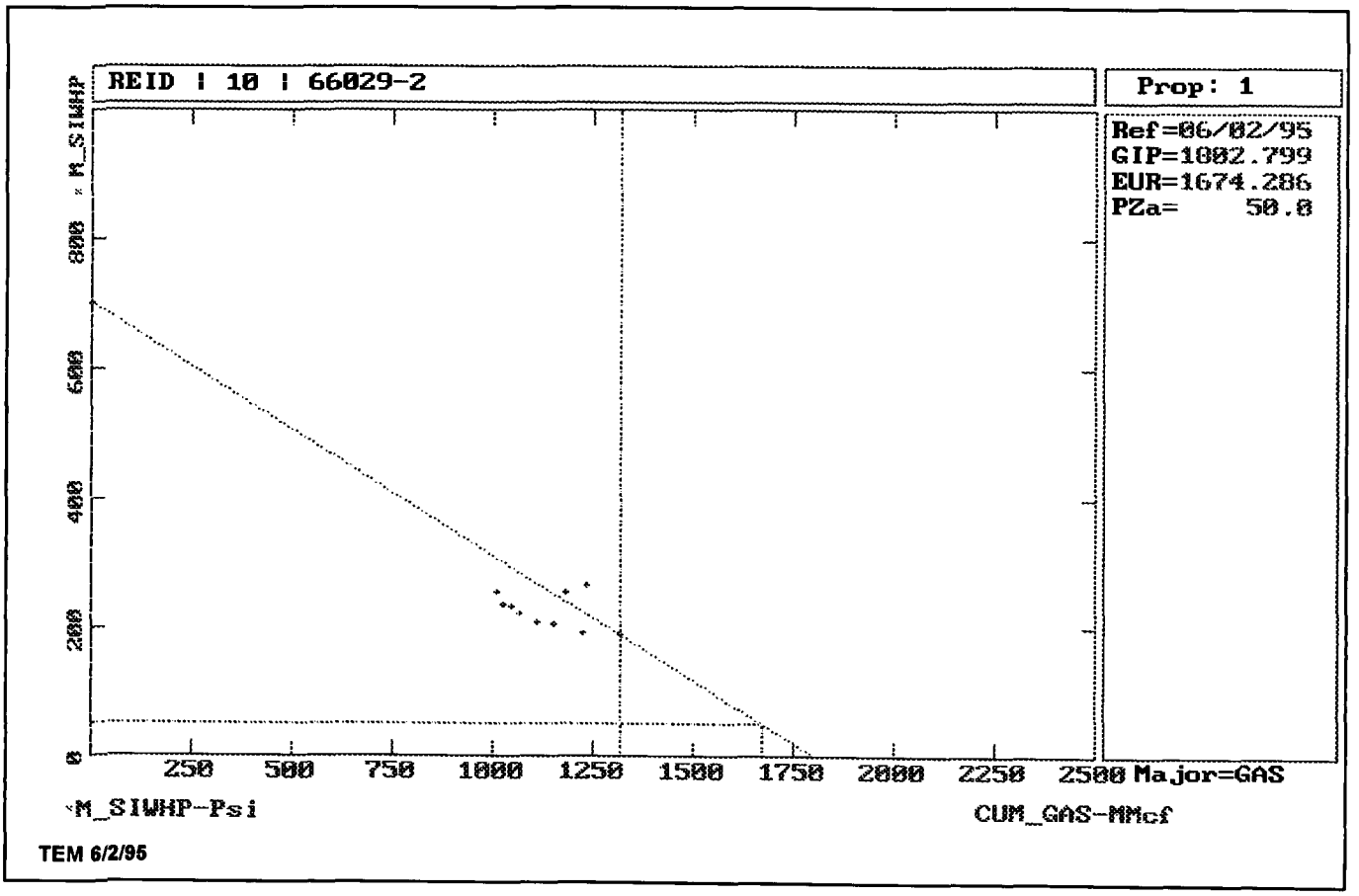
Prop 1 *
OIL Bbl/d
GAS Mcf/d
OIL/GAS
WATER Bbls/d
RateTime
Semi Log
EUR 1,674,003
Cum 1,329,744
Rem 344,259
Rem% 20.6%
Yrs 27
Date 9/1/1995
Act 0
Qmo 1,478
Q 49.3
n 0
De 2.677
Qab 24
GetQual PRODPC
Major = GAS
WATER
OIL/GAS
GAS
OIL
72 74 76 78 80 82 84 86 88 90 92 94 96 98 00 02 04


REID | 10 | 66029-2
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GIP=1002.799
EUR=1674.286
PZa= 50.0
M_SIWHP
0 200 400 600 800
250 500 750 1000 1250 1500 1750 2000 2250 2500
Major=GAS
M_SIWHP-Psi
CUM_GAS-MMcf
TEM 6/2/95

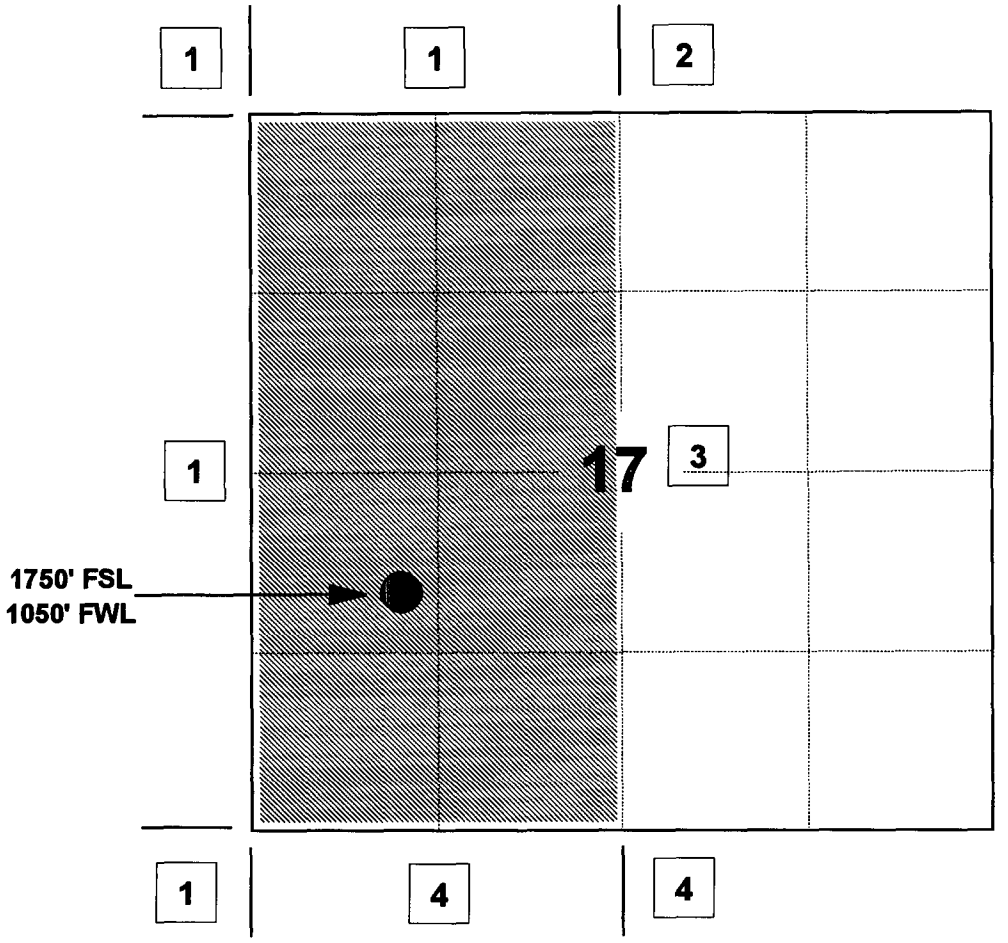
MERIDIAN OIL INC

REID #10

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

Township 28 North, Range 9 West



1) Southland Royalty Company	
2) D J Simmons	PO Box 1469, Farmington, NM 87499
3) West Largo Corporation	6638 W Ottawa, Suite 100, Littleton, CO 80123
4) Amoco Production Company	PO Box 800, Denver, CO 80201
Conoco, Inc.	10 Desta Drive, Suite 100W, Midland, TX 79705-4500

Fruitland Coal Formation

MERIDIAN OIL INC

REID #10

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Commingle Well

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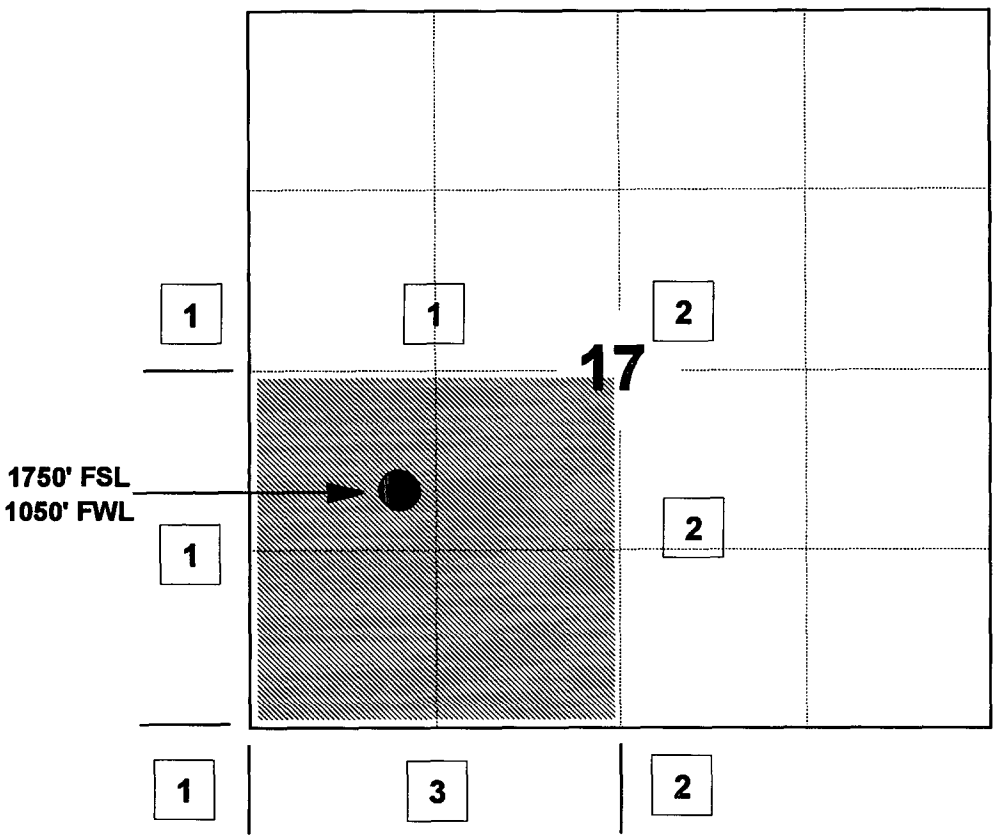

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Conoco, Inc. — 10 Desta Drive, Suite 100W, Midland, TX 79705-4500

Pictured Cliffs Formation

MERIDIAN OIL

June 30, 1995

Conoco, Inc.
10 Desta Drive, Suite 100W
Midland, Texas 79705-4500

RE: Reid #10
Unit L, Section 17, T28N, R9W
San Juan County, New Mexico
Downhole Commingle Request
Fruitland Coal/Pictured Cliffs

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The purpose of this letter is to notify of such action. We would appreciate your signing this letter and returning it to this office indicating you have been notified.

Should you have concerns or questions regarding this commingle application, please contact me at (505) 326-9546.

Sincerely,

Thomas E. Mullins
Reservoir Engineer

TEM:dlc

The addresse has been notified of this downhole commingling request:

_____

Date: _____

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

MERIDIAN OIL

June 30, 1995

Amoco Production Company
PO Box 800
Denver, Colorado 80201

RE: Reid #10
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San Juan County, New Mexico
Downhole Commingle Request
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3535 East 30th St., 87402-8891

MERIDIAN OIL

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West Largo Corporation
6638 W. Ottawa, Suite 100
Littleton, Colorado 80123

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3535 East 30th St., 87402-8891

MERIDIAN OIL

June 30, 1995

D.J. Simmons
PO Box 1469
Farmington, New Mexico 87499

RE: Reid #10
Unit L, Section 17, T28N, R9W
San Juan County, New Mexico
Downhole Commingle Request
Fruitland Coal/Pictured Cliffs

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Date: _____

P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833
3535 East 30th St., 87402-8891

Meridian Oil
6/30/95

PERTINENT DATA SHEET
REID #10

Location: 1750' FSL, 1050' FWL
Unit L, Section 17, T28N, R9W
San Juan County, New Mexico

Elevation: 5820' GR
Latitude: 36.659607
Longitude: 107.816833

Field: Aztec Pictured Cliffs
DP#: 66029 (PC)

GWI: 100% (25)
NRI: 85% (21.25)

Spud Date: 06-12-56
Completion Date: 07-06-56

TD: 2119'
PBTD: 2119'

Casing Record:

Hole Size	Casing Size	Weight & Grade	Depth Set	Sxs Cement	Cement Top
11"	8-5/8"	24#, K-55	189'	110	surface
7-7/8"	5-1/2"	14#, K-55	2119'	150	1360' (calc @ 75%)

Tubing Record:

Tubing Size	Weight & Grade	Depth Set
1"	1.7#, J-55	2093'

Formation Tops:

Nacimiento	surface
Ojo Alamo	1020'
Kirtland	1125'
Fruitland Coal	1835'
Pictured Cliffs	2063'

Logging Record:
Electrical Log

Stimulation:
Sand and water frac with 43,600 gal water and 50,000# sand. Perforations:
2062' - 2112' with 4 shots per foot.

Workover History:
None

Production History:

Initial Deliverability	4907 mcf, AOF	Initial Pressure:	688 psi
Latest Deliverability	0.77 mcfd	Current Pressure:	60 psi (casing leak?)

Transporter: Oil/Condensate: Meridian Oil Gas: Sunterra Gas Gathering Company

Reid #10
Fruitland Coal Recompletion/PC Commingle
Unit L-Sec17-T28N-R09W
1750' fsl & 1050' fwl

- Air package required.
- Dig work pits for water recovery/flare pit, fence pits .
- Comply with all BLM, NMOCD, and MOI rules and regulations.
- Due to use of Nitrogen, fracture stimulation will take place during daylight hours.
- **Always Hold Safety Meetings!**

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1. MIRU. Record tubing, casing, and Bradenhead pressures. Blow down well, kill 1" tubing w/ 2% KCl water. ND WH, NU BOP. Test all equipment.

2. PU on 1" tubing, note string weight. TOOH w/ 1", laying down for salvage (94 jts., 2083'). PU 2-7/8" J-55 EUE workstring w/ bit and casing scraper. Clean out w/air to PBTD @ 2119'. TOOH.

3. RU wireline, run GR-CCL from PBTD to 1800'. Note old perforations. Run in and wireline set CIBP @ 2050'. RD wireline.

4. TIH w/ 5-1/2" PKR and 2-7/8" tubing. Fill hole from bottom w/ 2% KCl. Test CIBP to 2500 psi. Release PKR, test casing string to 500 psi. Pull uphole and isolate casing leaks. (TOC calculated @ 1360'.)

5. RU wireline. Run GR-CCL-CBL from 2050' to surface. Engineering & Drilling will provide squeeze procedures as necessary. All squeeze work will be performed prior to stimulation.

6. Drill out cement, test casing to 500 psi. Hold and record for 15 minutes on chart. If casing integrity is not sound, identify leaks, and further squeeze work/ stimulation modifications will be recommended.

7. RU wireline. Go in with 3-3/8" HSC gun with 10 gram Owen charges w/ 0.30" perforation diameter and perforate with 1 SPF and 180° phasing at the following depths:

1839'	**1858'**	**1921'**	**1925'**	**1958'**
1962'	**2032'**	**2036'**	**2040'**	**2044'**

(10 holes, 205' of net pay)

8. TIH with 2-7/8" tubing and 5-1/2" PKR to 1800'. Pump 200 gallons 7.5% HCl ahead, then pump 300 gallons acid, dropping 20 1.3 s.g. ball sealers in evenly spaced increments. Ball off to 3800 psi. Release pressure and displace acid. Release PKR and TIH, knocking balls below bottom perforation. Pull up and reset PKR @ 1800'.

Fruitland Coal Stimulation

9. RU stimulation company. Fracture stimulate the Fruitland Coal interval according to attached pumping schedule w/ 120,000# 20/40 sand, followed by 20,000# 20/40 resin-coated proppant w/activator, in 30# linear gel with 70Q foam at 50 BPM. **Max pressure is 3800 psi.** Tag pad w/ Sc-46, tag sand w/Ir-192, tag resin-coated proppant w/ Sb-124. Frac during daylight only.

10. SI well for eight hours to allow proppant to activate.

11. Flow back well after frac on 1/4" choke until surface pressure is below 500 psi. Then flow well on open 2" line through choke manifold. Release PKR, TOOH.

12. PU bit, drill collars. TIH, clean out to CIBP @ 2050'. Pull uphole above perfs and obtain Pitot gauge. Drill CIBP and clean out to PBTD @ 2119'. Pull uphole, obtain final Pitot gauge. TOOH, laying down 2-7/8" workstring.

13. RU wireline, run afterfrac log from PBTD to 1700'. RD wireline. TIH w/ final production string as follows: expendable check, 1 joint 2-3/8", F nipple, and remaininng 2-3/8" tubing. Land tubing @ 2080'. ND BOP, NU WH. Pump off check w/ water. Flow well up tubing to verify check pumped off. RD and release rig to next location.

Drilling Superintendent

JME

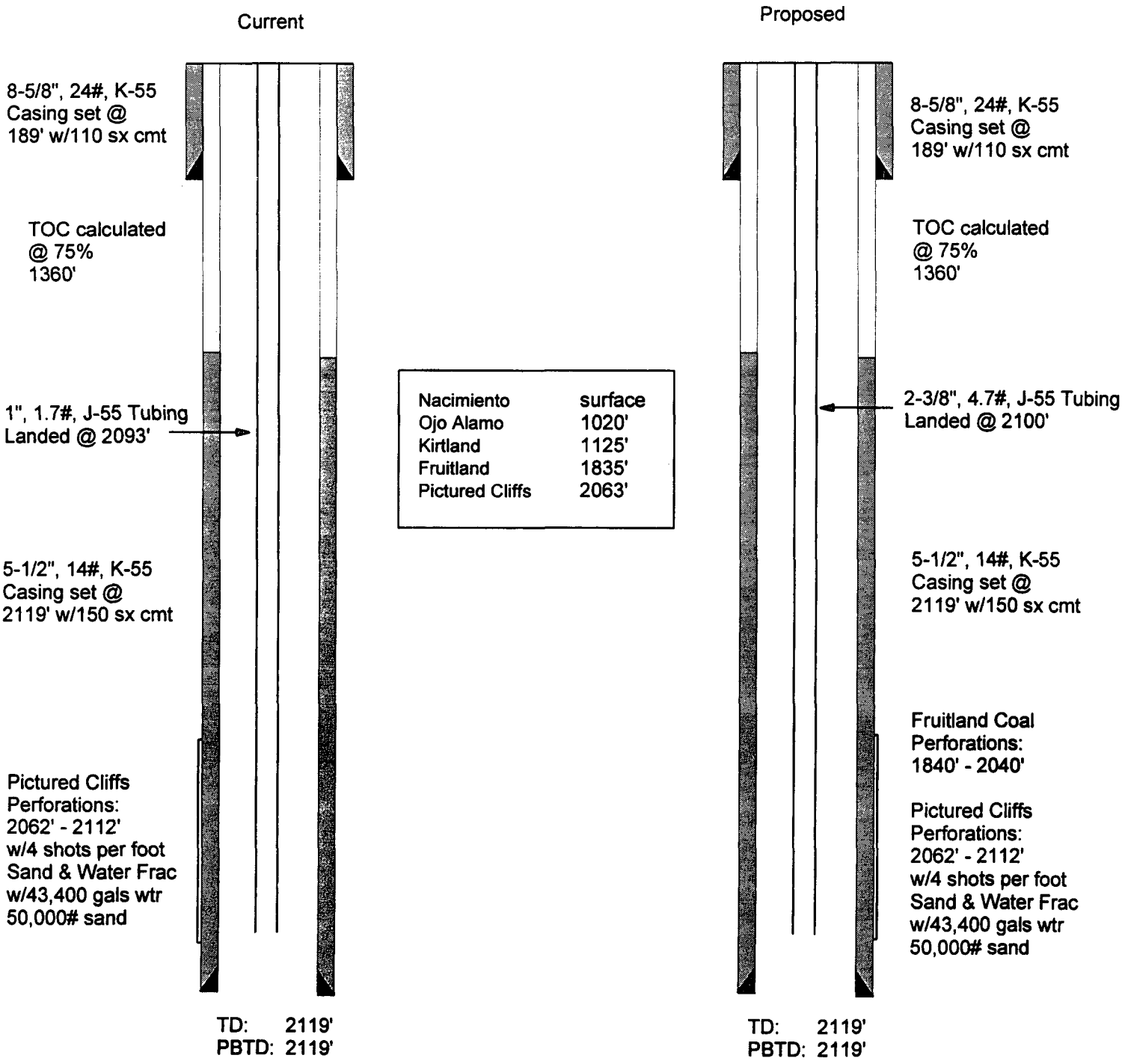
Suggested Vendors:		
Cased Hole, CIBP, Perforating	Basin Perforators	327-5124
Stimulation	Dowell Schlumberger	325-5096
Engineering	Joan Easley	599-4026-work
		327-3061-home
		324-2717-pager

Reid #10

Pictured Cliffs

Section 17, T28N, R9W

Elevation: 5820' GR



DLC
6/13/95