OHC RELEASE 1-24-94

MERIDIAN OIL

OIL CONSERVATION DIVISION
RECEIVED

'94 JAN 3 AM 9 34

December 30, 1993

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

Re: Huerfano Unit #258
990' FSL; 990' FEL
Section 36, T27N R10W
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 Basin Fruitland Coal and Fulcher Kutz Ext. Pictured Cliffs fields. The ownership of the zones to be commingled is common. The offset operator to the northwest is McKenzie Methane Corporation. 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 was completed as a single Gallup well in November 1974. The Gallup is presently unproductive and has not produced since 1987 when it averaged only 10 MCF/D.

We anticipate that the Pictured Cliffs portion of this well will be very marginal. Located about two miles outfield of the nearest Pictured Cliffs wells, log data indicates only four feet of Pictured Cliffs pay. In addition, the nine nearest Pictured Cliffs wells have cumulatives averaging less than 300 MMCF. We do not believe that the Pictured Cliffs interval in this well is capable of sustaining production alone, however, with the help of the Fruitland Coal gas to lift a small amount of liquid we anticipate producing the Pictured Cliffs reserves.

Commingling the Pictured Cliffs with the Fruitland Coal in this well will enable the well to produce its Pictured Cliffs 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.

We plan to commingle this well by plugging back the Gallup, perforate and stimulate the Pictured Cliffs and

Fruitland Coal 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. Located only two miles to the northwest, the Gordon #5 (SW 22 27 10) has produced commingled from the Pictured Cliffs and the Fruitland Coal since June 1992 with no liquid compatibility problems. The daily production will not exceed the limit of Rule 303c, Section 1a, Part 1.

The shut-in pressure for the Pictured Cliffs and Fruitland Coal in the area are 196 psi and 279 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 Pictured Cliffs and Fruitland Coal during field operations.

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

Yours truly,

P. M. Pippin
Senior Production Engineer

PMP:pmp
attachments

cc: Frank Chavez - OCD

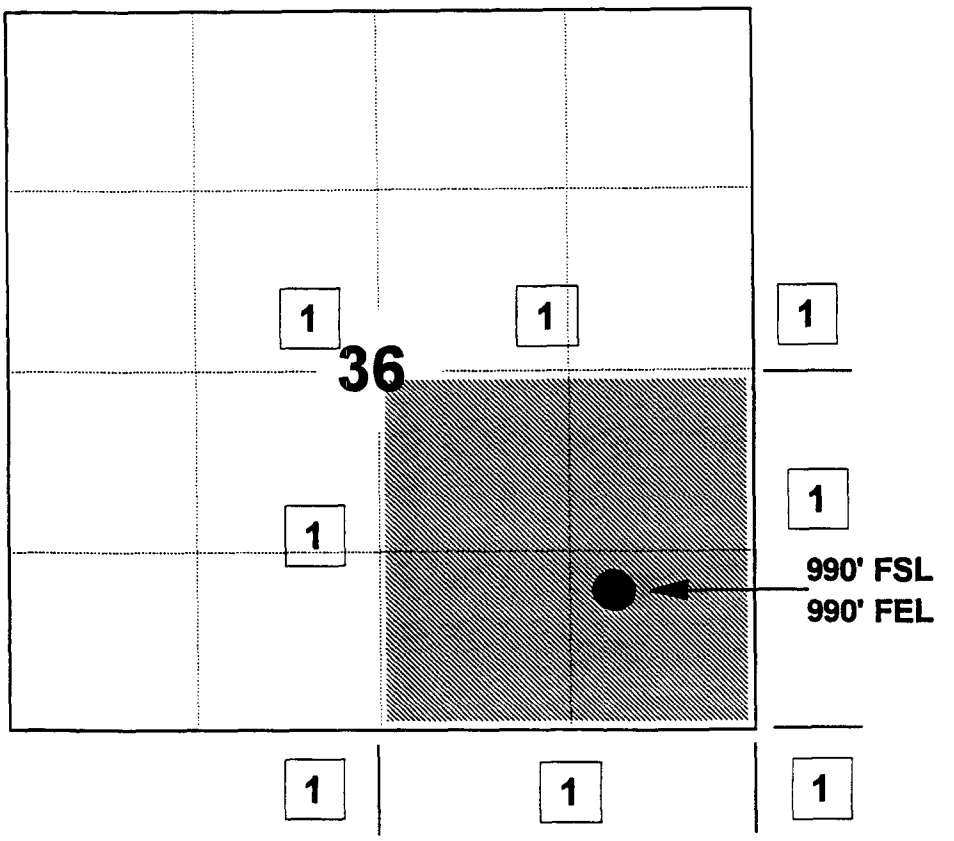
MERIDIAN OIL INC

HUERFANO UNIT #258

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal \ Pictured Cliffs Formations Commingle Well

Township 27 North, Range 10 West



1) Meridian Oil Inc

Pictured Cliffs

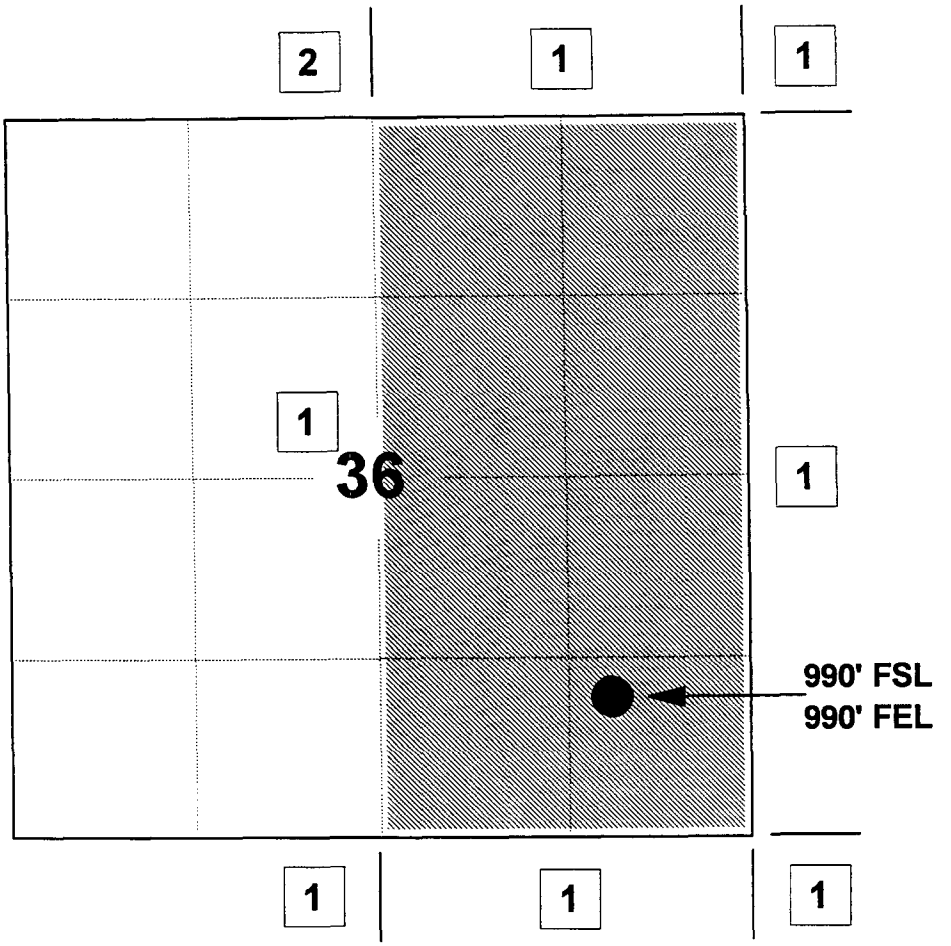
MERIDIAN OIL INC

HUERFANO UNIT #258

OFFSET OPERATOR \ OWNER PLAT

Fruitland Coal / Pictured Cliffs Formations Commingle

Township 27 North, Range 10 West



1) Meridian Oil Inc
2) McKenzie Methane Corp 1625 Broadway, Ste 2580, Denver, CO 80201 &
Quintana Petroleum Services 601 Jefferson St, Houston, TX 77002

Fruitland Coal

MERIDIAN OIL

December 30, 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 Huerfano Unit #258 PC/FRTC located 990' FSL 990' FEL, Section 36 T27N R10W, N.M.P.M., San Juan County, New Mexico, in the Fulcher Kutz Ext. Pictured Cliffs and Basin Fruitland Coal.

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

Yours truly,

P. M. Pippin
Senior Production Engineer

PMP:pmp

MERIDIAN OIL

December 30, 1993

McKenzie Methane Corporation
1625 Broadway, Suite 2580
Denvr, Colorado 80201

Gentlemen:

Meridian Oil, Inc. is in the process of applying for a downhole commingling order for their Huerfano Unit #258 PC/FRTC located 990' FSL 990' FEL, Section 36 T27N R10W, N.M.P.M., San Juan County, New Mexico, in the Fulcher Kutz Ext. Pictured Cliffs and Basin Fruitland Coal.

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

Yours truly,

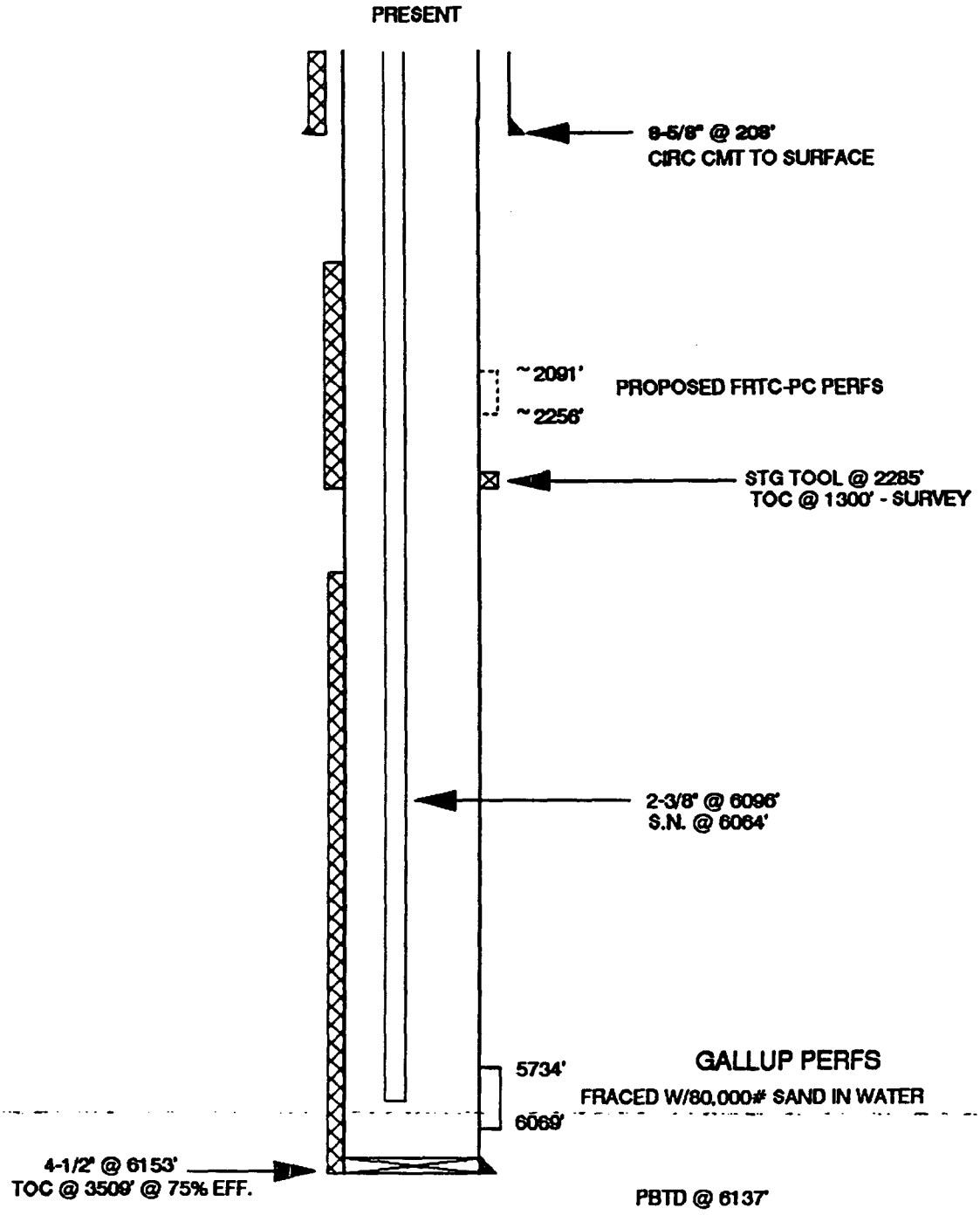
P. M. Pippin
Senior Production Engineer

PMP:pmp

HUERFANO UNIT #258 GALLUP

UNIT P SECTION 36 T27N R10W

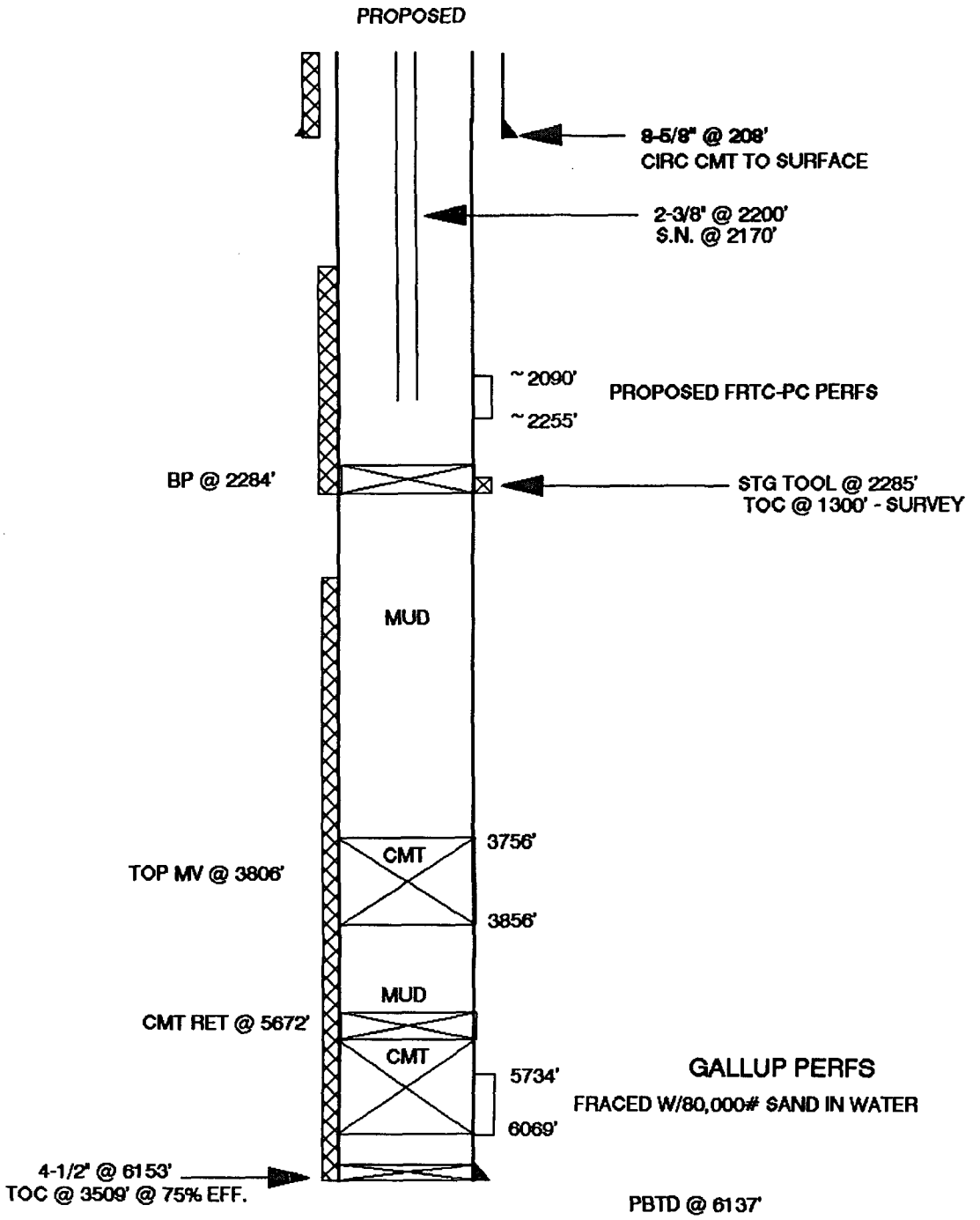
SAN JUAN COUNTY, NEW MEXICO



HUERFANO UNIT #258 PC/FRTC

UNIT P SECTION 36 T27N R10W

SAN JUAN COUNTY, NEW MEXICO



Pertinent Data Sheet - HUERFANO UNIT #258 FRTC

Location: 990'FSL 990' FEL SEC. 36 T27N R10W, SAN JUAN COUNTY, N.M.

Field: Basin Fruitland Coal

Elevation: 6495' **TD:** 6153'
13'KB **PBTD:** 6137'
LEASE: Federal NM-03017
DP#: GL=45079A
GWI: 66.06%
NRI: 51.39%

Completed: 11-29-74

Initial Potential:
AOF= 428 MCF/D, Q= 411 MCF/D, SICP= 764 psi

Casing Record:

Hole Size	Csg. Size	Wt. & Grade	Depth Set	Cement	Top/Cmt
12-1/4"	8-5/8"	24# J-55	208'	183 cf	Circ Cmt
7-7/8"	4-1/2"	10.5# J-55	6153'	803 cf	3509' @ 75% Eff.
		Stage Tool @	2285'	363 cf	1300' - Survey

Tubing Record: 2-3/8" 4.7# J-55 6096' 196 Jts
S.N. @ 6064'

Formation Tops:

Ojo Alamo	1295'
Kirtland	1470'
Fruitland	1985'
Pictured Cliffs	2244'
Cliffhouse	3806'
Point Lookout	4680'
Gallup	5722'

Logging Record: Induction Log, Density Log

Stimulation: Perf Gal @ 5734', 5822', 5926', 5988', 6010', 6048', 6086', 6090' w/1 spf & fraced w/80,000# sand in water.

Workover History: 1-2-85: Cut paraffin. 1-3-86: Cut paraffin & swabbed well in.

Production History: First Delivery = 2-1-75. Cumulative= 169 MMCF & 7,242 BO. Capacity = 0 MCF/D. Bradenhead = 0 psi. Tbg pressure = 8 psi. Csg pressure = 457 psi. Line Pressure = 143 psi.

Pipeline: EPNG

PMP

Huerfano Unit #258 FRTC
FRTC RECOMPLETION
P 36 27 10
San Juan County, N.M.

PLUGGING:

1. Comply to all NMOCD, BLM, & MOI rules & regulations. MOL and RU P & A rig. NU 6" 900 series BOP, flow tee and stripping head. NU blooie line and 2-7/8" relief line.

2. Hot oil tbg if necessary. Set blanking plug in S.N. @ 6064' in 2-3/8" tbg & pressure test to 3000 psi. TOH w/196 Jts 2-3/8" tbg.

3. Run 5-1/2" gauge ring on sand line to 5672' (50' above top Gallup). TIH w/4-1/2" cmt ret on tested 2-3/8" tbg & set @ 5672'.

4. Establish rate & sq Gallup perfs w/ 61 sx Cl "G" cmt. This will fill perfs & 4-1/2" csg to 5672' w/100% excess cmt.

5. Sting out of cmt ret & spot 4 sx cmt on top ret. Spot hole w/ 30 bbl mud: 15# sodium bentonite w/non-fermenting polymer, 8.4# gal weight, & 40 qs vis or greater. TOH.

6. W/ tbg @ 3856' (50' below top Mesaverde), spot 11 sx cmt. This will fill inside csg from 3856' to 3756' (50' above top Mesaverde) w/50% excess cmt.

7. Spot hole w/ 24 bbl mud: 15# sodium bentonite w/non-fermenting polymer, 8.4# gal weight, & 40 qs vis or greater. TOH.

8. Set top drillable BP @ 2284' & top w/1 sx sand. Run CBL from 2200' to top of cmt in 4-1/2" csg & cased hole Neutron log from 2280'-2000' & correlate to open hole Density log.

9. Release P & A rig.

COMPLETION:

10. MOL and RU completion rig. NU 6" 900 series BOP, flow tee and stripping head. NU blooie line and 2-7/8" relief line.

11. Spot and fill 3 - 400 bbl. frac tanks with 2% KCL water. Filter all water to 25 microns. Two tanks are for gel & one tank for breakdown water. Usable gel water required for frac is 411 bbls.

12. TIH w/2-3/8" tbg to 2282'. Roll hole w/2% KCL water & pressure test csg to 1000 psi for 15 min.

LOWER FRTC & PC:

13. Perf PC @ 2248'-55' w/1 spf. Total 7 holes. Perf PC w/3-1/8" HCG w/10 gr Owen 316 charges which have an average penetration in Berea of 14.7".

14. Perf lower FRTC @ 2228'-33' & 2181'-89' w/4 spf. Perforate FRTC using 3-1/8" hollow steel carrier guns loaded w/Owen HSC 13 gm. charges phased at 90 degrees & 4 spf. Avg. perf dia.= 0.48". Average penetration is 18" in Berea. Total 52 holes.

15. TIH w/4-1/2" pkr & 2-7/8" NUE N-80 rental tbg w/shaved collars & set @ 1900'. W/ 500 psi on backside, breakdown PC & FRTC perforations from 2181'-2255' w/2000 gal. 15% HCL acid & 150 7/8" 1.3 sp gr RCN perf balls. (1 gal/1000 corrosion inhibitor). Lower pkr to 2260' to knock off perf balls. Reset pkr @ 2000'.

16. Load backside w/2% KCL water & pressure to 500 psi. Monitor & record backside pressure during frac. Fracture treat PC & lower FRTC down frac string with 57,000 gals. of 70 quality foam using 30# gel as the base fluid & 90,000# 20/40 Arizona sand. Pump at 40 BPM. Monitor bottomhole and surface treating pressures, rate, foam quality, & sand concentration with computer van. Sand to be tagged with 0.4 mCi/1000# Ir-192 tracer. Max. pressure is 6000 psi and estimated treating pressure is 3200 psi. Frac string friction @ 40 BPM is 1300 psi. Treat per the following schedule:

Stage	Foam Vol. (Gals.)	Gel Vol. (Gals.)	Sand Vol. (lbs.)
Pad	20,000	6,000	----
1.0 ppg	10,000	3,000	10,000
2.0 ppg	10,000	3,000	20,000
3.0 ppg	10,000	3,000	30,000
4.0 ppg	5,000	1,500	20,000
5 0 ppg	2,000	600	10,000
Flush	(486)	146	
Totals	57,000	17,100#	90,000#

Treat frac fluid with the following additives per 1000 gallons:

* 30# LGC8 (Gel)
* 3.0 gal. AQF2 (Non-ionic Surfactant)
* 1.0# GVW3 (Enzyme Breaker)
* 1.0# B-5 (Breaker)

17. Open well through choke manifold and monitor flow. Flow @ 20 bbl/hr, or less if sand is observed. Take pitot gauges when possible. TOH w/pkr & frac string.

18. Set 4-1/2" ret BP @ 2160' on wireline & top w/1 sx sand. Pressure test csg to 1000 psi for 15 min.

19. Fill 2 - 400 bbl. frac tanks with 2% KCL water. Filter all water to 25 microns. One tank is for gel & one tank for breakdown water. Usable gel water required for frac is 407 bbls.

UPPER FRTC:

20. Production Engineering will pick upper FRTC perfs using CNL log. Perf upper FRTC w/4 spf. Perforate using 3-1/8" hollow steel carrier guns loaded w/Owen HSC 13 gm. charges phased at 90 degrees & 4 spf. Avg. perf dia.= 0.48". Average penetration is 18" in Berea. Estimated

total feet of perfs is 15 feet @ about 2090'-2105'.

21. TIH w/4-1/2" pkr & 2-7/8" NUE N-80 rental tbg w/shaved collars & set @ 1800'. W/ 500 psi on backside, breakdown upper FRTC perforations from w/2000 gal. 15% HCL acid & 60 7/8" 1.3 sp gr RCN perf balls. (1 gal/1000 corrosion inhibitor). Lower pkr to 2120' to knock off perf balls. Reset pkr @ 2000'.

22. Fracture treat upper FRTC down frac string with 37,000 gals. of 70 quality foam using 30# gel as the base fluid & 60,000# 20/40 Arizona sand. Pump at 40 BPM. Monitor bottomhole and surface treating pressures, rate, foam quality, & sand concentration with computer van. Sand to be tagged with 0.4 mCi/1000# Ir-192 tracer. Max. pressure is 6000 psi and estimated treating pressure is 3200 psi. Frac string friction @ 40 BPM is about 1300 psi. Treat per the following schedule:

Stage	Foam Vol. (Gals.)	Gel Vol. (Gals.)	Sand Vol. (lbs.)
Pad	12,000	3,600	----
1.0 ppg	5,000	1,500	5,000
2.0 ppg	10,000	3,000	20,000
3.0 ppg	5,000	1,500	15,000
4.0 ppg	5,000	1,500	20,000
Flush	(486)	146	
Totals	37,000	11,100#	60,000#

Shut well in after frac for six hours to allow the gel to break.
Treat frac fluid with the following additives per 1000 gallons:

* 30# LGC8 (Gel)
* 3.0 gal. AQF2 (Non-ionic Surfactant)
* 1.0# GVW3 (Enzyme Breaker)
* 1.0# B-5 (Breaker)

23. Open well through choke manifold and monitor flow. Flow @ 20 bbl/hr, or less if sand is observed. Take pitot gauges when possible. TOH w/pkr & frac string.

24. TIH w/ret head on 2-3/8" tbg & C.O. w/air/mist to ret BP @ 2160'. Take pitot gauges when possible. When well is sufficiently clean, retrieve BP & TOH.

25. TIH w/notched collar on 2-3/8" tbg & C.O. to 2280'. Monitor gas and water returns and take pitot gauges when possible.

26. When wellbore is sufficiently clean, TOH and run after frac gamma-ray log from 2280'-1800'.

27. TIH w/4-1/2" pkr on 2-3/8" tbg & set @ 2290'. Blow both tbg(PC) & csg(FRTC). Take water & gas samples & rates. TOH.

28. TIH with 2-3/8" tbg with standard seating nipple one joint off bottom and again cleanout to 2280'. When wellbore is sufficiently clean, land tbg at 2200'KB. Take final water and gas samples & rates.

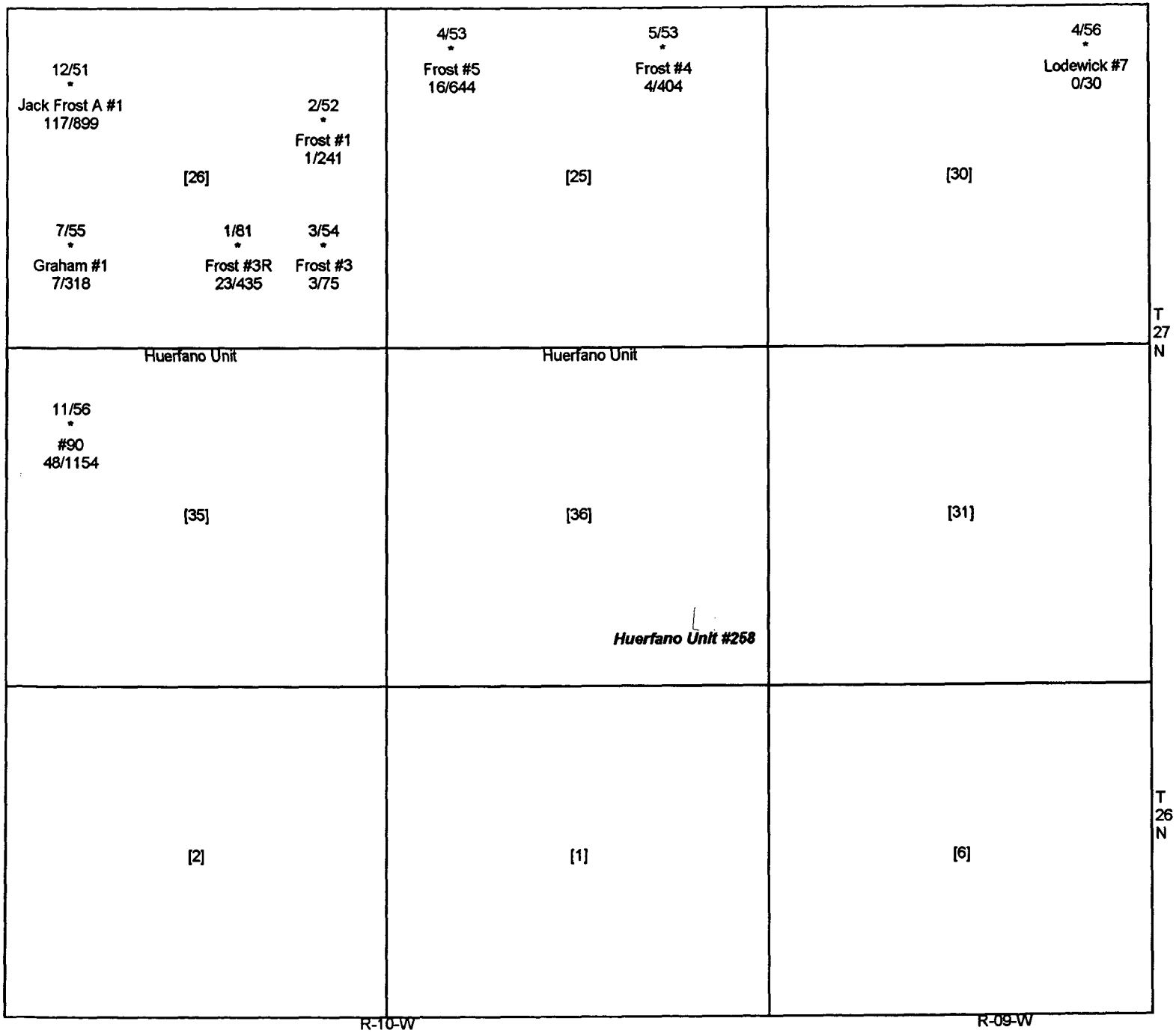
29. Replace any bad valves on wellhead. ND BOP and NU wellhead & tree. Rig down & release rig.

Approve: _____
J. A. Howieson

VENDORS:

Wireline:	Blue Jet	325-5584
Fracturing:	Western	327-6222
RA Tagging:	Pro-Technics	326-7133

PMP



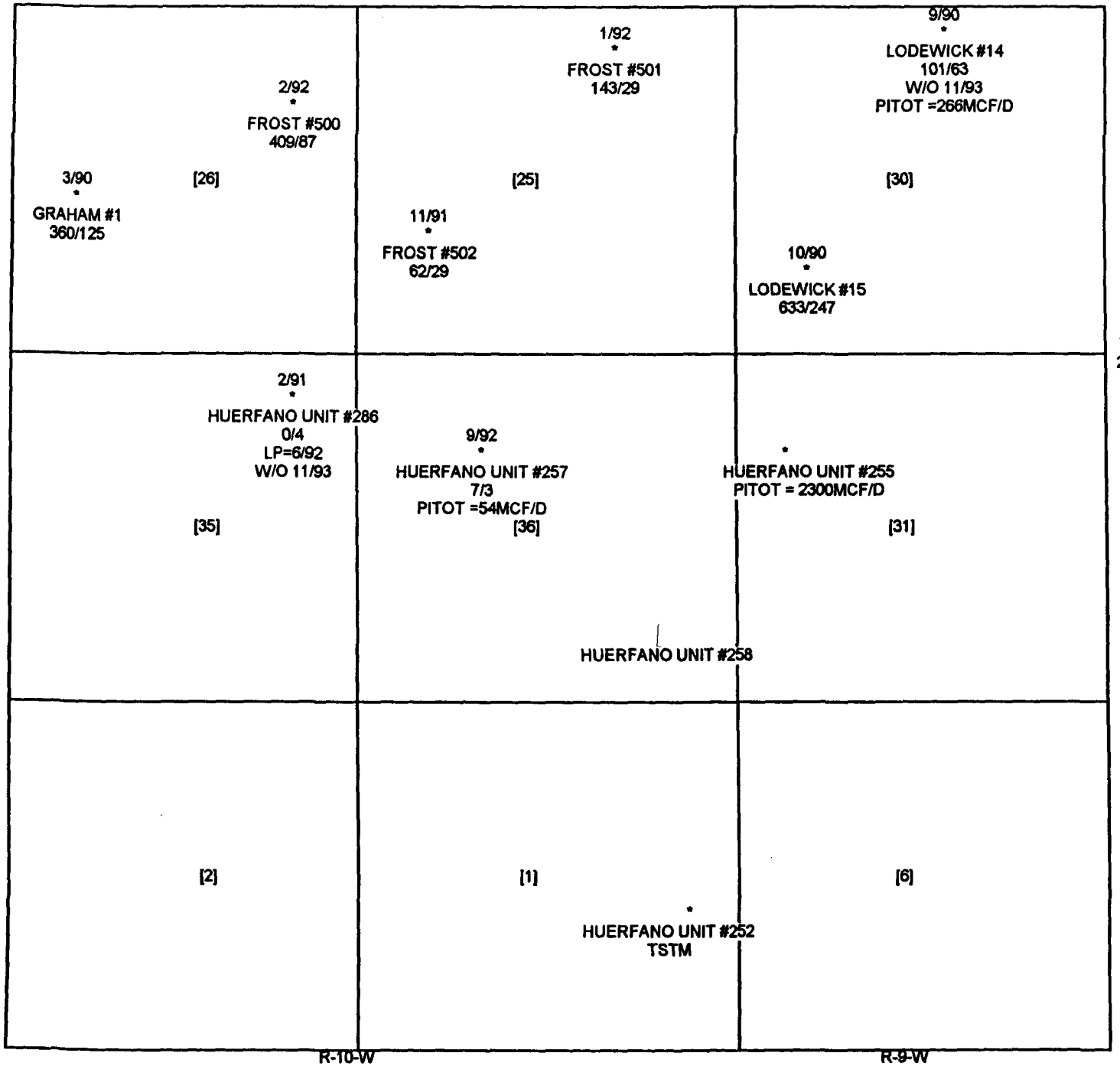
DATE: December 21,1993

NAME: Huerfano Unit #258

FORM: Pictured Cliffs

LOCATION
UNIT: P
SEC: 36
TWN: 27N
RNG: 10W

LEGEND
1ST DELIVERY DATE
*
WELL NAME/NUMBER
MCF/D-CUM (MMCF)



DATE: November 15,1993

NAME: HUERFANO UNIT

FORM: FRUITLAND COAL

LOCATION
UNIT: P
SEC: 36
TWN: 27N
RNG: 10W

LEGEND
COMPLETION DATE
•
WELL NAME
MCFP/D - CUM(MMCF)
LP=LAST PRODUCTION DATE

STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

OIL CONSERVATION DIVISION
RECEIVED
'94 JAN 10 AM 8 45

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

Date: 1-5-93

Attn: Ben Stone

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

RE: Proposed MC_____ Proposed DHC X
Proposed NSL_____ Proposed SWD_____
Proposed WFX_____ Proposed PMX_____
Proposed NSP_____ Proposed DD_____

Gentlemen:

I have examined the application received on 1-3-93

for the Meridian Oil Inc. Huerfano Unit #258
OPERATOR LEASE & WELL NO.

M-36-27N-10W and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,

Frank Chavez