1082

MERIDIAN OIL

December 5, 1994

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

Re: Huerfanito Unit #86 MV/DK
1750' FSL; 1090' FWL
Section 36, T27N 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 Basin Dakota and Blanco Mesaverde fields. Meridian Oil operates all the acreage surrounding the referenced well. We therefore wave the 30 day notice requirement and request that the NMOCD consider this application as expeditiously as possible. The Bureau of Land Management will receive notification of this proposed downhole commingling.

Meridian's ownership in the Dakota and Mesaverde is not common. However, we have approval to commingle these zones administratively in the Huerfanito Unit as per NMOCD Order No. R-9887. The MOI GWI-NRI in the Dakota is 95.14%-77.48% and 87.85%-73.20% for the Mesaverde.

This well has produced since 1965 as a dual well from the Dakota and Mesaverde. The well is presently not a good producer due to poor producing efficiency. It has a producing capacity in 1993 of only 29 MCF/D and 54 MCF/D, respectively. The cumulative production is 1,578 MMCF & 11,088 BO from the Dakota and 2,501 MMCF & 12,210 BO from the Mesaverde, as of January 1, 1994.

The Dakota production is currently being suppressed due to the presence of the well's production packer which limits the Dakota's ability to unload liquid with its small amount of gas volume. We believe that the Dakota has the potential to initially produce 100 MCF/D. We believe that the Mesaverde has the potential to initially produce 70 MCF/D. However, like the Dakota, the Mesaverde does not make sufficient gas to lift the produced liquids. The commingling of the subject well in the twilight of its producing life will result in better producing efficiency for both intervals. We believe that the combined gas volume will be sufficient to lift the produced liquids in the near future. A possible future artificial lift system such as a plunger

will be much more efficient with the intervals commingled. Granting this application will be in the best interest of conservation, the prevention of waste, and the protection of correlative rights.

Commingling should greatly enhance this well's producing life and its reserves from both producing intervals. We plan to commingle this well by pulling the Mesaverde tubing and the Dakota tubing and packer seal assembly. The permanent packer will be extracted and a single string of tubing run to the lower producing interval.

Additional Point Lookout intervals will be opened and stimulated during the workover.

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. Two other wells commingled in these same fields in 1991 with no detrimental effects are the McClanahan #17E (Sec. 24 T28N R10W) and Reid #20 (Sec 19 T28N R09W). The daily production will not exceed the limit of Rule 303c, Section 1a, Part 1. The shut-in pressures for the Dakota and Mesaverde are 374 psi and 418 psi, respectively. The Dakota and Mesaverde have the ability to produce about 1 barrel of water per day.

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 Dakota and Mesaverde during field operations.

Included with this letter are plats showing ownership of offsetting leases for both the Dakota and Mesaverde, wellbore diagrams, production curves, a pertinent data sheet, workover procedure, and maps indicating the offset Dakota and Mesaverde wells in the area.

Yours truly,

P. M. Pippin
Sr. Production Engineer

attachments

cc: Frank Chavez - OCD

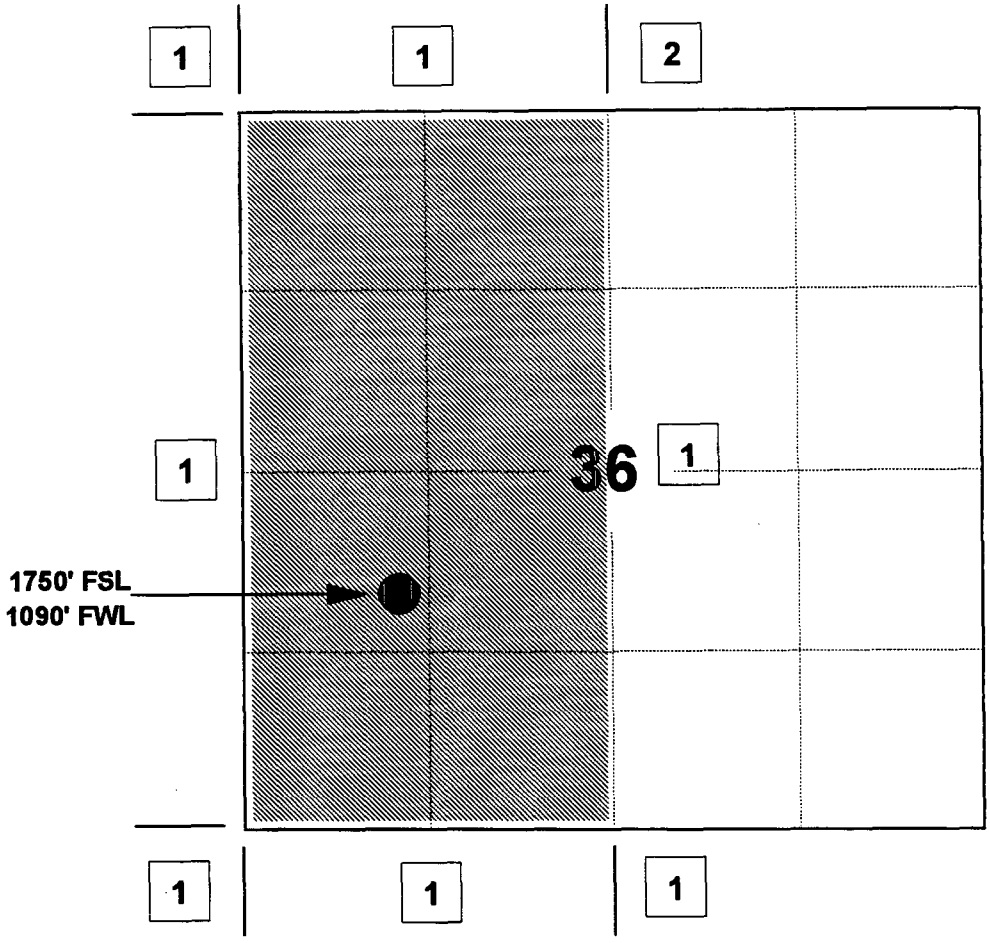
MERIDIAN OIL INC

HUERFANITO UNIT #86

OFFSET OPERATOR \ OWNER PLAT

Mesaverde / Dakota Formations Commingle Well

Township 27 North, Range 9 West



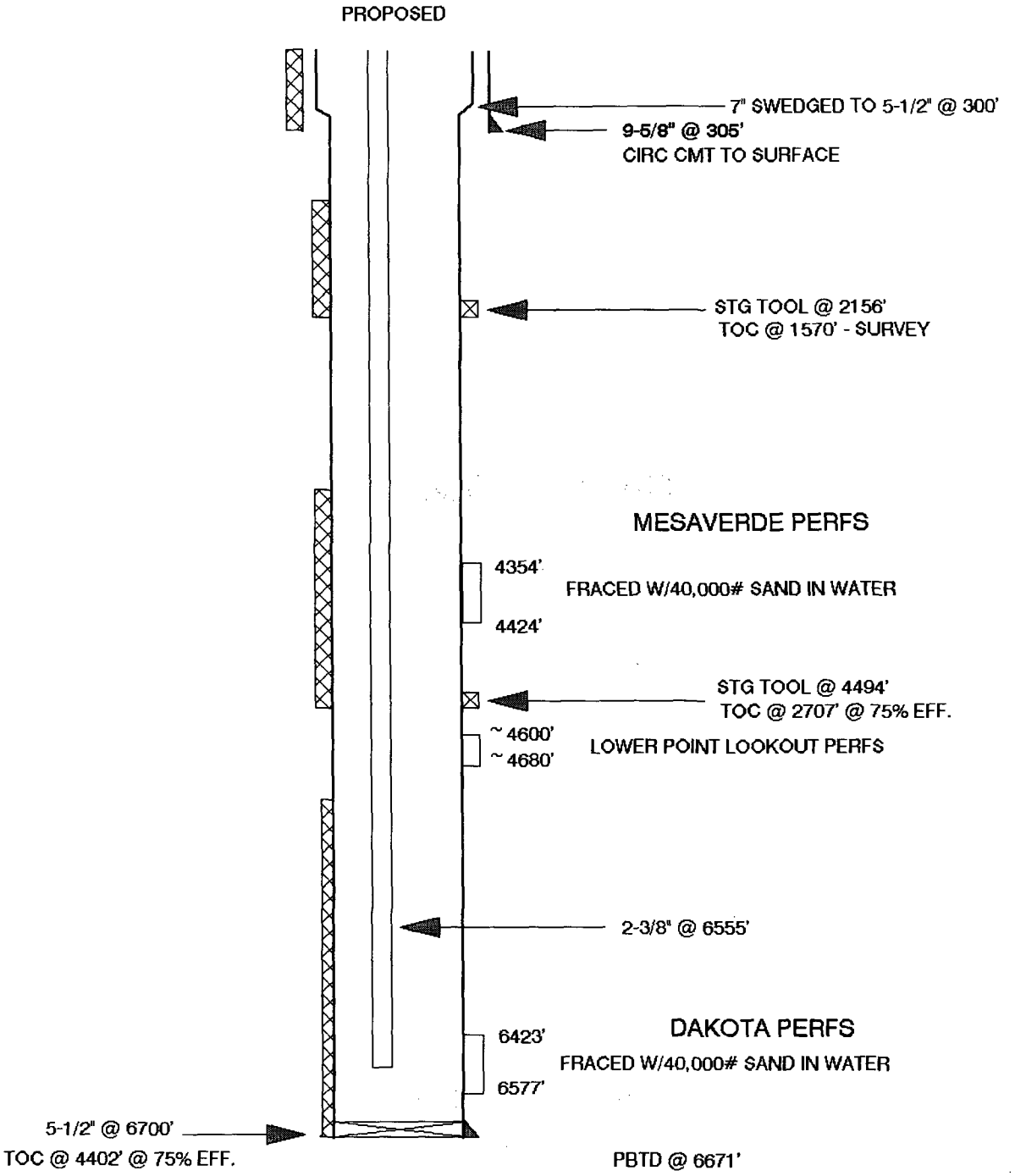
1) Meridian Oil Inc

2) Southland Royalty Company

HUERFANITO UNIT #86 MV/DK

UNIT L SECTION 36 T27N R9W

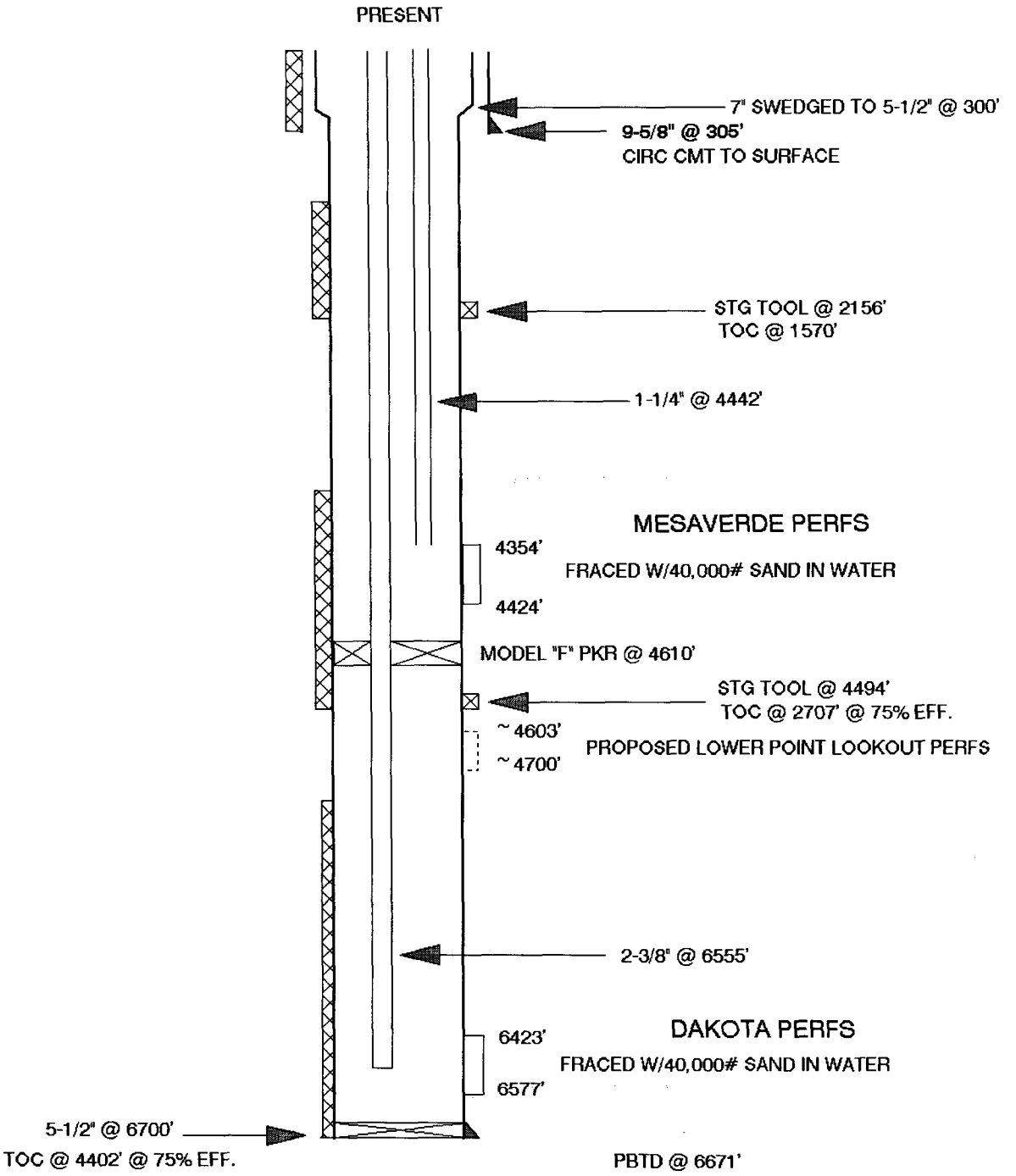
SAN JUAN COUNTY, NEW MEXICO



HUERFANITO UNIT #86 MV/DK

UNIT L SECTION 36 T27N R9W

SAN JUAN COUNTY, NEW MEXICO



STATE : NO STATE FOUND
COUNTY : SAN JUAN
LOCATION : 36L 27N
PAGE NUMBER: 0000001-A

DWIGHTS NUMBER : 30427N09W36L00MV
LEASE/WELL NAME: BLANCO (MESAVERDE)
RESERVOIR :
FIELD : HUERFANITO UNIT
OPERATOR : MERIDIAN OIL INC

000086.

MERIDIAN OIL

WATER (BBL/M) (LINEAR WITH ◁)

GROSS OIL (BBL/M) (LINEAR)

GROSS GAS (MCF/M) (HISTOGRAM)

19 74 | 19 75 | 19 76 | 19 77 | 19 78 | 19 79 | 19 80 | 19 81 | 19 82 | 19 83 | 19 84 | 19 85 | 19 86 | 19 87 | 19 88 | 19 89 | 19 90 | 19 91 | 19 92 | 19 93

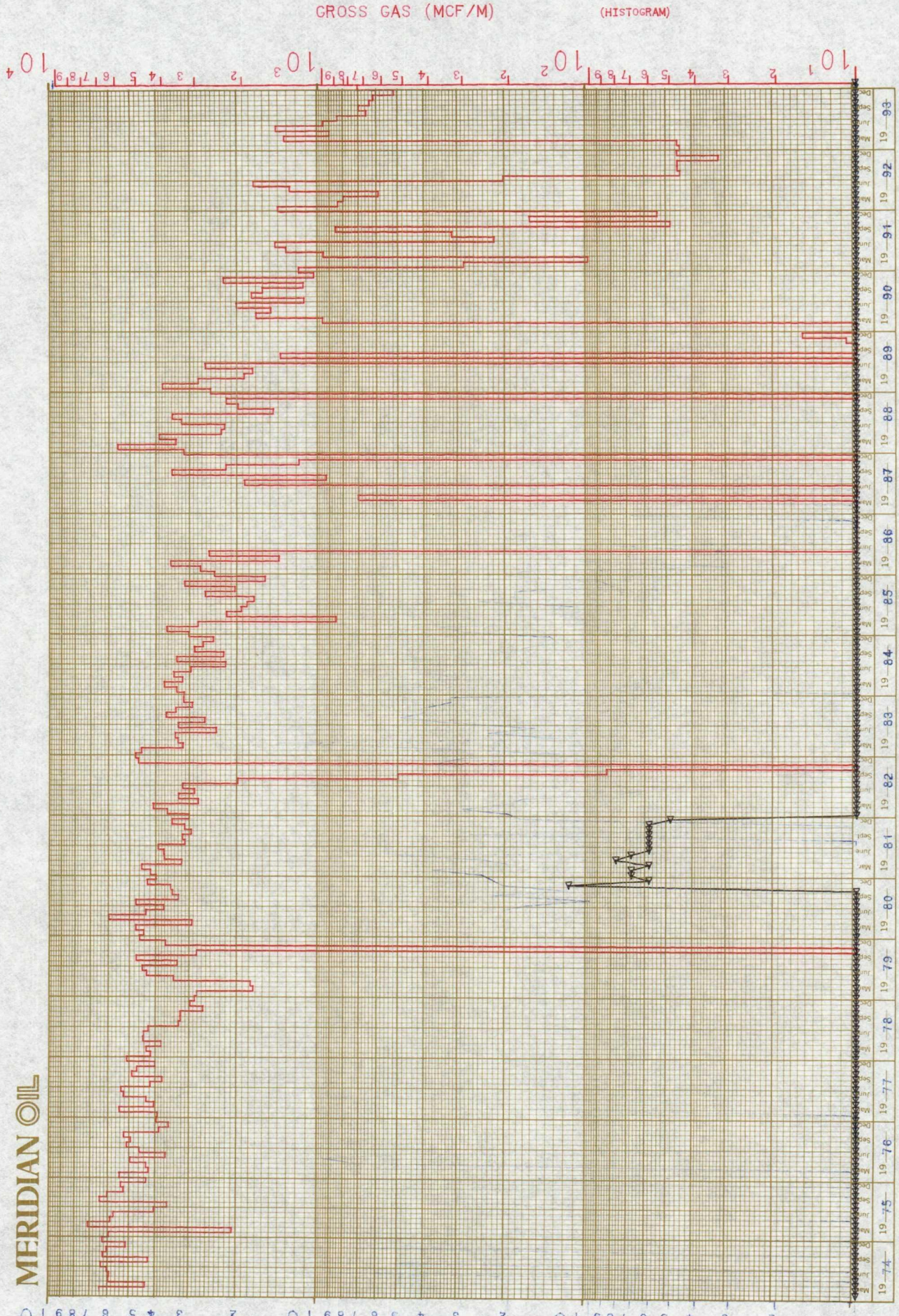
OIL BY MONTH GAS BY MONTH WATER BY MONTH

000086

DWIGHTS NUMBER : 30427N09W36L00DK
LEASE/WELL NAME: BASIN (DAKOTA)
RESERVOIR :
FIELD : HUERFANITO UNIT
OPERATOR : MERIDIAN OIL INC

PROJECT :
STATE :NO STATE FOUND
COUNTY :SAN JUAN
LOCATION : 36L 27N
PAGE NUMBER:0000002-A

MERIDIAN OIL



Pertinent Data Sheet - HUERFANITO UNIT #86 MV/DK

Location: 1750'FSL 1090' FWL SEC. 36 T27N R09W, SAN JUAN COUNTY, N.M.

Field: Basin Dakota
Blanco Mesaverde

Elevation: 6213' **TD:** 6700'
14'KB **PBTD:** 6671'

Prop#: MV:0023403 DK:0079705
Lease: State: E-1199-3
DP#: DK=30051 MV=30025
GWI: MV=87.85% DK=95.14%
NRI: MV=73.20% DK=77.48%

Completed: 7-2-65

Initial Potential:

DK: AOF=5556 MCF/D, Q=4863 MCF/D, SICP=2085 PSI
MV: AOF=6423 MCF/D, Q=5272 MCF/D, SICP=1130 PSI

Casing Record:

Hole Size	Csg. Size	Wt. & Grade		Depth Set	Cement	Top/Cmt
15"	9-5/8"	32.3#	H-40	305'	250 sx	Circ. Cmt
7-7/8"	7"	23#	J-55	(300')		
7-7/8"	5-1/2"	17 & 15.5#	J-55	6700'	450 sx	4402'@ 75% Eff.
			DV Tool @	4494'	350 sx	2707'@ 75% Eff.
			DV Tool @	2156'	100 sx	1570' - Survey

Tubing Record: 2-3/8" 4.7# J-55 6555' 213 Jts S.N. @ 6550'
Baker Model "F" Pkr @ 4610'
1-1/4" 2.3# JCW-55 4442' 136 Jts

Formation Tops:

Ojo Alamo	1230'	Gallup	5502'
Kirtland	1328'	Greenhorn	6324'
Fruitland	1896'	Graneros	6376'
Pictured Cliffs	2036'	Dakota	6486'
Cliffhouse	3591'		
Point Lookout	4347'		

Logging Record: Induction, Acoustic Velocity

Stimulation: Perf DK @ 6569'-77', 6517'-25', 6489'-97', 6423'-31', w/2 & fraced w/40,000# sand in water.
Perf MV @ 4416'-24', 4398'-4406', 4354'-62', w/2 sfp & fraced w/40,000# sand in water.

Workover History: **11-25-69:** Pulled 1-1/4" & 2-3/8" tbgs & replaced 2-3/8" jt w/hole (5 jts above pkr). Reran tbgs & seal assembly.

Production History: MV 1st delivered on 2-1-66. Cumulative: MV=2501 MMCF & 12,217 BO. DK=1578 MMCF & 11,088 BO. MV Tbg=287 psi. MV Csg=305 psi. Bradenhead=0 psi. DK Tbg = 302 psi. Line= 219 psi.

Pipeline: EPNG

PMP

HUERFANITO UNIT #86 MV/DK
Recommended Procedure
Open Lower MV & Commingle w/DK
Lat.-Long. = 36.528931 - 107.745209
L 36 27 9

1. Comply to all NMOCD, 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/136 Jts 1-1/4" tbg & lay down. Set blanking plug in 2-3/8" tbg in S.N. @ 6550' & pressure test to 3000 psi. TOH w/213 Jts 2-3/8" tbg & Baker Model "F" seal assembly @ 4610".

3. Run 5-1/2" "CJ" milling tool on tested 2-3/8" tbg & mill (w/air/mist) & retrieve Baker Model "F" pkr @ 4610'. TOH.

4. MI Wireline Truck. Set 5-1/2" ret BP @ 4800' & top w/2 sx sand. Run CBL from 4800' to top of cmt and pulsed neutron log from 4800'-3500' & 3200'-2900'. Coorelate to open hole induction log. Hot-shot logs to Production Engr Dept. Lower Point Lookout perfs will be picked at this time.

5. If unsufficient cmt is across lower Point Lookout 4600'-4680', perf 2 sq holes @ 4690'. W/5-1/2" pkr @ 4450' on 2-3/8" tbg, sq w/100 sx Cl "B" w/2% CACL2 & 3#/SX HI-SEAL for a yield of 1.21 cf/sx (15.6 #/gal). Unseat pkr, reverse out (if possible), reset & repressure. WOC. TOH.

6. TIH w/4-3/4" bit on 2-3/8" tbg & drill out cmt to 4750' w/air/mist. TOH. Run CBL from 4750'to top cmt. Resq if necessary.

7. When sufficient cmt is across proposed lower Point Lookout perfs, perf w/ 2 spf. Perfs will be a total of about 25' (50 holes) from 4600'-80'. Perf w/Tolson jets.

8. Spot and fill 5 - 400 bbl. frac tanks with 2% KCL water. Filter all water to 25 microns. Four tanks for gel and one for breakdown. Usable water required for frac is 1,230 bbls.

9. 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 @ 4450'. Breakdown & attempt to balloff w/2000 gal 15% HCL acid & 125 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 4700' to knock off perf balls. Reset pkr @ 4550'.

10. W/backside open, fracture treat well down rental frac string with 50,000 gals. of 20# gel water and 40,000# Arizona sand. Pump at 35 BPM. Sand to be tagged with 0.4 mCi/1000# Ir-192 tracer. Max. pressure (@ 35 BPM) is 6000 psi and estimated treating pressure is 2500 psi. Frac string friction @ 35 BPM is 1574 psi. Treat per the following schedule:

Stage	Liquid (Gals.)	Sand Vol. (lbs.)
Pad	10,000	----
0.5 ppg	10,000	5,000
1.0 ppg	20,000	20,000
1.5 ppg	10,000	15,000
Flush	(1,660)	----
Totals	50,000	40,000#

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

11. Open well through choke manifold and monitor flow. Flow @ 20 bbl/hr, or less if sand is observed.

12. When well stops flowing, TOH w/frac string & pkr & lay down. TIH w/notched collar on 2-3/8" tbg & C.O. w/air/mist to BP @ 4800'. Take pitot gauges when possible.

13. When wellbore is sufficiently clean, TOH and run after frac gamma-ray log from 4800'-4200'.

14. TIH w/retrieving tool on 2-3/8" tbg and again CO to 4800'. When wellbore is sufficiently clean, retrieve BP & TOH.

15. TIH w/4-3/4" bit on 2-3/8" tbg & CO to 6600' w/air/mist. **Take pitot gauges when possible.** TOH.

16. TIH with 2-3/8" production tbg with standard seating nipple one joint off bottom to 6600' and again blow well clean. When well is clean, land tbg @ 6500'. Take final pitot gauges, water & oil samples, and gas samples.

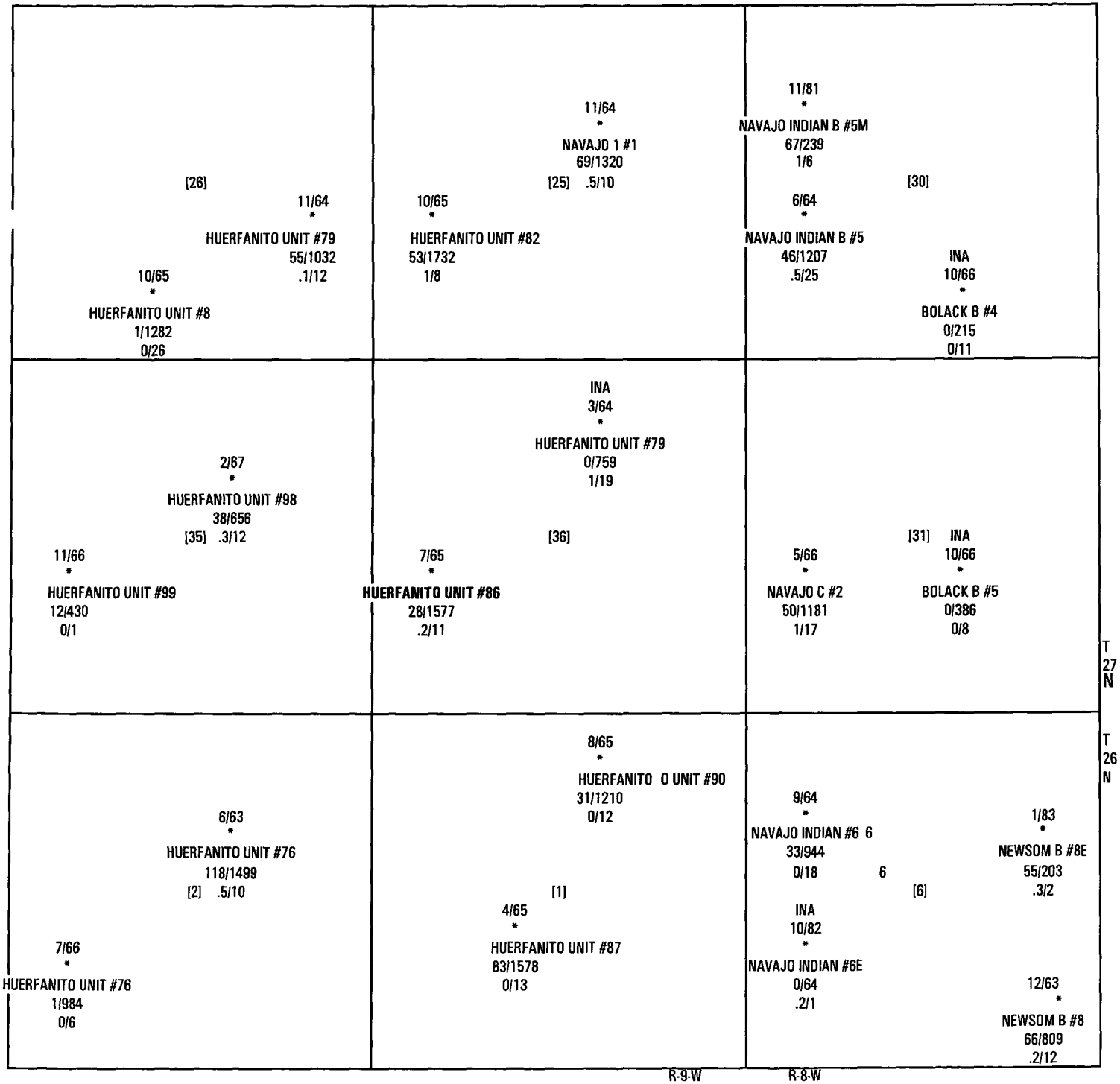
17. ND BOP and NU wellhead. Replace any bad valves on wellhead. Rig down & release rig.

Approved: _____
J. A. Howieson

VENDORS:

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

PMP



DATE: May 26,1994

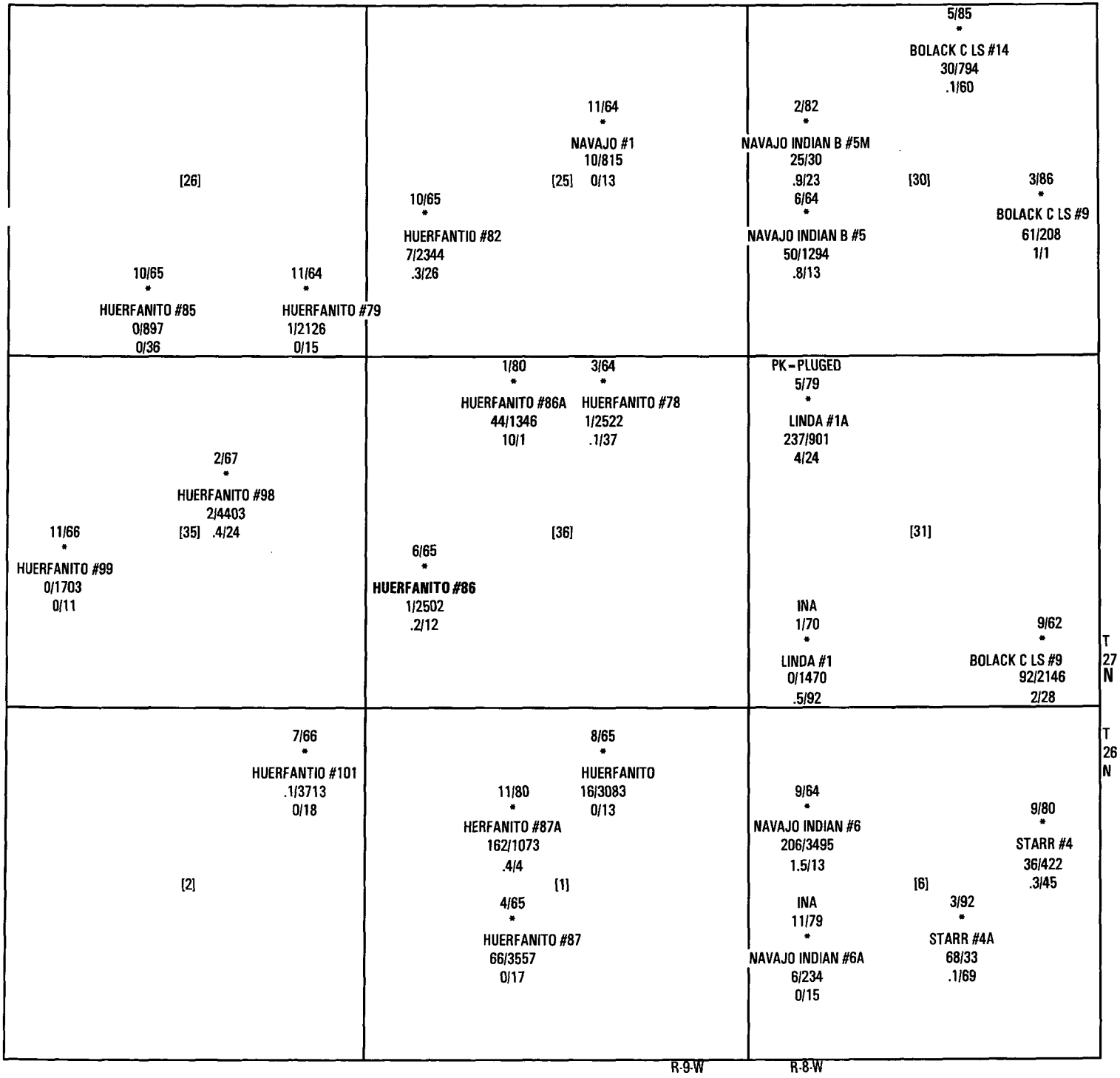
NAME: HUERFANITO #86

FORM: DAKOTA

LOCATION
UNIT: L
SEC: 36
TWN: 27N
RNG: 9W

LEGEND

COMPLETION DATE
*
WELL NAME
MCF/D-CUM(MMF)
BOP/D-CUM(MBO)



DATE: May 31,1994

NAME: HUERFANITO #86

FORM: MESA VERDE

LOCATION
UNIT: L
SEC: 36
TWN: 27N
RNG: 9W

LEGEND

COMPLETION DATE
*
WELL NAME
MCF/D-CUM(MMF)
BOP/D-CUM(MBO)