submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. **Type of Well**
GAS

5. **Lease Number**
NM-03017

6. **If Indian, All. or Tribe Name**

7. **Unit Agreement Name**
Huerfano Unit

2. **Name of Operator**
MERIDIAN OIL

8. **Well Name & Number**
Huerfano Unit 231

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499 (505) 326-9700

9. **API Well No.**
30-045-21117

4. **Location of Well, Footage, Sec., T, R, M**
1050'FNL, 800'FWL Sec.6, T-26-N, R-9-W, NMPM

10. **Field and Pool**
Basin Ft Coal

11. **County and State**
San Juan Co, NM

12. **CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA**

Type of Submission	Type of Action	
_x_ Notice of Intent	___ Abandonment	___ Change of Plans
	_x_ Recompletion	___ New Construction
___ Subsequent Report	_x_ Plugging Back	___ Non-Routine Fracturing
	___ Casing Repair	___ Water Shut off
___ Final Abandonment	___ Altering Casing	___ Conversion to Injectio
	___ Other -	

13. **Describe Proposed or Completed Operations**

It is intended to plug back the Gallup and recomplete in the Fruitland Coal per the attached procedure and wellbore diagram.

RECEIVED
JUL 11 1994
OIL CON. DIV.
DIST. 3

14. **I hereby certify that the foregoing is true and correct.**

Signed [signature] (MP1) Title Regulatory Affairs Date 6/24/94

(This space for Federal or State Office use)
APPROVED BY _____ Title _____ Date _____
CONDITION OF APPROVAL, if any:

APPROVED
JUL 9 1994
DISTRICT MANAGER

C-104 for NSL

NMOCD

C-104 For NSL

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-10
Revised February 21, 199
Instructions on bac
Submit to Appropriate District Offic
State Lease - 4 Copie
Fee Lease - 3 Copie

☐ AMENDED REPOR

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
35-045-21117	71629	Basin Fruitland Coal

Property Code	Property Name	Well Number
	Huerfano Unit	231

OGRID No.	Operator Name	Elevation
14538	MERIDIAN OIL INC.	6542'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	6	26 N	9 W		1050	North	800	West	S.J.

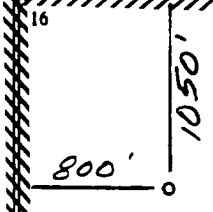
Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
N/326.18			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



Not re-surveyed, prepared from a plat dated 11-1-72 by David O. Vilven.

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature

Peggy Bradfield
Printed Name

Regulatory Affairs
Title

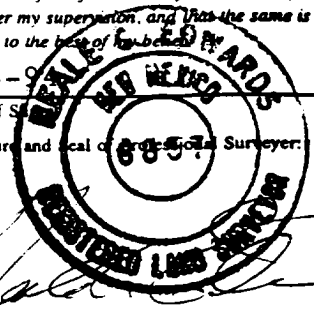
6-30-94
Date

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

6-28-9
Date of Su

Signature and Seal of Professional Surveyor:



6857
Certificate Number

RECEIVED
JUL 11 1994
OIL CON. DIV.
DIST. 3

Huerfano Unit #231 FRTC
FRTC RECOMPLETION
D 6 26 9
Lat. Long. = 36.521408 - 107.835220
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 W/offset rams, flow tee and stripping head. NU blooie line and 2-7/8" relief line.

2. Set blanking plug in S.N. @ 6083' in 2-3/8" tbg & pressure test to 3000 psi. TOH w/194 Jts 2-3/8" tbg.

3. Run 4-1/2" gauge ring on sand line to 5708' (50' above top Gallup perf). TIH w/4-1/2" cmt ret on tested 2-3/8" tbg & set @ 5708'. Establish rate & sq Gallup perfs w/63 sx Cl "G" cmt. This will fill Gallup perfs & 4-1/2" csg to 5708' w/100% excess cmt.

4. 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.

5. PU tbg to 3884' (50' below top Mesaverde). W/ pipe rams open spot 12 sx Cl "B" cmt. This will fill csg from 3884' to 3784' (50' above top MV) w/ 50% excess cmt.

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

7. MI wireline truck. Run CNL log, which will be used to pick FRTC perfs, and CBL (2300'-1500'). Coorelate logs to open hole Density- GR log. Set top drillable BP @ 2300' & top w/2 sx sand. TIH w/2-3/8" tbg & land @ 2200'.

8. Release P & A rig.

COMPLETION:

LOWER FRTC:

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

10. Spot and fill 3 - 400 bbl. frac tanks with 1% KCL water. Filter all water to 25 microns. On 1st stg, one tank is for gel & one tank for breakdown water. Usable gel water required for frac is 241 bbls.

11. Roll hole w/1% KCL water & pressure test csg to 1000 psi for 15 min. TOH w/2-3/8" tbg.

12. Using CNL log, perf basal FRTC using w/2 spf @ about 2200'-10'. Total 20 holes. Perforate using 3-1/8" hollow steel carrier guns loaded w/Owen HSC 13 gm. charges phased at 180 degrees & 2 spf. Avg. perf dia.= 0.48". Average penetration is 18" in Berea.

13. TIH w/4-1/2" pkr & 2-7/8" NUE N-80 rental tbg w/shaved collars & set @ 1900'. Load backside w/1% KCL water. W/ 500 psi on backside, breakdown lower FRTC perforations w/1500 gal. 15% HCL acid & 40-7/8" 1.3 sp gr RCN perf balls. (1gal/1000 corrosion inhibitor). Lower pkr to 2220' to knock off perf balls. Reset pkr @ 2100'.

14. Pressure backside to 500 psi. Monitor & record backside pressure during frac. Fracture treat lower FRTC down frac string with 33,000 gals. of 70 quality foam using 30# gel as the base fluid & 60,000# 20/40 Arizona sand. Pump at 25 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 3411 psi. Frac string friction @ 25 BPM is 1575 psi. Treat per the following schedule:

Stage	Foam Vol. (Gals.)	Gel Vol. (Gals.)	Sand Vol. (lbs.)
Pad	8,000	2,400	----
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	(510)	(153)	
Totals	33,000	9,900#	60,000#

Shut well in after frac for six hours to allow 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)

15. 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.

16. Set 4-1/2" ret BP @ 2180' on wireline & top w/1 sx sand. Pressure test csg to 1000 psi for 15 min.

17. Fill 3 - 400 bbl. frac tanks with 1% 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 241 bbls.

UPPER FRTC:

18. Using CNL log, perf upper FRTC w/2 spf @ about 2104'-16' & 2067'-70'. Total "30 holes. Perforate using 3-1/8" hollow steel carrier guns loaded w/Owen HSC 13 gm. charges phased at 180 degrees. Avg. perf dia.= 0.48". Average penetration is 18" in Berea.

19. 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 w/1500 gal. 15% HCL acid & 85-7/8" 1.3 sp gr RCN perf balls. (1 gal/1000 corrosion inhibitor). Lower pkr to 2160' to knock off perf balls. Reset pkr @ 2000'.

20. Fracture treat upper FRTC down frac string with 33,000 gals. of 70 quality foam using 30# gel as the base fluid & 60,000# 20/40 Arizona sand. Pump at 35 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 4573 psi. Treat per the following schedule:

Stage	Foam Vol. (Gals.)	Gel Vol. (Gals.)	Sand Vol. (lbs.)
Pad	8,000	2,400	----
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)	(145)	
Totals	33,000	9,900#	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)

21. 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.

22. TIH w/ret head on 2-3/8" tbg & C.O. w/air/mist to ret BP @ 2180'. **Take pitot gauges when possible.** When well is sufficiently clean, retrieve BP & TOH.

23. TIH w/notched collar on 2-3/8" tbg & C.O. to 2300'. Monitor gas and water returns and **take pitot gauges when possible.**

24. When wellbore is sufficiently clean, TOH and run after frac gamma-ray log from 2300'-1500'.

25. TIH with 2-3/8" tbg with standard seating nipple one joint off open ended bottom and again cleanout to 2300'. When wellbore is sufficiently clean, land tbg at 2100'KB. **Take final water and gas samples & rates.**

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

Approve: _____
J. A. Howieson

VENDORS:

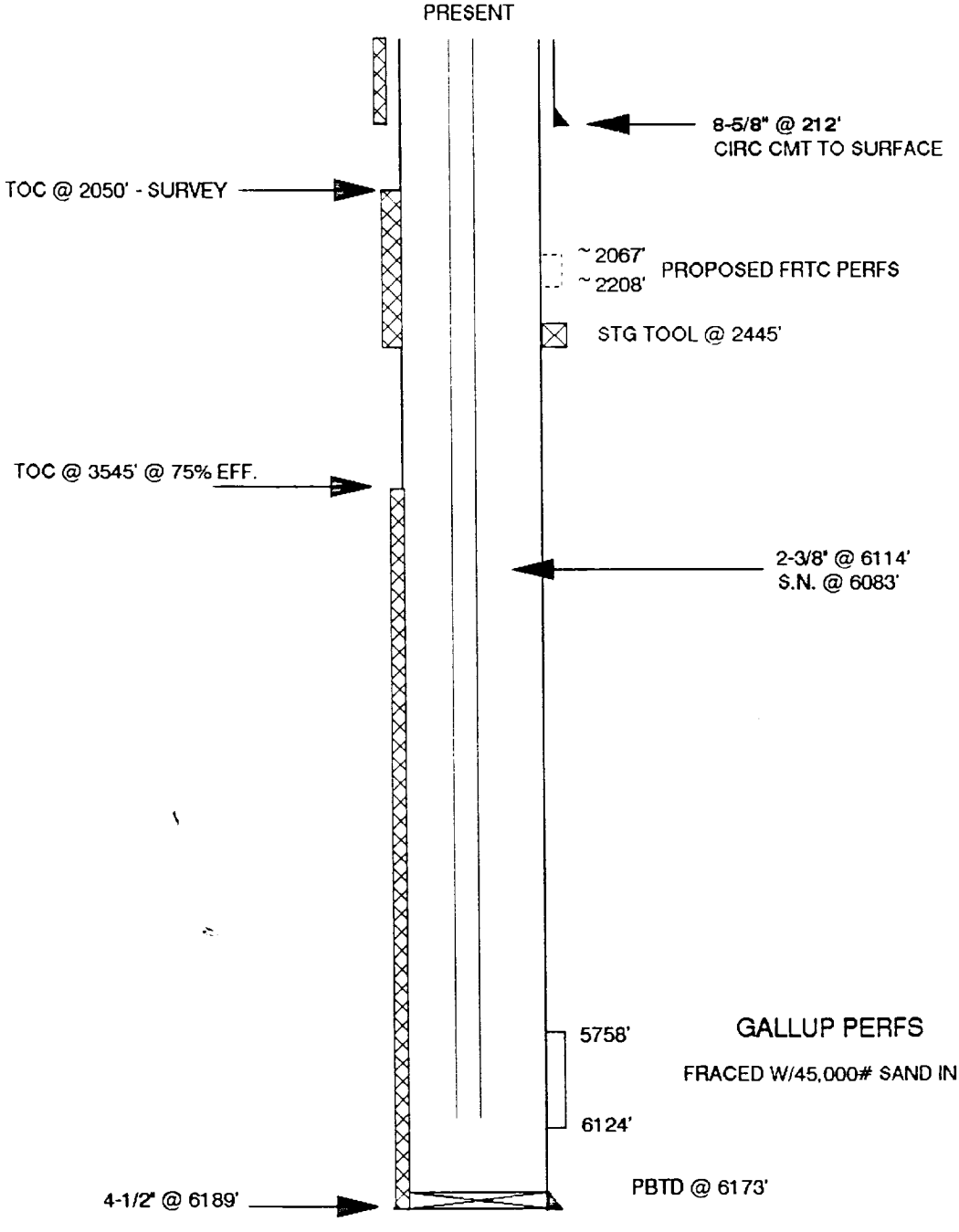
Wireline:	Blue Jet	325-5584
Fracturing:	Western	327-6222
RA Tagging:	Pro-Technics	326-7133

PMP

HUERFANO UNIT #231 GALLUP

UNIT D SECTION 6 T26N R9W

SAN JUAN COUNTY, NEW MEXICO



Pertinent Data Sheet - HUERFANO UNIT #231 GAL

Location: 1050'FNL 800' FWL SEC. 6 T26N R09W, SAN JUAN COUNTY, N.M.

Field: Angel Peak Gallup Ext.

Elevation: 6542' 11'KB **TD:** 6189' **PBTD:** 6173'

Prop#: 007972200
Lease: Federal NM-03017
DP#: 44856B - FRTC
GWI: 66.06% - FRTC
NRI: 52.51% - FRTC

Completed: 12-19-72

Initial Potential:
AOF=1002 MCF/D, Q=843 MCF/D, SICP=692 PSI

Casing Record:

Hole Size	Csg. Size	Wt. & Grade		Depth Set	Cement	Top/Cmt
12-1/4"	8-5/8"	24#	KS	212'	182 cf	Circ. Cmt
7-7/8"	4-1/2"	10.5#	KS	6189'	803 cf	3545'@ 75% Eff.
			DV Tool @	2445'	332 cf	2050' _ Survey

Tubing Record: 2-3/8" 4.7# J-55 6114' 194 Jts
S.N. @ 6083'

Formation Tops:

Ojo Alamo	1367'
Kirtland	1515'
Fruitland	2035'
Pictured Cliffs	2220'
Mesaverde	3834'
Point Lookout	4683'
Gallup	5756'

Logging Record: Induction, Density

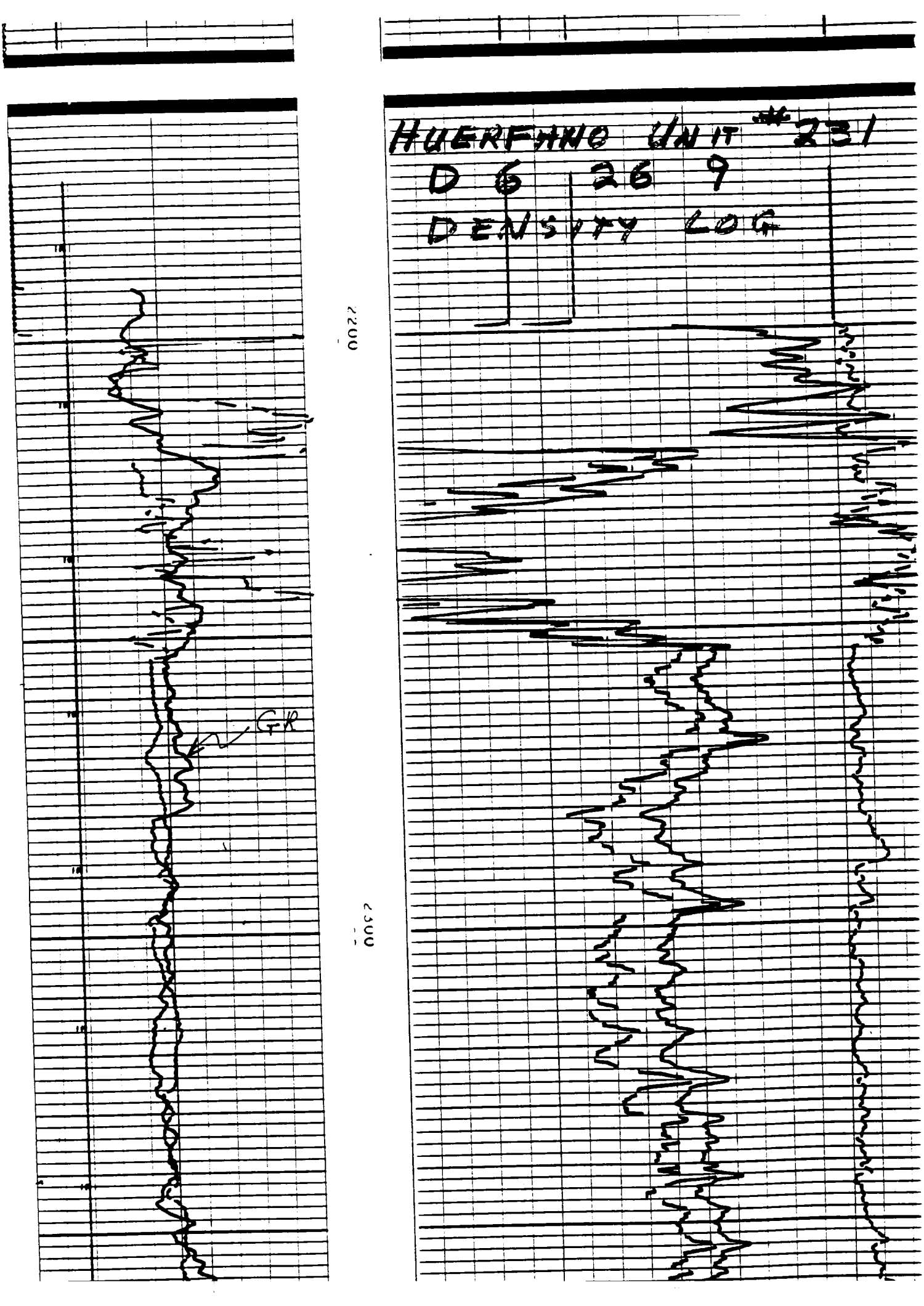
Stimulation: Perf Gal @ 5758'-6124' & fraced w/45,000# sand in water.

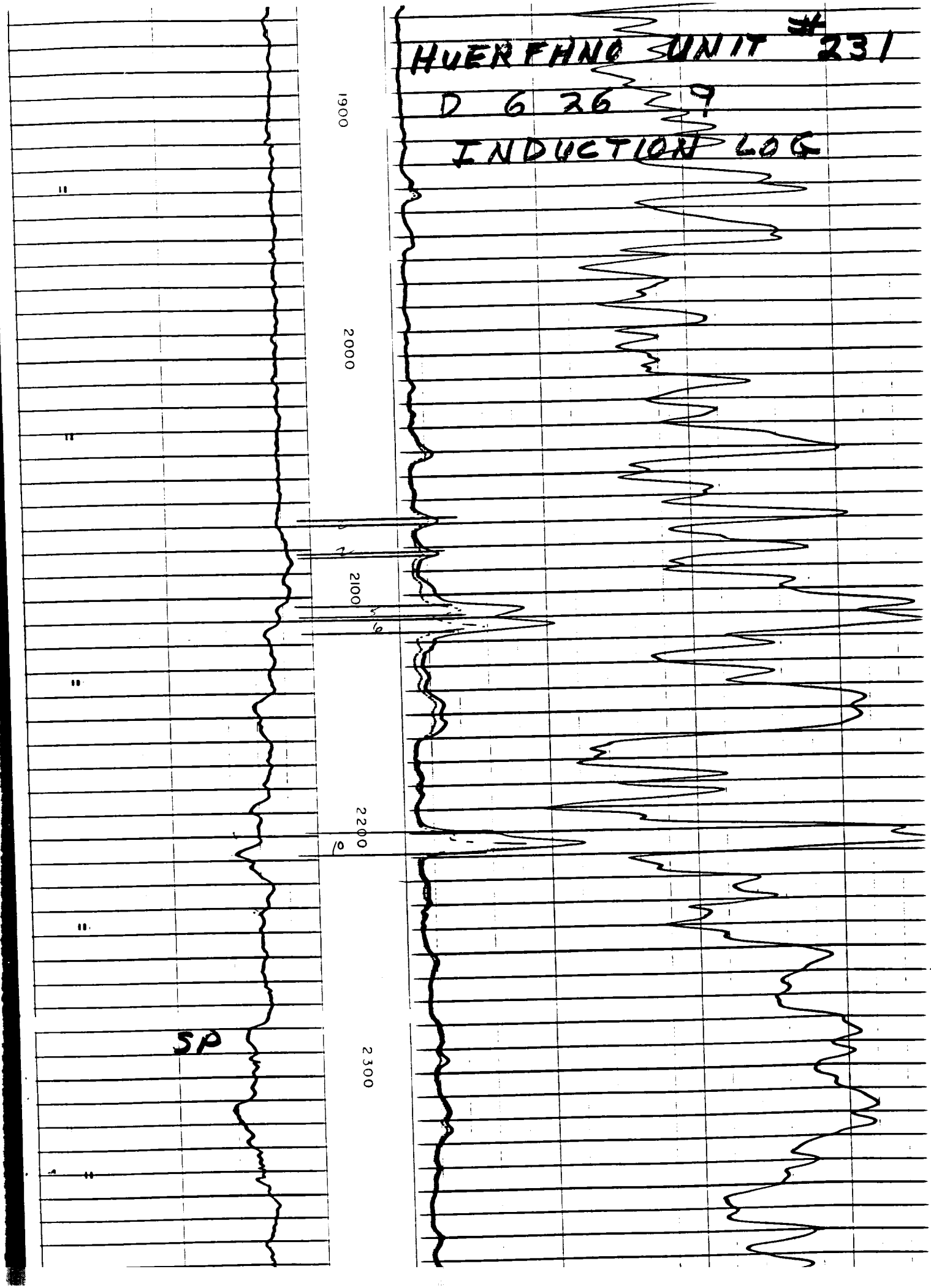
Workover History: None

Production History: Gal cummulative = 815 MMCF & 8584 BO. Gallup 1st delivered 6-1 73. Bradenhead=? psi. Line=??? psi. Gallup has current capacity of 8 MCF/D.

Pipeline: EPNG

PMP


HUERFANO UNIT #231
D 6 26 9
DENSITY LOG
GR
2200
2300


HUERFHNO UNIT #231
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INDUCTION LOG
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2000
2100
2200
2300
SP