

submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
BLM

Sundry Notices and Reports on Wells 95 JUL 11 PM 1:56

070 FARMINGTON, NM Lease Number
NM-012737

1. Type of Well
GAS

6. If Indian, All. or
Tribe Name

2. Name of Operator
MERIDIAN OIL

7. Unit Agreement Name

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

8. Well Name & Number
Crandell #2

4. Location of Well, Footage, Sec., T, R, M
790' FSL, 790' FEL, Sec. 11, T-26-N, R-9-W, NMPM
P

9. API Well No.
30-045-05898

10. Field and Pool
Ballard Pictured Cliffs

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

<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion	<input type="checkbox"/> New Construction
<input type="checkbox"/> Final Abandonment	<input type="checkbox"/> Plugging Back	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Water Shut off
	<input checked="" type="checkbox"/> Altering Casing	<input type="checkbox"/> Conversion to Injection
	<input checked="" type="checkbox"/> Other - Restimulate	

13. Describe Proposed or Completed Operations

It is intended to run and cement 3 1/2" casing in the subject well and then perforate and fracture treat the Pictured Cliffs formation according to the attached procedure and wellbore diagram.

RECEIVED
JUL 10 1996
OIL GCS, BLM
LRS

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

Signed Nancy Oltmanns (PMP) Title Regulatory Administrator Date 7/10/96

(This space for Federal or State Office use)

APPROVED BY _____ Title _____ Date _____

CONDITION OF APPROVAL, if any:

APPROVED

JUL 12 1996

for DISTRICT MANAGER

NMOCD

CRANDELL #2 PC
Workover Procedure
P 11 26 9
San Juan County, N.M.
Lat-Long: 36.497421 - 107.751999

1. Comply to all NMOCD, BLM, & MOI rules & regulations. MOL and RU completion rig. NU 6" 900 series BOP w/flow tee and stripping head. NU blooie line & 2-7/8" relief line.
2. TOH w/1" tbg & lay down. TIH w/4-3/4" bit on 2-3/8" rental tbg & C.O. w/air/mist to new TD 2100'. Load hole w/1% KCL water. TOH.
3. MI Blue Jet. Run an advanced integrated data processing GSL neutron log 2100'-1700' & coorelate to open hole GR log - attached.
4. Run 3-1/2"-OD 9.2# J-55 NUE tbg to TD 2100' w/Omega type latching collar above 2' tbg sub w/notched collar on bottom. Cement w/155 sx 50-50 Cl"B" POZ w/2% gel & 6-1/2#/sx kolite & 10% salt & 2% Cacl. (yield=1.44 cf/sx). This should circ cmt to surface w/50% excess. After cmt, break & wash lines, run 2 wiper balls & Omega wiper latching plug, followed by 100 gal 7-1/2% HCL acid. Displace acid w/1%KCL water. After plug seats, release pressure. Space out using tbg subs & install 3-1/2" csg in new csg spool. Install 6000 psi rental frac valve on 3-1/2" csg.
5. Pressure test csg to 6000 psi. MI Basin Perforating. Run GR-CCL & coorelate to neutron log. Perf PC w/about 16 holes over 150' of PC interval as per Production Engineering Dept. Perf w/2-1/8" SHOGUN SDP STP-2125-401NT 14 gr charges which make a 0.27" hole & 21.8" of penetration in concrete
6. Break down PC perfs down 3-1/2" csg w/2000 gal 15% HCL & 150% excess perf balls. Acidize @ 7 BPM w/max pressure = 6000 psi. Run junk basket to retrieve balls.
7. Spot & fill 2-400 bbl. frac tanks w/2% KCL water. Filter all water to 25 microns. One tank is for gel & one tank is for breakdown water. Usable gel water required for frac is 355 bbls.
8. Frac PC down 3-1/2" csg w/49,000 gals. of 70 quality foam using 30# gel as the base fluid & 80,000# 20/40 Arizona sand. Pump at 70 BPM. Monitor bottomhole & surface treating pressures, rate, foam quality, & sand concentration with computer van. Sand to be tagged w/ 0.4 mCi/1000# Ir-192 tracer. Max. pressure is 6000 psi & estimated treating pressure is 5500 psi. Treat per the folowing schedule:

<u>Stage</u>	<u>Foam Vol. (Gals.)</u>	<u>Gel Vol. (Gals.)</u>	<u>Sand Vol. (lbs.)</u>
Pad	14,000	4,200	—
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
Flush	(725)	(218)	0
Totals	49,000	14,700	80,000#

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

- * 30# J-48 (Guar Gel mix in full tank - 16,000 gal)
- * 1.0 gal. Aqua Flow (Non-ionic Surfactant mix in full tank)

CRANDELL #2 PC - PC RESTEM

- * 1.0# GVW-3 (Enzyme Breaker mix on fly)
- * 1.0# B - 5 (Breaker mix on fly)
- * 3.0 gal Fracfoam I (Foamer mix on fly)
- * 0.38# FracCide 20 (Bacteriacide mix on full tank)

9. Open well through choke manifold & monitor flow. Flow @ 20 bbl/hr, or less if sand is observed. **Take pitot gauges when possible.**
10. Change out frac valve w/tbg head. TIH w/notched collar on 1-1/4" IJ tbg & C.O. to 2098'. Monitor gas & water returns & **take pitot gauges when possible.**
11. When wellbore is sufficiently clean, TOH & run after frac gamma-ray log from 2098'-1700'.
12. TIH w/1-1/4" IJ tbg w/standard seating nipple one joint off bottom & again cleanout to 2098'. Use expendable check if necessary. When wellbore is sufficiently clean, land tbg @ 1940' KB. **Take final water & gas samples & rates.**
13. ND BOP & NU wellhead & tree. Rig down & release rig.

Recommended: _____
Production Engineer

Approve: _____
Drilling Superintendent

VENDORS:

Logging:	Blue Jet	325-5584
Perfing	Basin	327-5244
Fracturing:	BJ	327-6222
RA Tag:	Pro-Technics	326-7133
Csg Equip:	Howco	325-3575
Cmt	Howco	325-3575

PMP

Pertinent Data Sheet - CRANDELL #2 PC

Location: 790' FSL & 790' FEL, Unit P, Section 11, T26N, R9W, San Juan County, New Mexico

Field: Ballard PC

Elevation: 6264' GL
KB=8'

TD: 2031'
PBTD: 2031'

Completed: 7/17/54

Spud Date: 6/2/54

DP #: 48978A
Lease: Fed: 0127377
GWl: 78.62%
NRI: 67.29%
Prop#: 0023052

Initial Potential: Initial Potential = 2085 MCF/D, SICP=654 psi

Casing Record:

<u>Hole Size</u>	<u>Csg Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>	<u>Cement</u>	<u>Cement (Top)</u>
12-1/4"	8-5/8"	24# N/A	97'	65 sx.	N/A
7-7/8"	5-1/2"	14# J-55	1986'	100 sx.	1475' @ 75% Eff.

Tubing Record:

<u>Tbg. Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>
1"	1.7#	2016'

96 Jts

Formation Tops:

Ojo Alamo:	970'
Kirtland Shale:	1135'
Fruitland:	1617'
Pictured Cliffs:	1962'

Logging Record: GRN log

Stimulation: Fraced Open Hole w/5000# sand in oil.

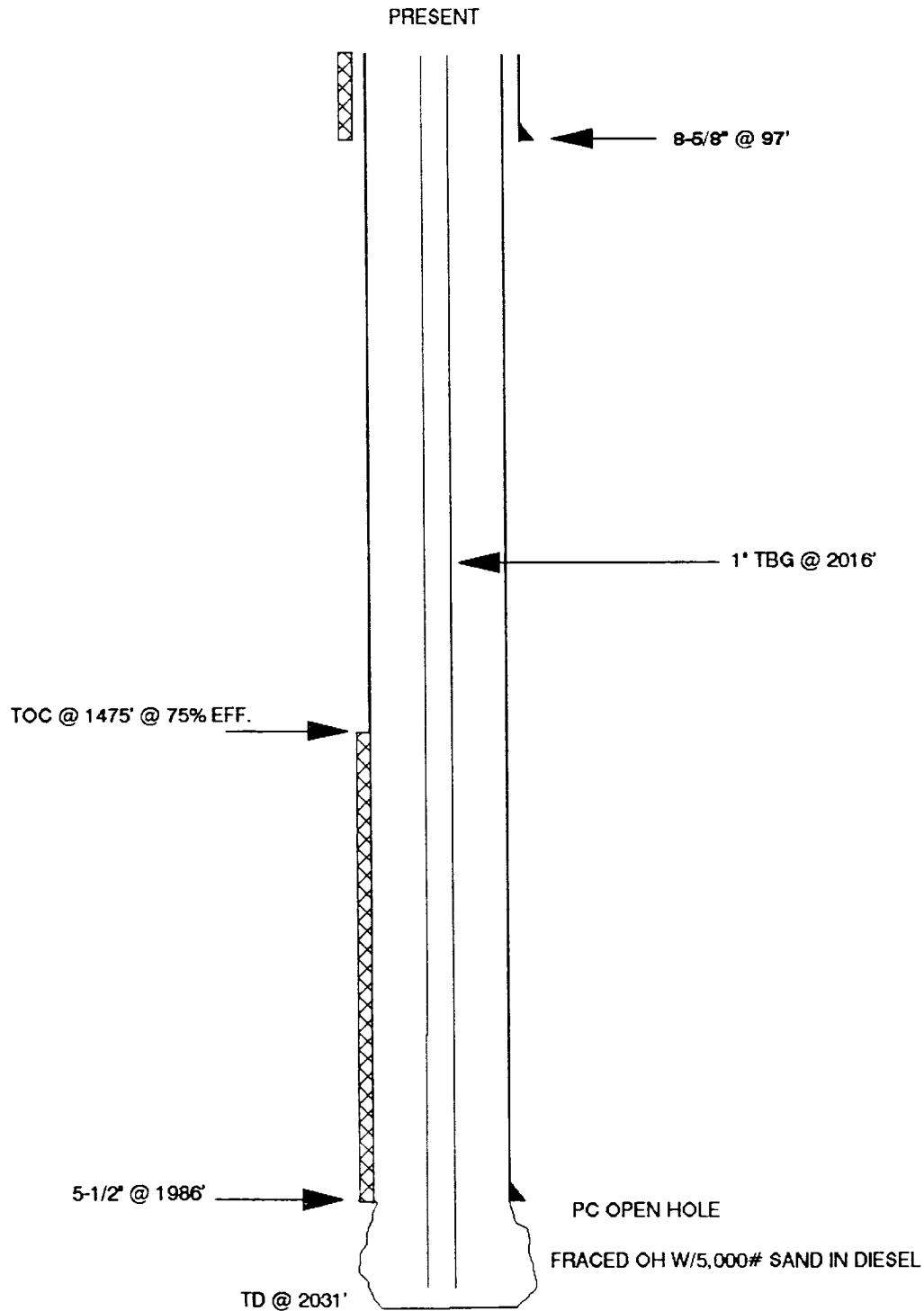
Workover History: NONE

Production history: 1st delivered 9/54. Current capacity is 15 MCF/D. Cum is 894 MMCF.
W/ 54 MMCF booked.

Pipeline: EPNG

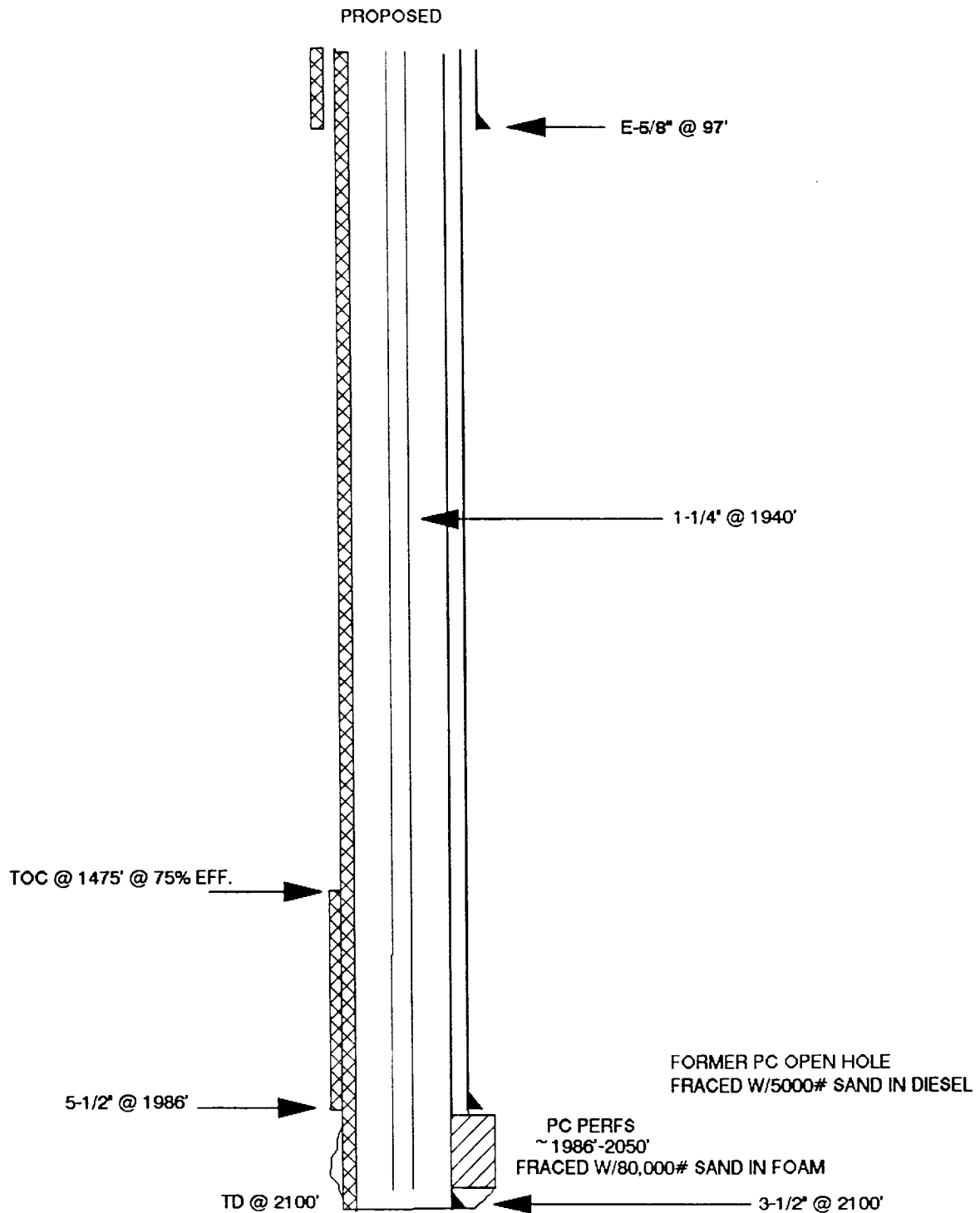
CRANDELL #2 PC

UNIT P SECTION 11 T26N R9W
SAN JUAN COUNTY, NEW MEXICO

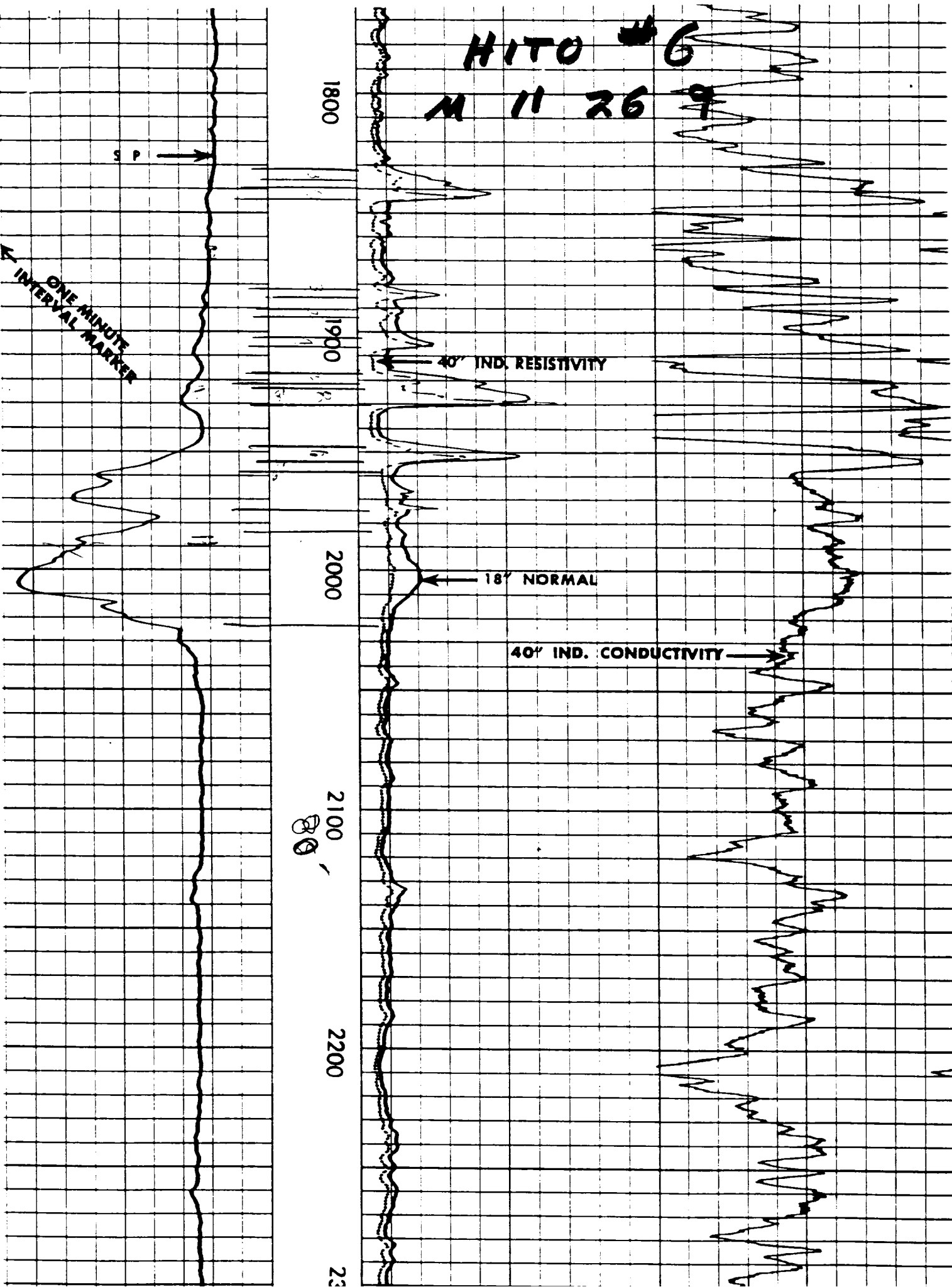


CRANDELL #2 PC

UNIT P SECTION 11 T26N R9W
SAN JUAN COUNTY, NEW MEXICO



HITO #6
M 11 26 9



80

5"=100'

1800

CRANDELL #2AC

P 11-269

10

1900

CC-1888

CC-1916

5

3

FC-1947

6

2

5

0-140 DIV LEFT

196

536

CSG-197

406

548

20