

CONTINGENCY PLAN FOR WELL CONTROL

AT CHEVRON NVSU #1



Chevron Canada Resources

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W.H. Garman
Manager
Drilling Division

1989-08-01

Manitoba Energy and Mines
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: Mr. John N. Fox

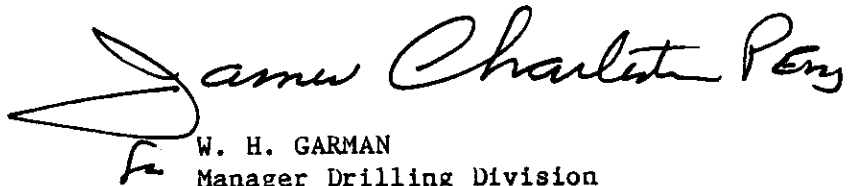
Gentlemen:

Attached is a copy of the Chevron "Chain of Command, Well Control Contingency Plan and Shut-In Procedures for the following nine (9) Chevron NVSU No. 1 development wells we have licenced:

Lic. No. 4123 - Chevron Virden 9D-23-11-26 WPM
Lic. No. 4124 - Chevron Virden 10D-23-11-26 WPM
Lic. No. 4125 - Chevron Virden 11D-23-11-26 WPM
Lic. No. 4126 - Chevron Virden 15D-23-11-26 WPM
Lic. No. 4127 - Chevron Virden 1D-26-11-26 WPM
Lic. No. 4128 - Chevron Virden 2D-26-11-26 WPM
Lic. No. 4129 - Chevron Virden 14D-23-11-26 WPM
Lic. No. 4130 - Chevron Virden 3D-26-11-26 WPM
Lic. No. 4131 - Chevron Virden Prov. 13C-24-11-26 WPM

Should you require any further information, contact Mr. Roy S. Rettie at (403) 234-5522.

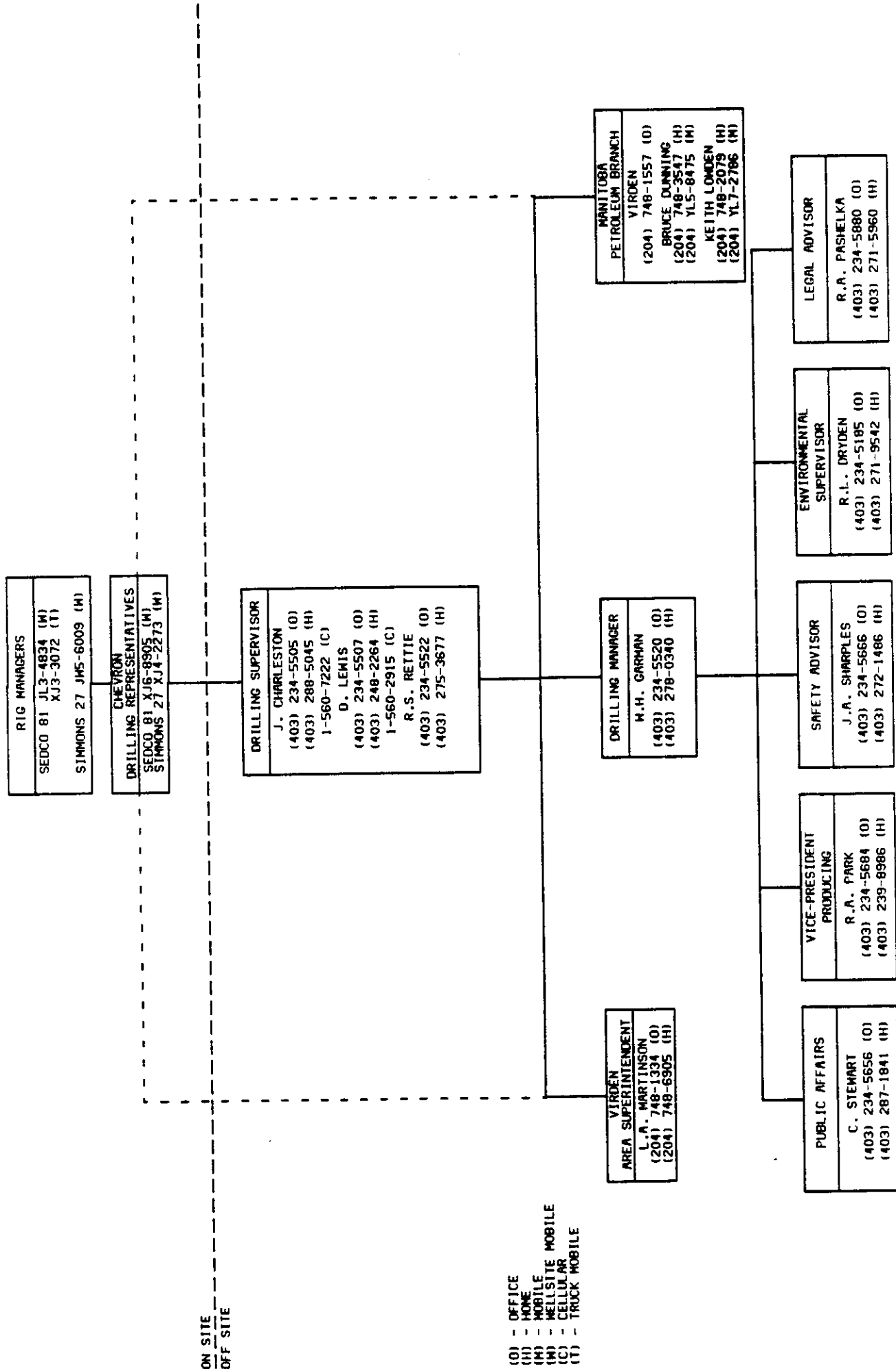
Yours very truly,


W. H. GARMAN
Manager Drilling Division

BD/77:im

cc: L. A. Martinson
R. L. Dryden
A. R. Young
J. Charleston
D. G. Lewis
On-Site Drilling Reps

FIGURE 1
CHEVRON CANADA RESOURCES
NORTH VIRDEN SCALLION UNIT NO. 1 DRILLING PROGRAM
EMERGENCY NOTIFICATION STRUCTURE



(O) - OFFICE
(H) - HOME
(M) - MOBILE
(M) - WELLSITE MOBILE
(C) - CELLULAR
(T) - TRUCK MOBILE

NOTE: DRILLING DIVISION RESPONSIBLE FOR DRILLING OPERATIONS. ALL CONTACTS SHOULD BE MADE WITH DRILLING DIVISION PERSONNEL.



Chevron Canada Resources

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W.H. Garman
Manager
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1989-07-31

Manitoba Energy and Mines
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: Mr. John N. Fox

Gentlemen:

RE: CONTINGENCY PLAN FOR WELL CONTROL AT CHEVRON NVSU No. 1

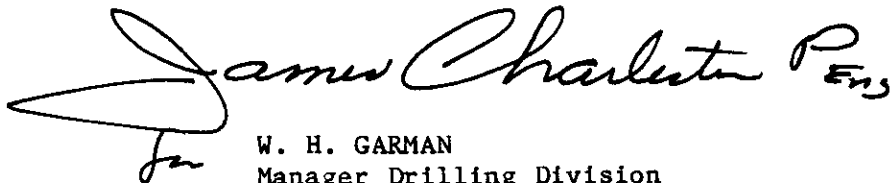
Chevron Canada Resources will be incorporating a "hard" shut-in procedure to minimize the size of the influx and thereby reduce the initial shut-in casing pressure. This method will lower the casing shoe pressures at all points during the circulation and reduces the chance of formation breakdown and an underground blowout.

Prior to drilling out surface casing of any of the Chevron Virden wells, we shall rig up a 25 m³ pre-mix tank filled with 1 770 kg/m³ (kill) drilling fluids and two 400 barrel storage tanks. In the event a well kicks prior to setting intermediate casing, the well would be shut-in and the kill drilling fluids circulated to restore well control. Should shut-in pressures exceed the maximum allowable shut-in pressure (MACP), as determined by the leak-off test at Chevron Virden Prov. 13C-24-11-26 WPM, then the well would be opened to the MACP and allowed to flow into the storage tanks until the well could be safely shut-in. Excessive water would be trucked from location and reinjected as required. The MACP will be posted in the doghouse immediately following the leak-off test.

Our policy requires all of the contractor's drillers and Toolpushers to hold a valid First Line Supervisor's Blowout Prevention Certificate. In addition, all Chevron (Onsite) Drilling Representatives have valid Second Line Supervisor's Blowout Prevention Certificates.

We anticipate spudding the first well on or about 1989-08-03, subject to government approvals and site preparation. Should you have any further questions contact Mr. Roy S. Rettie at (403) 234-5522.

Yours very truly,



W. H. GARMAN
Manager Drilling Division

BD/76:im

CHEVRON SHUT-IN PROCEDURES FOR SURFACE STACK

Chevron requires the use of a hard shut-in procedure, which is designed to reduce the size of the influx. Although some concern may be directed to the possibility of a hydrostatic shock, it should be minimal due to the closing time of the bag preventer.

Note that the HCR and hydraulic choke are always closed during normal operations.

Shut-In Procedure While Drilling

The initial action to be taken after the first indication of a kick:

1. Sound alarm
2. Pull kelly out of preventers, then stop pumps. Ensure tool joints are clear of all BOPs.
3. Close bag-type preventer
4. Open HCR to closed choke
5. Read and record the following:
 - a) S.I.D.P.P. every minute
 - b) S.I.C.P. every minute
 - c) Volume of mud gained
6. If pipe is to be stripped or reciprocated, adjust regulator valve to reduce pressure on bag.

Shut-In Procedure While Tripping

The initial action to be taken when kick is detected:

1. Sound alarm
2. Position tool joint above table, set slips and unlatch elevators
3. Install full open safety valve and latch elevators
4. Close safety valve and then close bag preventer
5. Open HCR to closed choke
6. Read and record the following:
 - a) S.I.D.P.P. every minute
 - b) S.I.C.P. every minute
 - c) Volume of mud gained
7. If pipe is to be stripped or reciprocated, adjust regulator valve to reduce pressure on bag.

1. BOP Equipment Function Tests

*All function tests are to be recorded in the Tour Book.

- (a) Annular preventer and pipe rams are to be function tested daily and blind rams every time pipe is out of hole. Record closing and opening times.
- (b) Remote BOP controls are to be function tested at least once a week.
- (c) Motor air shut-offs are to be function tested at least once a week.

- (d) All bolts on BOP flanges must completely fill the nuts and are to be checked for tightness weekly, after pressure tests, and prior to penetrating potential producing zones.
- (e) The HCR valve(s) must be function tested weekly.

Note: The above function test is to be conducted by one of the following methods:

- 1) Visual Check (for HCRs where the valve stem movement can be visually witnessed).
- 2) During the CCR routine weekly BOP stack and equipment pressure test.
- 3) By use of a hydraulic hand pump which is to be tied into the manifold allowing fluid to be pumped from the manifold up against the HCR valve when in the closed position and visually into the stack bore when in the open position.

***Function tests are not done until they are recorded in Tour Book.**

2. Accumulator Units

- (a) Accumulator bottle pressures to be kept at the rated working pressure of the system. The manifold and annular pressure on the accumulator are to be kept at 10 500 kPa for fast shut-in while drilling. Regulate for stripping, etc.
- (b) Primary accumulator control valves for the BOP stack are to be left in the open position while conducting normal operations except the control valve for the HCR valve which will be kept in the closed position.
- (c) Accumulator units and nitrogen bottles are to be sized and maintained according to Chevron Canada Resources General Instructions and Requirements for Blowout Prevention Equipment, attached.
- (d) Must be capable of closing any ram or annular preventer within 20 seconds.

3. Kick Control

- (a) Drilling Supervisor to run a "pit drill" prior to drilling out surface casing. Below surface casing "pit drills" and BOP closing time checks are to be run on a surprise basis at least twice a week with each crew and prior to coring, testing and during tripping operations. Record crew check, BOP operation and times in the Tour Book.
- (b) After drilling out below surface casing, the pump is to be run at half speed and the standpipe pressure recorded in Tour Book and Well Control Handbook. This procedure is to be repeated daily on daylight tour.
- (c) All kellys are to be equipped with upper and lower kelly cocks.
- (d) A full opening stabbing valve in the open position with pick-up handles and a Hydriil checkguard inside BOP must be available on the rig in a readily accessible location. This valve is not to be used as the lower kelly cock.
- (e) The hole is to be kept full at all times while tripping and a permanent hole fill record kept for each trip. Drilling Representatives are to observe the first 10 stands being pulled off bottom to ensure the hole is not swabbing.
- (f) When seasonal weather conditions are below 0°C: the BOP manifold and all lines upstream and downstream of the manifold (from HCR to degasser) will be filled with Arctic-grade diesel; steam traced and insulated; the control panel for the hydraulic disc type choke will be located in the doghouse or an enclosed heated area on the rig floor.
- (g) Procedures, calculations, formulas and current data required to control a kick are to be posted in the doghouse and at the choke controls.
- h) A drill string float topped with a 5 mm hole is to be run directly above the bit on all wells.