

AVOID DAMAGE SWITCH CUSTOMERS CARS CAREFULLY

JUDGING SPEED

Accurate judgment of coupling speed depends upon correct timing. An excellent way to get accurate timing without a watch is to count "one hundred and thirty-one, one hundred and thirty-two" and so on as the car passes a stationary point. With a little practice counting can be done at the rate of one a second.

Ability to closely estimate speed at the time car strikes is extremely important because impact force builds up as the square of the speed. This means that impact delivered by a car coupled at 8 miles per hour is not four times that at 2 miles per hour, but 16 **TIMES AS GREAT**. Damage to freight or car can be avoided by always keeping coupling speed within the safe range—**NOT OVER 4 MILES PER HOUR — A BRISK WALK.**

IMPACT FORCE AT VARIOUS STRIKING SPEEDS

	Car Coupled at	Units of Destructive Force
Safe	1 mph	1
	2 "	4
	3 "	9
	4 "	16
Damaging	5 "	25
	6 "	36
	7 "	49
	8 "	64
	9 "	81
	10 "	100

Butte, Anaconda & Pacific Railway Company

SPECIAL INSTRUCTIONS and TIME TABLE NO. 2

EFFECTIVE 12:01 A. M.
MOUNTAIN TIME

JANUARY 10, 1964

For Information and Guidance
of Employes Only

NOTE IMPORTANT CHANGES

W. F. CONROY,
General Manager

A. A. HOLLAND,
Superintendent of
Transportation

STANDARD CLOCKS

Anaconda

Butte

Rocker

Roundhouse
Dispatcher's Office

Yard Office
Roundhouse

Employees off duty on account injury or sickness must secure release from doctor before reporting on for duty. Such employees must report weekly to their supervisor until released.

In case of injury to employees requiring ambulance in the Butte territory, call The Anaconda Company Telephone Operator —

Dial "0" on Company Line, or Bell Phone 723-4311 or

Dial 723-3132 — Harkins Ambulance Service

In the Anaconda territory, call the Emergency Hospital at the Smelter —

Bell Phone 563-5211, Company Extension 200
or

Dial 563-3434 (Police Station) for City
Ambulance

Train and yard crews, and all other employees, must be on the alert at all times when switching or working over highway and street crossing in order to avoid delays of any kind to emergency ambulance, police and fire truck movements.

LOCATION OF STRETCHERS

- 1) Butte Freight Office.
- 2) Butte Hill Yard Office.
- 3) Trainmen's Room—Rocker Yard Office.
- 4) Anaconda Dispatcher's Office.
- 5) Enginemen's Changeroom—Anaconda Roundhouse.
- 6) Anaconda Storeroom.

FIRST AID CABINETS

First Aid Cabinets are available at the following locations:

- 1) Change Room, Anaconda Roundhouse.
- 2) Yard Office, East Anaconda.
- 3) Yard Office, Rocker.
- 4) Butte Hill Yard Office.
- 5) Butte Freight Depot.

A list of the contents is posted on the outside and inside of each cabinet.

Please familiarize yourselves with the equipment and use for emergency only.

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ROCKER-BUTTE HILL LINE

WESTWARD	Distance from Butte	MAIN LINE			Distance from Anaconda	EASTWARD
Scales, Turntables, Wyes, Registers, Telephones		TIME TABLE NO. 2 1964				
		STATIONS				
R P	0.	B	Butte 1.1	D	25.7	190
P Y R	1.1		West Butte 2.8		24.7	362
P R Y Z "R" for Rocker yard engines only	3.9	RO	Rocker 2.9	DN	21.8	612
P	6.8		Silver Bow 1		18.9	363
P	7.8		Ramsay 1.0		17.9	—
P	8.8		Dawson 4.9		16.9	77
P	13.7	DU	Durant 2.3	DN	12.0	176
P	16.0		Gregson 5		9.7	23
P	21.0	Automatic Block	Staton 3		4.7	93
P R Z	24.0		DA	East Anaconda 1.7	DN	1.7
P T Y	25.7		Anaconda		0.	270

EASTWARD	Car Capacity	TIME TABLE NO. 2 1964		Distance from Rocker	WESTWARD
P R Y Z "R" for Rocker yard engines only		STATIONS			
	AUTOMATIC BLOCK	Rocker	0.	FREIGHT SERVICE ONLY	
		Minnie Jane 2.1	2.1		
P		Orphan Girl Ore 0.4	2.5		
P		Anselmo 1.2	3.7		
		Central Lbr. 0.3	4.0		
P R Y		Butte Hill 0.5	4.5		

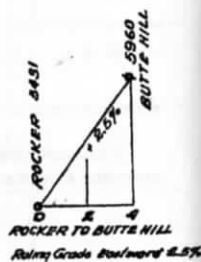
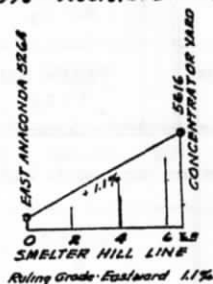
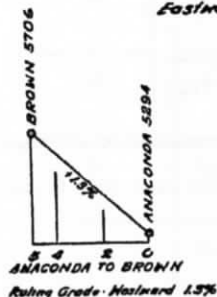
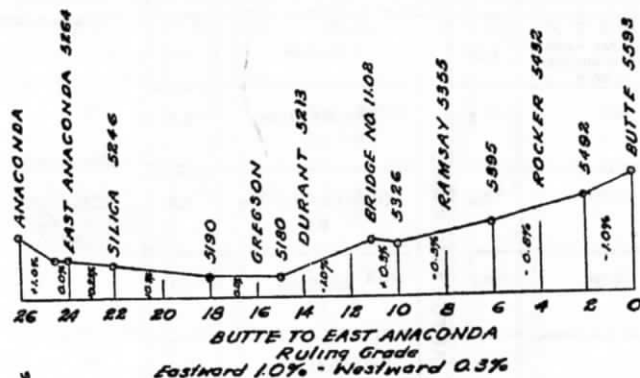
Eastward trains are superior to trains of the same class in the opposite direction.

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SPECIAL INSTRUCTIONS

The Speed Shown Below Must
Not Be Exceeded

RULING GRADES OVER SYSTEM



LOCATION	Maximum Speed	REMARKS:
	Miles per Hour	
At Any Point	30	Reduce to a safe speed on all curves, and move very carefully on sidings & industry tracks.
Within Yard Limits	25	Or as much slower as conditions may require.
Over and Between Bridges 11.02 and 12.48	25	
ROCKER— BUTTE HILL LINE	20	
BROWN'S LINE	15	
SMELTER LINE	20	

Road crews departing and arriving East Anaconda Yard will not exceed eight (8) miles per hour between Mile Posts 23 and 25.

Westward tonnage trains will depart from Rocker, not less than twenty minutes apart, and will keep twenty minutes apart, as far as practicable.

Main Line conductors on eastbound trains will prepare Form 140 (Consist of Train report) on one sheet. Show various stations where cars are set out. Leave this form, together with Butte waybills, in Section House at West Butte. Also, leave a duplicate copy of Form 140 with Milw. (Rocker) and U. P.-N. P. (Silver Bow) waybills at Rocker Yard Office. Conductors will also prepare a Form 140 for Rocker on empty dumps, slime and gravel.

Main Line conductors will make wheel report (Form 139) on all B. A. & P. or loads destined to Anaconda.

Rocker yard foremen will be required to prepare wheel report (Form 139) on all cars handled between stations within yard limits.

Should a loaded ore car be set out enroute, conductors will comply with Rule 902 of the Consolidated Code.

Passengers will not be carried on freight trains, except persons presenting a special permit issued by the General Manager or Superintendent.

Dispatcher will issue order to train crews handling either the Jordan Spreader or the D-2 Wrecker Outfit not to exceed a speed of 20 miles per hour. This equipment to be placed in train near the caboose.

Engineers will normally operate from leading end of electric locomotives except when actually involved in switching cars.

Under Rule 922 of the Consolidated Code of Operating Rules the fireman, when competent, may handle the engine under the supervision of the engineer, the engineer being responsible.

Bulletins are posted at Roundhouses and other report points and must be acknowledged in accordance with Rule 109 of the Consolidated Code. Train, engine and yard crews will acknowledge bulletins at Roundhouse. Yardmasters, train dispatchers and operators will acknowledge bulletins at yard offices, dispatchers' office, and Rocker. The number of last bulletin read will be acknowledged by appropriate notation on back of timeslip under "Remarks" column.

B. A. & P. center flow hopper cars, Series 801 to 820, inclusive, are to be handled next to caboose on all road train movements.

A spring switch has been installed on west end of Anaconda Company concentrator to G. N. connection at point of junction with track No. 5 in the G. N. Yard at Butte. Switch must be lined for eastward movement but is automatic for westward movement.

Do not exceed six (6) miles per hour at any point within the Butte Concentrator area or in the Berkeley Yard of the Anaconda Company. Be alert for men and equipment on or about tracks at these locations.

Switch on stem of Wye at West Butte and Rocker must be left lined and locked for east leg of Wye.

Before descending from the Haggin Line to Butte Hill Yard, switch crews will receive telephone clearance from the Butte Hill Yard Office, unless cleared for round trip before leaving Butte Hill Yard. Engine Foremen will repeat instructions back to individual who transmitted them. When Butte Hill Office cannot be contacted for clearance, or when Yardmaster is not on duty, the Hill may be descended under flag protection only. Section Foremen working on the Hill with track motor cars shall be governed by these same instructions.

Mountain view main track and B. & M. spur cannot be used beyond a point 150 feet east of HI Ore road crossing.

Please watch out for truck operations on Butte hill line inside of the Anselmo Mine Yard just east of Excelsior Street grade crossing. Truck movements will be protected by Anaconda Company flagmen.

Extra trains on the B.A.&P. may be authorized to run by clearance card instead of train order. In such cases the clearance card will designate points between which the extra is authorized to run. All clearance cards will be numbered consecutively, the same series of numbers being used for cards as for orders.

Location of Yard Limits, designated by yard limit signs, as follows:

- 1) From M. P. 9 (Dawson) east is one yard.
- 2) From near M. P. 20 (Staton) west is one yard.
- 3) Durant

Public crossings must not be blocked to exceed five (5) minutes.

Trains and engines approach all street crossings within the city limits of Butte and Anaconda with caution. All movements over public crossings must be fully protected by flag, unless watchman is on duty or crossing is protected by signals or gates.

Rule 21 of the Consolidated Code of Operating Rules is not applicable to trains operating on the B. A. & P. Railway.

When shoving cars ahead of engine from West Butte Yard to Great Northern Railway, Butte, trainmen will use tall hose with air whistle on east end of leading car.

During the night, or foggy or stormy weather, when necessary to shove cars ahead of engine between Switchback and Stock Bins Yard, a lighted red fusee will be displayed on the front end of the leading car.

Derrail on main track below lower switch, Stock Bins Yard, can be run through going into yard. Must be kept set for deraill at all times, except when trains are passing over it.

Whenever a stop is made with cars standing over this switch, it must be definitely determined that the switch is properly lined and secured before a backward movement is made.

Keep Zinc Hole switch lined for the "Bug House" at all times when not in actual use.

Normal position of spring switch at end of double track on the Smelter Line will be for trains descending toward East Anaconda, but such trains must reduce speed, approach switch very carefully and observe that it is in proper position, with points fitting up safely before passing over switch.

Trains ascending toward High Line Yard will run through this spring switch, not exceeding fifteen (15) miles per hour.

After a train or engine has started through spring switch, a reverse movement must not be made unless switch has been set by hand to hold it.

Extra precaution must be taken at night and during stormy weather.

The two main line switches, East Anaconda Yard, leading westward from Main Track to East Lead and Track 14, together with cross-over switches used in connection with these tracks, may be left in either position, as will facilitate movement of trains and engines. The main line switches should be kept locked. Be governed accordingly and expect to find these switches in either position.

Indicating lights showing the position of No. 14 switch at east end of East Anaconda Yard have been installed approximately 200 feet east of west end of No. 14 track. These lights indicate position of No. 14 switch as follows:

GREEN lined for the Lead.

RED lined for the Main Line.

New cantilever overhead flashing highway crossing signals have been placed in operation at Slime Pond-Highway 10-A Crossing, East of Anaconda.

Indicating lights operating in conjunction with highway crossing lights will indicate to crews that the operation is normal. In the event indicating lights are not operating it will be necessary to flag the crossing.

Shove cabooses to spot on Caboose Track when tying up.

Leave 15 foot opening between cars across all tracks just west of wrecker house and another 15 foot opening between cars just west of hose house, West Anaconda Yard.

Ring engine bell freely when making moves at or near Wrecker House, Coach Yard Rip, West Yards, Anaconda.

Do not run engines onto Kelly Coal Trestle at West Yards in Anaconda. Arrangements have been made to leave three cars on Kelly Spur to aid in switching operations at this point.

Do not exceed five (5) miles per hour when pulling empties by car sprayer, East Anaconda Tipple Tracks.

B. A. & P. locomotives will not go beyond the clearance point on any track at the Coal Pile without authority from the yardmaster.

Employees are prohibited from riding or walking on the roof of any moving car, except when necessary in the passing of signals and then only when they place themselves near the middle of the car.

EAST ANACONDA TIPPLE OPERATION

Regardless of instructions from tipple crews, B. A. & P. crews must comply with Rule 810(B) of the Consolidated Code while spotting the Tipple.

When pulling cars from empty tracks at East Anaconda Tipple, Engine Foreman must have a man at the east end of cars to ascertain that it is safe to pull cars from each respective track.

WHEN SETTING UP NEW TIPPLE:

Set a handbrake on any cars that are on the Tipple Tracks before making a coupling to prevent them from rolling. Leave handbrake set.

Gates, locked with switch locks, are placed across main track at upper and lower ends of Anselmo Mine yard. Approach these gates with caution.

The following trestles must not be used by engines:

Badger State Mine, Coal Trestle—Butte Hill.

Bell Mine, Coal Trestle—Butte Hill.

Ammonium Nitrate cars spotted at the Ramsay Powder Plant are protected by a blue flag placed approximately two car lengths west of cars. Plant employes only will place and remove blue flag.

After pulling cars from Badger Mine leave Gibson's Derail lined for derail position and line Wye Switch for Mountain View Yard.

TONNAGE RATING FOR MOTIVE POWER

MAIN LINE—BUTTE TO ANACONDA

	Old Electrics		New Electrics	
	Double	Triple	201-202 Coupled	Single Engine
Eastbound	2,000	3,000	3,500	1,750
Westbound	5,600	8,400	12,600	6,300

	Diesel Locomotives		
	Single	Double	Triple
Eastbound	1,500	3,000	4,500
Westbound	4,200	8,400	12,600

SMELTER HILL LINE

Ascending—2 Units—22-27 loads; depending upon rail conditions and temperature.

BUTTE HILL LINE

2 Units—810 tons; depending upon rail conditions and temperature.

FULL load rating of 200 amperes on Electric Locomotives, Series 39 to 66, inclusive, is not to be exceeded, except during acceleration periods, and controller should be operated on running points when possible. (Eliminates overheating rheostats).

DIESEL OPERATION

Diesel locomotives being towed dead in a train will be handled as follows:

- 1) Next to the engine.
- 2) Reverser will be locked in neutral position by enginemen as per paragraph 301 of Diesel Operating Instruction Manual.
- 3) Air brakes will be handled as per note at the end of paragraph 209 of the same Instruction Manual.
- 4) Isolation switch in start position.

Inspection of diesel locomotives traction motors shows burns on commutators caused by power being applied with locomotive standing still.

All concerned must be sure:

- 1) The generator field is off when pumping up trains.
- 2) The throttle is off when the locomotive is standing.
- 3) Not to reverse locomotive while in motion.
- 4) When starting trains to be careful that locomotive starts to move and does not stand still with heavy armature current flowing.

The practice of rapidly speeding up diesel engines with the lay shaft lever will not be allowed.

It is necessary that enginemen on diesel locomotives frequently observe that battery ammeter is not showing discharge. If it does, check following:

- 1) Battery charging contactor is closed.
- 2) 150 amp. battery charging fuse is **GOOD**. Use fuse tester on engine.
- 3) Auxiliary generator field circuit breaker (in electrical control cabinet) must be on.
- 4) Auxiliary generator cutout switch (in electrical control cabinet) must be closed.

All deadhead locomotive units must be coupled to the operating units in train or yard movements.

Buss Lines for diesel and new electric locomotives have been numbered for each locomotive. Please keep Buss Lines on locomotives they are marked for.

Under no circumstances should diesel-electric or electric engines pass through water which is deep enough to touch the bottom of the traction motor frame. When passing through water, movement must always be at very slow speed (2 to 3 MPH).

During freezing weather Diesel engines when shut off must have cooling water drained to winter level, and if in judgment of crew completely drained to prevent freezing and damage to engine.

When Diesel propulsion engines are shut off, in addition to insuring air brakes are fully applied, blocking must be securely placed at front and rear of a traction wheel, and sufficient hand brakes fully applied throughout train to insure against movement in event air brakes leak off.

Rule 927 of the Consolidated Code will apply to diesel and electric locomotives as well.

Air hoses on engines must be locked in the hose fastener when not in use.

Enginemen should inspect wheels on their locomotives at the beginning of each day's work when leaving ready track. They should determine that all wheels are turning properly and that there are no flat spots. If flat spots are detected, they must immediately notify the General Shop Foreman or the Locomotive Inspector on duty.

ELECTRIC OPERATION

Do not forget to report fuses that blow on **ALL ENGINES** so that they can be replaced and the trouble located and corrected. This is important.

When coupling engines 201 and 202, make sure that the clamps, holding the high voltage connection between units, are firmly in place to insure a good contact and prevent burning.

Your attention is called to the importance of reporting blown motor fuses and abnormal operation of equipment, so that the condition may be corrected before damage becomes excessive.

Inspection and heavy replacement of resistance grids on electric locomotives indicate that locomotives are being operated for excessive periods of time on resistance points. Leaving controller on rheostat points for longer than necessary causes overheating and damage to these grids.

Your attention is called to the importance of seeing that jumpers between units are put in all the way and make good contact and that the receptacle cover locks jumper in place. Also, be careful that dated tags on jumpers are not torn off.

It is necessary that air pressure on electric locomotives be at least 90 pounds before reverser operation is attempted.

The trolley at the Sand House at Anaconda Roundhouse is to be de-energized by means of a sectional switch located at the west end of the Sandhouse while sanding locomotives. The switch is locked by means of a switch lock. Handle to be placed in down position to de-energize trolley. The trolley opposite the Cinder Pit, east of the East sectional insulator will still be energized, so that electric locomotives may be left with pantographs up.

Hostlers and helpers breaking up old electric units must check brakes and apply hand brakes to both units when left standing by themselves and with blocking on each unit. Check three-way valve before releasing hand brake.

TROLLEY WIRES

Copper wires are arranged over electrified tracks and furnish current to the electric locomotives when pantograph is in direct contact with overhead system.

AIR GAPS

The trolley system is divided into sections to facilitate sectionalizing in the event of trouble. The separation is made by means of air gaps or sectional insulators.

The air gap or sectional insulator must not be "bridged" with both pantographs, or crossed when trouble is known to exist, or when the section is considered "dead" (de-energized).

SECTIONALIZING SWITCH

Sectionalizing and de-energizing of electrical circuits will be handled by Electrical Department employees who in turn will hold the clearance and notify the Dispatcher.

At each air gap there is a switch through which current is fed to the trolley. When the handle is up the switch is **CLOSED**, when the handle is **DOWN** the switch is **OPEN**. These switches **MUST NOT** be opened under load. When **MAIN LINE** switches are open, the air gap must be protected by one or more flagmen. Locomotives approaching protected air gaps must not run on to air gaps. When exact location of air gap is unknown, locomotive must be preceded by flagman.

When flagman is not available to protect air gap, the feeder or feeders should be de-energized until all are informed of conditions. All sectionalizing and spur switches shall be locked with standard switch lock. When special protection is desired, special locks may be used. In no case should sectional insulators be passed until the sectionalizing switch is closed.

Main line sectionalizing switches must not be opened until it is known that they carry no current.

A sectional insulating switch (sneezer) has been installed 150 feet west of Colorado Street Bridge on main track, which will de-energize all trolley east of that point. This switch to be cut out at all times except while in actual use.

LOW TROLLEY

Hot weather, or other conditions, may cause wire to sag or become out of alignment endangering pantograph operation. A close watch must be kept, and if trolley wires are observed to be low, the trouble must be reported.

TROUBLE ON WIRES

All employees are to report to the Dispatcher, as soon as possible, any irregularity of distribution system. When fallen or broken wires endanger life or property, power must be shut off and the situation guarded by an employee, until repair is properly made. Anyone may order power off by calling the Anaconda or Missouri River Sub stations in case of emergency. Also, call the Dispatcher to get Dawson Substation off the line. All wires must be considered energized when found broken or on the ground.

Energized wires may be handled in case of extreme emergency by means of dry rope or dry board provided six feet of dry (non-metallic material) is between wire and person handling the rope or board and provided there is no danger of the wire slipping off and contacting the person.

LOWERING PANTOGRAPHS

Pantographs must not be lowered under load. Dynamotor and heater switches must be **OPEN** (and left open) before pantographs are lowered.

Emergency operation: Pantographs may be lowered while running or standing.

POWER FAILURE

When power fails, the Dispatcher should be notified. Dynamotor and heater switches may be left in, providing there is no reason to believe that your engine is causing the trouble. When power returns, the running position must be governed by voltage conditions. When voltage is **UP**, resume normal operation. When voltage is **DOWN**, curtail operations. Series operation consumes only half the power that parallel operation requires.

DERAILED ELECTRIC LOCOMOTIVES

Should electric locomotives deraill and no part of running gear touch the rail, it is not safe to touch the engine. Should the pantograph contact the overhead system, lower pantograph and provide ample ground connection before again raising pantograph.

OVERHEAD CLEARANCE

Special precaution must be taken when riding tops of cars. Work equipment must not be permitted to touch the overhead wires.

The steam derrick boom is insulated but should not be forced into wires beyond reasonable limits.

Wires attached to buildings and bridges are double-insulated. In no case should material be placed on supporting wires, or employees climb out on wires. Special permission and instructions should be obtained when work may involve accidental contact with overhead wires.

ENGINE HOUSE AND SHOP PROCEDURE

When desiring to raise pantograph, the fact must be made known to all concerned by, first, observing that there are no flags protecting workmen; secondly, observing that the grounding switches are not in use; thirdly, by passing through the aisles calling "**PANTOGRAPH GOING UP.**" Three calls on each unit, connected together, must be made clearly and loudly. One in the operating end, one in the middle compartment and one in No. 2 end. Should tools or materials indicate abnormal conditions, same must be investigated before proceeding further. It must be definitely known that no one is working under, in or on the engines.

Electric locomotives operate on a potential of 2400 Volts Direct Current. **NO CURRENT CARRYING PARTS SHALL BE TOUCHED WHILE ENERGIZED.**

NO ONE shall climb on top of engines when pantographs are up, for any reason whatsoever. Lock Down and Grounding Switch must be used before working on current-carrying parts.

CAUTION—remove grounds when through working on engines. When two or three units are connected, each unit must have pantograph **LOCK DOWN** — and **NO LESS THAN TWO (2) GROUNDING SWITCHES USED.**

Electric switch point heaters are in operation at:

- 1) Derrall at Concentrator Yard.
- 2) Switchback Siding and Coal Pile at Anaconda Smelter.
- 3) Both ends BAP-NP Cross-O'vr at Durant, as well as east and west ends of north passing tracks at Durant.

Location of Dispatcher Phones on Main Line:

- 1) West end of West Butte Yard.
- 2) Rocker Yard Office.
- 3) West end of Rocker Yard.
- 4) 200 feet west of Silver Bow Road crossing.
- 5) East end of Ramsay Lead.
- 6) East end of Bridge 11.02.
- 7) Bridge 12.48.
- 8) Durant Depot.
- 9) Pole east end of South Siding at Durant.
- 10) West Switch at Durant.
- 11) Gregson Section House.
- 12) Station—Booth at Loading Pens.

Booth phones connected to Dispatcher's line must be left cut out when not in use.

All trouble must be reported immediately to the Dispatcher's Office as this is the clearing house for all departments covering electrical trouble, mechanical trouble, derailments, wrecks, floods, fires, and any other unusual occurrences that unfavorably affect the operation of the Railroad.

Department heads, emergency crew foremen, trainmasters, yardmasters, section foremen, substation operators and all concerned must report as soon as possible.

The dispatcher on duty can then keep management and other officials properly informed on such occurrences.

Roller bearing failures on cars or engines equipped with roller bearing boxes may be due to lack of oil or grease. If the box is not blazing, the oil plug in the cover should be removed and heavy oil added and plug replaced. Oil must never be added to a box that is blazing. In case of a hot box, oil should be added and the plug replaced; train should proceed at reduced speed and care exercised until it is apparent the box is running cool.

In addition, put a good coating of oil between the adapter and outer race. Car should be set out at first opportunity.

AIR BRAKE RULES

The Power Brake Law of 1958 is applicable on the B. A. & P. Railway.

All personnel affected by such rules and regulations must have pamphlet in their possession while on duty.

SPECIAL AIR BRAKE RULES

Trains descending from Butte Hill, Anaconda Smelter, and Brown's Line must have air brakes tested as prescribed by Rule 132.12 of the Power Brake Law—Initial Terminal Road Train Air Brake Test.

When car inspectors are not immediately available, train and yard crews will be required to make their own air tests in accordance with the rules.

Retainers to be used according to judgment of conductor and engineer.

Unnecessary emergency application of air brakes will not be permitted.

Enginemen will leave dynamotors on all units cut in while charging trains for an air test.

Your attention is called to Item 4, Page 226 of GP-9 Instruction Manual of Dynamic Braking, which requires a ten (10) second interval while going from motoring to dynamic braking.

RULES GOVERNING THE MOVEMENT OF TRAINS BY BLOCK SIGNALS

On the B. A. & P. Railway, block signals are of the two-color light aspect and are number plate blocks, except Signal R-8(A), R-8 and R-6 on the Butte Hill-Rocker Main Track.

A red indication will be governed by N. P. Automatic Block Signal Rules 501-A-1 and 501-A-2 of the Consolidated Code.

A yellow indication will be governed by N. P. Automatic Block Signal Rule 501-B-1 of the Consolidated Code.

Block M-65 will be governed by N. P. Automatic Block Signal Rule 501-A-3 of the Consolidated Code.

In reporting delays caused by block signals to B. A. & P. dispatcher, employes must indicate signal by number to assist maintenance forces in readily identifying the point of repair.

Anaconda yard crews must obtain a lineup from the Dispatcher's Office before entering Main Line block signal territory.

SMELTER HILL MAIN TRACK

The Concentrator Yard Indicator shows clear (GREEN) when no trains are above signal 11, and will indicate STOP when track is occupied above signal 11.

Trains, engines and rail cars may leave the Concentrator Yard on clear indication or under N. P. Rule 501-A-1, under flag, proceed to Signal No. 2, STOP, then line switch for Main Track, by means of push button control. Proceed on clear indication or comply with N. P. Rule 501-A-1, under flag, when signal No. 2 fails to clear. In the event that Power Switch fails, the switch can be manually operated. When Signal No. 2 is red, following hand operation, press push button to clear Signal No. 2. Should Signal 2 then fail to clear, follow N. P. Rule 501-A-1, under flag. After operating switch manually, switch should be returned to its normal position.

Trains and engines ascending to the Concentrator Yard will run through the derailed Spring Switch, not exceeding 15 miles per hour, and after a train or engine has started through this Spring Switch, a reverse movement must not be made unless switch has been set by hand to hold it. Track cars which cannot run through switch, will stop and line it or set over.

NOTE:—No block signal protection is provided between the indicator and Signal No. 2.

Indicator at Signals No. 8 and No. 9 indicate to train on Switch Back Siding that the lap below Signal No. 7, or the Block between Signal No. 7 and No. 8, is occupied or clear.

Back Light on Signal 7 indicates when Block is occupied below Signal 8.

ROCKER-BUTTE HILL MAIN TRACK

The dwarf signals at Anselmo and Orphan Girl Ore display three indications: namely, RED, YELLOW and "S". When using these spurs to re-enter the main track, the switch may be opened only when the dwarf signal displays "S", and after opening switch, proceed only on YELLOW indication, but if RED, immediately close switch.

When using the Anselmo Central Lumber Spur, leave Main Line switch lined for Spur to hold block.

FEEDERS

FEEDER NO. 1—SMELTER HILL LINE

Energizes Smelter Hill Line, Concentrator Yard to Signal No. 8. (Feeder No. 1 and No. 5 are tied together).

FEEDER NO. 2—FOUNDRY, EAST ANACONDA YARD AND WEST YARD

Feeder No. 2 feeds directly to East Anaconda Yard and controls East and West Yards and Foundry Tracks. The West Yard may be sectionalized by switch located west of Fourth Street Crossing. The Foundry Lead may be sectionalized by switch located approximately 300 feet west of Foundry Lead Switch. The Foundry Yard Tracks are controlled by cut-out switch operated by Foundry Office on request.

FEEDER NO. 3—SMELTER YARDS

Energizes Concentrator and Stock Bins Yard. Switch 3B, located east of the Main Flue, controls the Concentrator Yard. Switch 3A, located east of Roaster No. 2, controls the Stock Bins Yard. Switch 3C (Stack Track Switch) controls Stack Track, normally open.

FEEDER NO. 5—SMELTER HILL LINE

Energizes Smelter Hill Line, East Anaconda to Signal No. 8, and Switch Back to Stock Bins Yard, and Copper Tracks.

FEEDERS NO. 1 AND NO. 5 ARE TIED TOGETHER ABOVE SIGNAL NO. 8.

FEEDER NO. 4—MAIN LINE

Energizes the Main Line from East Anaconda to Rocker and connects with Feeders Nos. 1 and 2 from Butte Hill Substation. The connections are made through switches Nos. 1F and 2F located immediately east of Rocker Depot. (Note below).

ROCKER

Switch Boxes 1, 2 and 4 connect to Feeders 1, 2 and 4, respectively. Normal set-up: Switches 2, 1F and 2F closed.

Switches 1F and 2F separate Feeders 1 and 2 East from Feeder No. 4 West and are Main Line Feeder switches normally closed. Do not open under load.

SECTIONALIZING

The Main Line can be sectionalized at Rocker, Silver Bow, Ramsay, Dawson Substation, and Durant, provided power is off.

FEEDERS

FEEDER NO. 1—ROCKER TO BUTTE HILL YARD

Rocker-Butte Hill Line is energized directly by No. 1 and 2 Feeders, which are controlled from the Substations. Butte Hill Yard is fed by No. 1 Feeder but energized by No. 2 Feeder. No. 1 Switch Box is connected to No. 1 Feeder and No. 2 Switch Box is connected to No. 2 Feeder. These boxes are located 100 feet east of North Wyoming Street crossing, north side of Yard. Butte Hill Yard trolley extends from 100 feet below Haggin switch through Yard to upper side of High Ore cut and down hill to a point 300 feet below Main Street Tunnel. Both No. 1 and No. 2 switches are normally closed. No. 1 and 2 Feeders connected together and Butte Hill Yard. To clear Butte Hill Yard, open switches at Missouri River Substation, No. 1 and 2 and No. 4 Feeder switch at Rocker.

LOCATION OF DERAILS

BUTTE	(Map-Track No.)
N. P. Connection	
N. P. Connection, Main Line—150 Feet East of West Switch of North Siding	(Track 7)
North Siding—West End	(Track 17)
South Siding—West End	(Track 293)
Otisco Ore Spur—West End	(Track 517)
N. P. Connection, Main Line—25 Feet West of Nevada Street	(Track 7)

DEPOT TRACKS

Western States Spur—100 Feet West of Maryland Ave. (Track 20)	(Track 20)
Western States Spur—60 Feet East of Maryland Ave. (Track 20)	(Track 20)
Freight House Track—West End	(Track 6)
Beer House Track—West End	(Track 5)
Team Track—West End	(Track 2)

WEST BUTTE

North Siding No. 1—West End	(Track 24)
North Siding No. 2—West End	(Track 25)
South Siding No. 1—West End	(Track 28)
South Siding No. 2—West End	(Track 274)
South Siding No. 3—West End	(Track 313)
South Siding No. 4—West End	(Track 319)
South Siding No. 5—West End	(Track 449)
South Siding No. 6—West End	(Track 453)
Tail of Wye	(Track 431)
East Leg of Wye—225 Feet West of East Switch	(Track 432)
West Leg of Wye—125 Feet from North Switch	(Track 431)
Washoe Sampler, High Line Track, West of Sampler.....	(Track 26)
Main Track at Clearance Point of Lead.	

ROCKER

Rocker Mill High Line Track:	
(Derail normally in off track position and to be placed in derailing position by B. A. & P. Pilot only while taking Northern Pacific trains to the C. M. St. P. & P. or vice versa).	(Track 40)
Tail of Wye—30 Feet North of Crotch Switch	(Track 45)
Low Line Transfer—West End	(Track 39)
North Siding No. 1—West End	(Track 55)
North Siding No. 2—West End	(Track 56)
North Siding No. 3—West End	(Track 57)
North Siding No. 4—West End	(Track 58)
North Siding No. 5—West End	(Track 327)
North Siding No. 6—West End	(Track 392)
North Siding No. 7—West End	(Track 332)
North Siding No. 8—West End	(Track 331)
South Siding No. 1—West End	(Track 37)
South Siding No. 2—West End	(Track 38)

BUTTE HILL

(Map-Track No.)

Anselmo Mine Track No. 1—79 Feet Back of Switch.....	(Track 527)
Anselmo Passing Track—West End	(Track 177)
Badger State Supply Track—50 Feet North of South Gate	(Track 301)
Badger State Supply Track—200 Feet North of South Gate	(Track 301)
Badger State Lumber Track—Opposite Time Keeper's Office	(Track 304)
Bell Boiler House Track—90 Feet Back of Switch	(Track 214)
Mountain View Track (Old G. N. Main Line) 430 Feet East of Wye Switch	(Track 487)
Anaconda Ore Extension Siding	
Alice-Lexington Spur—100 Feet North of Siding Switch	(Anaconda Co. Track)
Alice-Lexington Spur—400 Feet South of Siding Switch	(Anaconda Co. Track)
Cement Plant Track—160 Feet East of Point of Switch	(Track 543)
Butte Hill Yard—West Connection (Short Runaround) 15 Feet East of Wyoming St.	(Track 549)
Green Mountain Supply— Derail Spur (Gray Rock)—330 Feet West of Ramp ..	(Track 210)
Missouri River Supply Spur— 100 Feet from Head Block	(Track 270)
North Leg of Wye—40 Feet East of Anaconda Road ..	(Track 271)
Connection to Mt. Con Supply—15 Feet East of Slime Spur Switch	(Anaconda Co. Track)
Green Mtn. Main Line—300 Feet West of Badger Ore Bins	(Track 210)
Green Mtn. Supply and Ore—100 Feet Above Badger Ore Bins	(Track 210)

SILVER BOW YARD

(Including Ramsay)

Siding No. 1—West End	(Track 64)
Siding No. 2—West End	(Track 65)
Siding No. 3—West End	(Track 66)
Siding No. 4—West End	(Track 67)
Siding No. 5—West End	(Track 68)
Powder Spur, 150 feet inside gate	(Track 426)
Powder Spur, 1600 feet east of Main Line	(Track 424)
Powder Spur, 175 feet west of Highway 10-A	(Track 424)

DAWSON

Ice Spur—West End	(Track 314)
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STATON

Staton Siding—190 Feet West of Frog, East Switch	(Track 80)
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MILL CREEK

Mill Creek—Nicely Spur South Track—100 Feet from end of Track Derail for Nicely's use only. Private lock. Spot cars west of Derail.	
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EAST ANACONDA, FOUNDRY AND OLD WORKS

Slag Dump Track—West End	(Track 391)
Foundry Track (High Line)—700 Feet West of Frog ..	(Track 101)
Acid Plant Track—West End	(Track 95)
Brick Yard Track—East End	(Track 398)
Tipple Track—Wood Spur 200 Feet West of Crusher Building	(Anaconda Co. Track)
Acid Plant High Line Track—25 Feet North of Fence ..	(Track 386)

WEST ANACONDA YARD—NORTH (Map—Track No.)

House Track—East End (Track MR 1)
 Siding No. 1, North of Passing Track—East End 600 (Track MR21)
 Montana Union Freight House Track—East End 500 (Track MR22)

WEST ANACONDA YARD—SOUTH

Lead to West Yard—East End (Track 107)
 Machine Track No. 1—East End (Track 134)
 Machine Track No. 2—East End (Track 135)
 Lead to Rip Track (Track 133)
 Main Track to Shops—East End (Track 122)
 Coal Chute Track—West End (Track 125)
 Coach Yard Rip Track—150 Feet West of East Switch (Track 118)
 Wrecking Crane Track—West End (Track 324)
 Siding No. 1, North 195 Feet West Cross-over Switch... (Track 110)
 Siding No. 2, North—480 Feet West of Switch
 in front of General Office (Track 111)
 Siding No. 3, North—400 Feet West of East Switch (Track 113)

ANACONDA TO BROWN'S

Main Line—1,200 Feet West of West Switch
 of Shop Lead at Anaconda (Track 164)
 Main Line—100 Feet East of East Switch at Brown's ... (Track 164)

NEW SMELTER LINE

Copper Track, Main Line—50 Feet East of
 Switch of Copper Siding No. 2 (Track 248)
 Copper Siding No. 1—50 Feet East of Ferro-Mang.
 Loading Spur Switch (Track 249)
 Scrap Iron Track (Track 380)
 Long Siding—Lower End (Track 237)
 Ferro-Mang. Loading Spur 100 Feet East of East
 End of Old Converter Building (Track 554)
 Montana Power Co. Sub-station Spur—
 150 Feet from Fence (Mont. Power Co.)

STOCK BINS YARD

Stock Bins Main Track—720 Feet Below
 Switch Stock Bins Yard (Track 252)
 Calcine Loading Spur (Iron Hole)—450 Feet
 Above Loading Shed (Track 466)
 Siding No. 3 Left (Sand Track)—
 100 Feet Below Sand Shed (Track 255)
 Phosphate High Line Track (Track 382)
 Zinc Reload Track No. 1 (Track 417)
 Zinc Reload Track No. 2 (Track 418)
 Custom Zinc Unloading Track 150 Feet
 West of Switch (Anaconda Co. Track)
 Ammo-Phos Unloading Track—
 120 Feet above Switch (Anaconda Co. Track)

CONCENTRATOR YARD

Track No. 4—North of Thaw Shed (Track 234)
 Track No. 5—North of Thaw Shed (Track 240)
 Zinc Hole Track—10 Feet Below Zinc Hole
 Passing Track Switch (Track 410)
 Main Smelter Line 1387 Feet Below
 Concentrator Yard (Track 234)
 Stack Track—300 Feet Below Switchback
 Switch (Anaconda Co. Track)

IMPAIRED CLEARANCES

There are close clearances above and at the side of main and other tracks as shown below, and in addition thereto, at platforms, overhead structures, ore bins, buildings and other structures above and at the side of industry, yard, mine and other tracks, not shown below. Particular attention is directed to impaired clearances at various buildings, ore bins, etc., within the switching limits at Anaconda and Butte.

LOCATION	STRUCTURE OR OBSTRUCTION	Clearance of Engine or Car Is Close at
At all points At all stations	Overhead trolley wire Switch stands	Top Side
West Butte to Anaconda W. Butte—Tail of Wye Rocker—Sand Track Rocker—Roundhouse Track M. P. 11.02 M. P. 14.66 M. P. 23.24 M. P. 23.40 M. P. 23.64 M. P. 23.69	Mazzolini Overhead Ramp Sand house and bins Roundhouse doors Bridge over N. P.—Main Track Trolley Pole at Rock Point Overhead flume Flume support—North side Overhead flume Overhead flume	Top and Side Side Top and Side Side Side Side Side Side
Smelter Hill Line—Main Tracks M. P. -0.16—Both Tracks M. P. -0.21—Both Tracks M. P. -1.70—Up Hill Track	Overhead flume Overhead flume Trolley pole and rock cut	Side Side Side
Stock Bins South Side of Iron Hole Track	Retracable Ramp	Side

Note important data concerning Impaired Clearances starting on next page.

IMPAIRED CLEARANCES

Rocker Line—Rocker to Butte Hill	Steel bridge over highway	Side
M. P.-0.26—Main Track	Cribbing	Side
Orphan Girl Ore Spur (70 ft. West)	Ore bins	Top and Side
Anselmo Mine Tracks	Cribbing	Top and Side
Anselmo Passing Track	Gate in fence	Side
Central Lumber Spur	Bridge and Ore Bins	Top and Side
Lexington Ore Loading Spur	Steps over air line	Side
M. P.-4.03—Main Track	Steps over air line	Side
M. P.-4.05—Main Track	Montana street tunnel	Side
M. P.-4.10—Main Track	Main street tunnel and cribbing	Top and Side
M. P.-4.31—Main Track	Warehouse platform	Top and Side
Clear Grit Coal Spur		
Butte Hill—New Way—Main Track		
Badger State Mine	Ore Bins	Top and Side
Butte Hill Yard	Ore Bins—North	Top
Kelley Mine	Ore Bins—South	Top
Kelley Mine	Gate in fence	Side
Parrot Supply Spur		
Green Mountain—Main Track		
Badger State Mine	Slime Plant	Top and Side
Badger State Mine	North gate in fence	Side
Badger State Mine	Trolley poles along fence	Side
Badger State Mine	Ore bins	Top and Side
Mountain Con Mine	Slime Plant, platform, cable tower	Side
Old Way—Main Track		
Near Wyoming St. crossing (200 ft. West)	Section coal shed	Side
Main Street	Overhead trestle	Top and Side
Speculator Supply Spur		
Speculator Mine	Cribbing	Side
Alice—Lexington		
Alice Lexington Spur	Car Shaker	Top and Side

MAXIMUM CLEARANCES

NOTE—Length of load, 40 feet. Maximum width of load, independent of clearances, 11'6".

LOCATION	LIMIT OF LOAD—MEASUREMENT								
	8'0" Wide	8'6" Wide	9'0" Wide	9'6" Wide	10'0" Wide	10'6" Wide	11'0" Wide	11'6" Max. Height	Max. Width
M. L.—Butte to Anaconda at any point.....	19'0"
M. L.—Rocker to Butte Hill Yard at any point.....	17'0"
M. L.—Rocker to Butte Hill Yard Mont. St. Tunnel.....	17'0"	17'0"	17'0"	17'0"	17'0"	16'6"	16'0"	16'0"	17'0"
M. L.—Rocker to Butte Hill Yard Main St. Tunnel.....	17'0"	17'0"	17'0"	17'0"	17'0"	16'0"	15'6"	12'0"	17'0"
M. L.—Anaconda to Browns at any point.....	19'0"
Original Mine Spur Gagnon Tunnel.....	17'0"
New Way—Butte Hill High Ore Bins.....	11'6"
New Way—Butte Hill, near High Ore Mine—Pipe Line Trestle.....	11'6"
Switchback—Lower Line, Butte Hill Badger Ore Bins.....	11'6"
Switchback—Upper Line, Butte Hill Badger Ore Bins.....	11'6"
Speculator Supply Spur, Butte Hill Cribbing at Speculator Mine.....	18'0"
Speculator Supply Spur, Butte Hill Overhead Trestle 330 ft. So. of Granite Mountain Hoist House.....	18'0"
Speculator Supply Spur, Butte Hill Pilot Butte Ore Bins.....	17'0"
Old Way—Butte Hill Main St. Overpass.....	17'0"
Smelter Line, E. Anaconda to Concentrator Yard, at any point.....	16'0"

HOURS OF SERVICE ACT

The provisions of the Hours of Service Act shall apply to any common carrier by rail and the term "employee" used herein shall be held to mean persons actually engaged in or connected with the movement of any train. Pertinent sections of the Act are reproduced for information and guidance of employees:

"It shall be unlawful for any common carrier, its officers or agents, subject to this Act to require or permit any employe subject to this Act to be or remain on duty for a longer period than sixteen (16) consecutive hours, and whenever any such employe of such common carrier shall have been continuously on duty for sixteen (16) hours he shall be relieved and not required or permitted again to go on duty until he has had at least ten (10) consecutive hours off duty. Further, no such employe who has been on duty sixteen (16) hours in the aggregate in any twenty-four (24) hour period shall be required or permitted to continue or again go on duty without having had at least eight (8) consecutive hours off duty.

"Provided, that no operator, train dispatcher or other employe who by the use of the telegraph or telephone dispatches, reports, transmits, receives, or delivers orders pertaining to or affecting train movements shall be required or permitted to be or remain on duty for longer period than nine (9) hours in any twenty-four hour period in all towers, offices, places, and stations continuously operated night and day, nor for a longer period than thirteen (13) hours in all towers, offices, places, and stations operated only during the daytime, except in case of emergency, when the employes named in this proviso may be permitted to be and remain on duty for four (4) additional hours in a twenty-four-hour period on not exceeding three (3) days in any week.

"Provided further, that the provisions of this Act shall not apply in any case of casualty or unavoidable accident or the act of God; nor when the delay was the result of a cause not known to the carrier or its officer or agent in charge of such employe at the time said employe left a terminal, and which could not have been foreseen. Also, the provisions of this Act shall not apply to the crews of wrecking or relief trains."

The Act covers only the service performed within a 24-hour period. The term "any 24-hour period" means a cycle of 24 consecutive hours. Therefore, when figuring total time on duty under the Act the calculation must be confined to service falling within a cycle of 24 consecutive hours.

When any part of an employe's service is subject to the provisions of the Act all service performed on the Railroad within the 24-hour period must be included when calculating total time on duty; even though a part of the service is not subject to the Act, the total service must not exceed the maximum permitted for the most restricted service performed. For example, if a locomotive engineer works as such for a number of hours and later is used in some other occupation on the railroad in the same 24-hour period, his total service in both capacities must not exceed 16 hours within the 24, which is the maximum permitted for an engineer.

Employes whose occupations are governed by the Act must comply with the provisions of Rule 702(A) in the Consolidated Code.

HANDLING OF EXPLOSIVES

Placarded loaded tank cars handled in through freight trains shall not be nearer than 6th car from engine, occupied caboose or passenger car.

Cars placarded "Explosives", "Inflammable", "Corrosive Liquids", or "Poison Gas" handled in through freight trains, local and mixed trains, shall not be nearer than 16th car from engine, occupied caboose or passenger car.

When length of train will not permit handling of cars as prescribed above—ANY PLACARDED CAR, loaded with above commodities, shall be placed near middle of train, but not nearer than 2nd car from engine, occupied caboose or passenger car.

When switching such cars in terminal yards they must be separated from engine by at least one non-placarded car.

When placarded cars described above are handled in freight trains made up in "blocks" or classifications, placarded car or cars shall be placed near middle of the "block" or classification, but not nearer than 6th car from engines, occupied caboose or passenger car.

When such placarded cars are placed in trains they must not be placed next to each other, next to refrigerators equipped with gas-burning heaters, stoves or lanterns, or next to loaded flat cars, or gondola cars containing lading higher than ends of car that is liable to shift.

Terminal or pick-up points enroute must furnish proper written notice to conductor and engineer showing consecutively location in train of all cars placarded "Explosives". At points other than terminals where crews change, notice will be transferred from crew to crew.

Employes will be guided by further instructions governing handling of loaded tank cars, Explosives, Inflammables, Corrosive Liquids, and Poison Gas found in I.C.C. Regulations and applicable Consolidated Code Rules.

HOWARD DE BRANTON

Howard de Branton was born on the 15th of August 1885 at
10, St. James's Place, London, W. He was educated at
St. Paul's School, London, and at Balliol College, Oxford.

He was called to the Bar at Lincoln's Inn in 1908, and
was a member of the Council of the Law Society from 1910 to
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