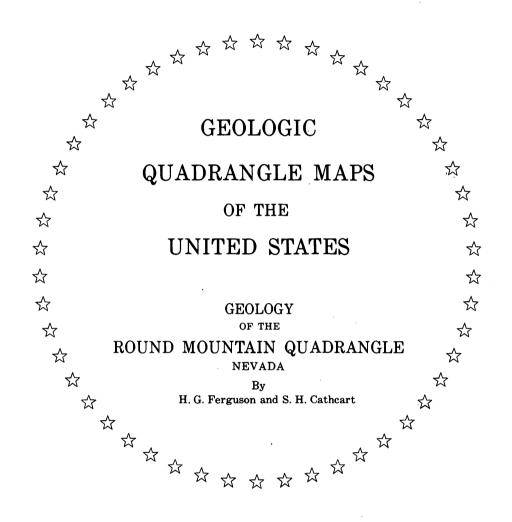
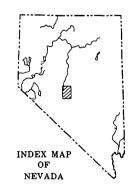
DEPARTMENT OF THE INTERIOR

UNITED STATES GEOLOGICAL SURVEY W. E. WRATHER, DIRECTOR





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GEOLOGIC MAP SYMBOLS

COMMONLY USED ON MAPS OF THE UNITED STATES GEOLOGICAL SURVEY (Special symbols are shown in explanation)

	Contact – Dashed where approximately located; short dashed where inferred; dotted where concealed	Strike and dip of beds – Ball indicates top of beds known from sedimen- tary structures
<u></u> 45 ,	Contact – Showing dip; well exposed at . triangle	$-\frac{70}{-1}$ Inclined \oplus Horizontal $-+$ Vertical $-\frac{40}{-1}$ Overturned
	Fault — Dashed where approximately located; short dashed where inferred; dotted where concealed	 Strike and dip of foliation Inclined Vertical Horizontal Strike and dip of cleavage
²⁰	Fault, showing dip - Ball and bar on downthrown side	¹⁵ Inclined → Vertical → Horizontal Bearing and plunge of lineation
	Normal fault Hachured on downthrown side	15 Inclined • Vertical \leftrightarrow Horizontal
	Fault Showing relative horizontal movement	Strike and dip of joints
	Thrust fault - Sawteeth on upper plate	Note: planar symbols (strike and dip of beds, foliation or schistosity, and cleavage) may be combined with linear symbols to record data
▲	Anticline Showing direction of plunge; dashed where approximately located; dotted where concealed	observed at same locality by superimposed symbols at point of observation. Coexisting planar symbols are shown intersecting at point of observation.
	Asymmetric anticline – Short arrow indicates steeper limb	
Ĥ	Overturned anticline - Showing direction of dip of limbs	Shafts 🔊 Vertical 🏚 Inclined
◄	Syncline Showing direction of plunge; dashed where approximately located; dotted where concealed	Adit, tunnel, or slope Accessible Accessible
	Asymmetric syncline Short arrow indicates steeper limb	x Prospect Quarry
Ų	Overturned syncline Showing direction of dip of limbs	Active Abandoned Gravel pit
← ───┼────	Monocline - Showing direction of plunge of axis	X Active X Abandoned Oil well
_→→ ²⁰	Minor anticline Showing plunge of axis	o Drilling ¢ Shut-in ∻ Dry hole ☆ Gas ở Show of gas abandoned
€-→ ⁶⁰	Minor syncline Showing plunge of axis	● Oil

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