

DRILL HOLE LOG - FERROUS

Driller Longyear (Rush) / Longyear JR

LAT.	+13,304.4N	ANGLE	-75°	MINE	Sunrise, Platte County, Wyoming
DEP.	+3,927.5E	BEARING	East	LOCATION	Emanuel No. 2 E½ SW¼ SW¼ Sec. 29, T28N, R65W
ELEV.	5,317.8	LEVEL	Surface	HOLE NO.	DDH No. 437

Core recovery 98-9%

DATE 1974	DRILLED			CORE		MATERIAL	REMARKS
	FROM	TO	FEET	FT.	10ths		
						200 ft south of north claim line.	Banding to axis of core.
						0-371 Hartville formation:	Set 5 ft NX casing.
3-1	0	5	5	0	0	0-5 Surface material.	
	5	10	5	5	0	5-10 Limestone.	
	10	15	5	5	0	10-25 Mudstone, limy. Shaly in spots, with	
	15	20	5	5	0	green spots, interbedded with perturbed and	
	20	25	5	5	0	broken limestone beds.	
	25	30	5	5	0	25-43 Limestone, in parts broken and cemented	
	30	35	5	5	0	with limy mudstone.	
	35	43	8	8	0		
	43	53	10	10	0	43-63 Mudstone, limy. Many beds of broken	
3-4	53	63	10	10	0	limestone, with mudstone filling.	
	63	73	10	10	0	63-181 Limestone. In parts broken and filled	
	73	83	10	10	0	with red limy mudstone. Very stylolitic.	
	83	93	10	10	0		
	93	103	10	10	0		
3-5	103	113	10	10	0		
	113	123	10	10	0		
	123	133	10	10	0		
	133	143	10	10	0		
	143	153	10	10	0		
	153	153	10	10	0		
3-6	153	173	10	10	0		
	173	183	10	10	0	181-188 Shale, red with green spots.	
	183	193	10	10	0	188-200 Limestone, very sandy, coarse crystal-	90° at 190.
						line. (Crystals up to 1 centimeter), very	
						hematitic. Sand is coarse grained.	
	193	203	10	10	0	200-371 Sandstone. Medium grained. Red and	
	203	213	10	10	0	pink striped. Cross bedded. Well indurated.	
	213	223	10	10	0		
3-7	223	233	10	10	0	Quartzitic in places. Limonite and occasional	
	233	243	10	10	0	calcite fracture filling.	
	243	253	10	10	0		
	253	263	10	10	0		70° at 263.

Core ID H8 Lynch

no analyzer

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ELEV. 5,317.8		LEVEL Surface		HOLE NO. DDH No. 437			
DATE 1974	DRILLED			CORE		MATERIAL	REMARKS
	FROM	TO	FEET	FT.	10ths		
							Banding to axis of core.
3-7	263	273	10	10	0		
	273	283	10	10	0		
3-8	283	293	10	10	0		
	293	303	10	10	0		
	303	313	10	10	0		
	313	323	10	10	0		50° at 313.
	323	333	10	10	0		55° at 323
3-9	333	343	10	10	0		30° at 333.
	343	353	10	10	0		
	353	363	10	10	0		
	363	373	10	10	0	371-402 Guernsey formation:	
	373	383	10	10	0	371-400 Limestone, argillaceous, possibly dolo-	85° at 383.
3-11	383	393	10	10	0	mitic. Weak effervescence in acid. Pink to purple with green splotches. Narrow bands of ferruginous siltstone. Calcite, limonite, and hematite fracture filling.	
	393	403	10	10	0	400-402 Sandstone, limy, coarse grained. Contains weathered schist fragments.	75° at 398.
	403	413	10	10	0	402-417 Precambrian upper schist. Hematitic, quartz, chlorite schist; 5 to 30 percent quartz in bands up to 3 centimeters wide. Hematite is heavy and completely pervades most of the schistose portion of the rock. Schistosity is highly contorted.	Precambrian at 402. 70° at 413.
3-12	413	423	10	10	0	417-423 Quartz sericite schist. Some hematite stain. Many vugs filled with hematitic material. The many square corners on these vugs suggests that they represent leached out pyrite crystals.	80° at 413. 45° at 423.
	423	430	7	7	0	423-437 Hematitic, quartz, sericite schist.	
	430	431	1	1	0	Mostly hematite stained. Numerous quartz bands. Some calcite fracture filling. The schistosity is crenulated and a sort of secondary schistosity develops parallel to the axial plane of the crenulation.	
3-13	431	441	10	10	0	437-449 Hematitic, limonitic, quartz, sericite	432 primary schistosity and bedding 45° secondary schistosity near 0°.

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ELEV.	5,317.8	LEVEL	Surface	SOLE NO.	DDH No. 437		
						schist. Silvery gray with some hematite and limonite stain. Numerous quartz bands. Numerous vugs filled with hematitic material to empty; the many square corners on these vugs suggests leached out pyrite. Schistosity is crenulated and the axial plane of these crenulations develops a secondary schistosity.	Banding to axis of core. 447 Primary schistosity, 30° plane of secondary schistosity 60°.
3-13	441	451	10	10	0	449-481 Graphitic, quartz, sericite schist.	
	451	461	10	10	0	Moderately graphitic. About 30 percent quartz bands up to 20 centimeters thick; mildly hematite stained in spots. Schistosity and quartz bands are extremely contorted and minutely crenulated. Some vugs filled with hematitic material, probably leached out pyrite crystals. Crenulation develops a sort of secondary schistosity.	
	461	471	10	10	0		
	471	481	10	10	0		
	481	491	10	10	0	481-493 Graphitic, quartz sericite schist.	45° at 485.
3-14	491	493	2	2	0	Quartz bands highly contorted. Schistosity is very crenulated. Calcite, hematite, and limonite fracture filling.	Core orientation taken at 491-493.
						END OF HOLE AT 493.	Cap set.
						Core checked with scintillation counter with negative results.	

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DATE 1947	DRILLED			CORE		MATERIAL	REMARKS
	FROM	TO	FEET	FT.			
							CORE ORIENTATION SURVEY AT 491-493 ft.
							Good schistosity and quartz banding 20° to core axis. Upper apex of bedding 60° clockwise from reference line on core.
							Top of acid tube is 60° counterclockwise from reference mark. Inclination angle is 80° corrected.
							Estimated Stereonet Strike Dip Strike Dip S80°E 60°N S64°E 66°N26°E
							HOLE SURVEYS
							200 feet: 81° uncorrected. 79° corrected.
							400 feet: 82° uncorrected. 80° corrected.
							493 feet: 82° uncorrected. 80° corrected.
							Core orientation at 491-493 ft. Hole inclination 82° uncorrected; 80° corrected. Tube reference line 60° clockwise from top of tube. Lower apex of banding 240° clockwise of reference line. Banding 20° to axis of core.
							Estimated Stereonet Strike Dip Strike Dip S80°E 60°N S64°E 66°N26°E

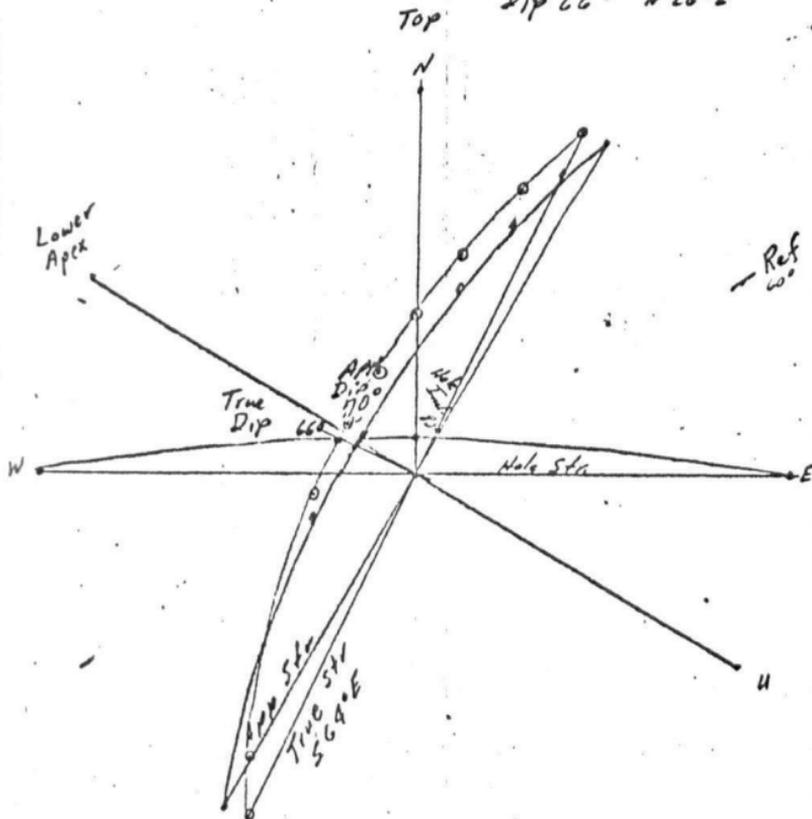
Hole Incl.
 $80^{\circ}E$

DDH 437

493 ft

True Str. $564^{\circ}E$

Dip $66^{\circ} N 26^{\circ}E$



App Dip $(90-20) = 70^{\circ}$

$N^{\circ} 10^{\circ} W$ $(90-80) = 10^{\circ}$

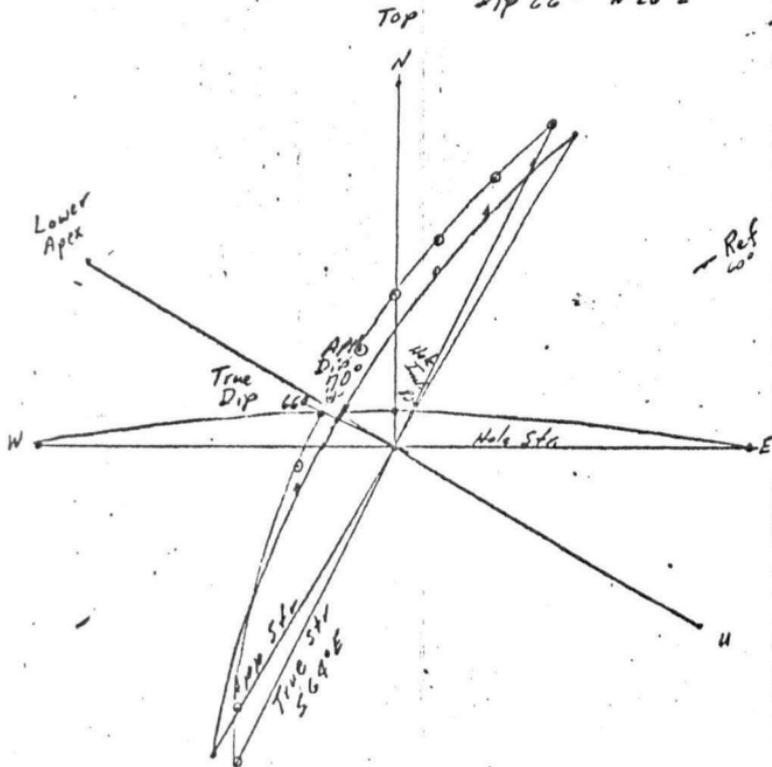
Hole Incl.
80° E

DDH 437

493 FT

True Str. 564 @

Dip 66° N 26° E



App Dip $(90 - 20) = 70^\circ$

No. to $(90 - 80) = 10^\circ$

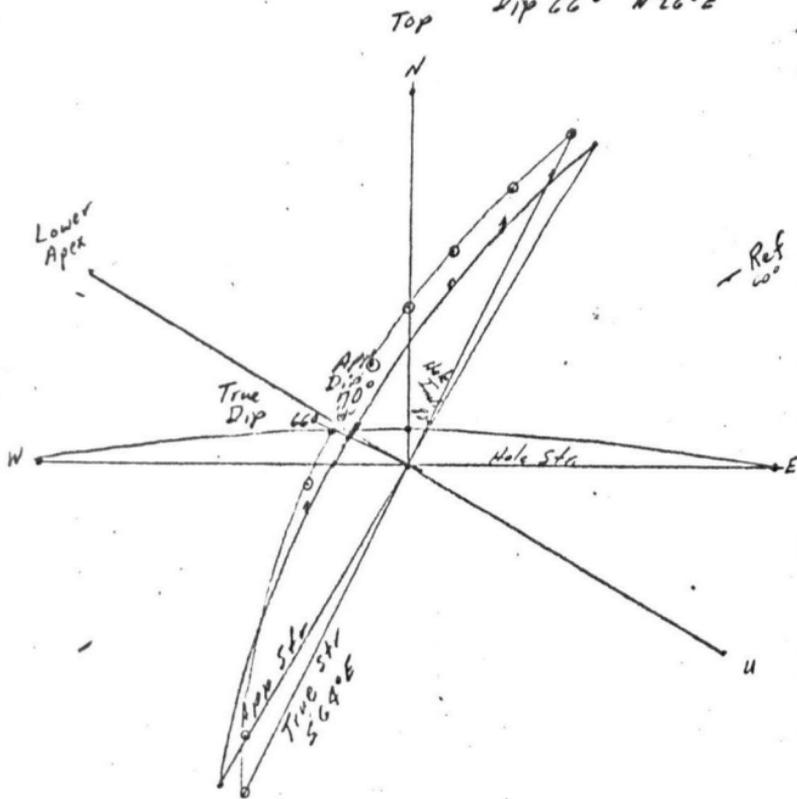
Hole Incl.
80° E

DDH 437

493 FT

True Str. 564 E

Dip 66° N 26° E



3

App Dip (90-20) = 70°

10° to (90-80) = 10°

