

GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE \_\_\_\_\_

DIRECTION \_\_\_\_\_ HOLE NO. \_\_\_\_\_  
 INCLINATION \_\_\_\_\_ PROPERTY South Fork  
 STARTED \_\_\_\_\_ LOCATION Douglas Co Oregon  
 COMPLETED \_\_\_\_\_ COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH \_\_\_\_\_ COLLAR ELEV. \_\_\_\_\_  
 NOTES BY \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_

ROCK AND ALTERATION	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS			
			SECTION			
<u>Explanation</u>						
Basaltic to Dacitic Rhs.						
Andesite						
Chert or strongly sil- icidous Rhs.						
"Iron Fm."						
Quartz Sericite Schist						
Massive Sulfides						
Attitude of Schistosity						
Strongly fractured						
Moderately fractured						
Fault Zones						

GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1" = 100'

DIRECTION \_\_\_\_\_ HOLE NO. DDH-5FD-14  
 INCLINATION 80° PROPERTY South Fork  
 STARTED 3/19/80 LOCATION \_\_\_\_\_  
 COMPLETED \_\_\_\_\_ COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH 0-90 COLLAR ELEV. \_\_\_\_\_  
 NOTES BY T. Beckhart SHEET 1 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG.	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS					
				SECTION					
<p>0-60 No Core            rock bit, 60' of 4"            casing with shoe.</p>									
<p>Highly weathered country rock            soft, and crumbly along fractures            with med. to heavy oxides.            oxide buildup and weathered            nature of rk. decreasing            with depth</p>		<p>scattered qtz veins &lt; 1/2" wide            most fractured and discontinuous</p>	70%						
<p>Light to med. grn. basaltic            tuff. color due to epidote            &amp; chlorite. small wht semi            round blebs (flakes or frags)            Rock fairly competent with            only localized weathering</p>		<p>77' shear zone 6" wide            schistose with numerous small folds            λ &lt; 1/2"            and calcite            quartz &amp; calcite along small            fractures most &lt; 1/2" wide.            Scattered vugs contain cu. qtz            crystals</p>	40%						



GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1" = 100'

DIRECTION \_\_\_\_\_  
INCLINATION 90°  
STARTED 3/19/80  
COMPLETED \_\_\_\_\_  
DEPTH 180-270  
NOTES BY T. Budhart

HOLE NO. 5FO-14  
PROPERTY South Fork  
LOCATION Douglas Co. Oregon  
COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
COLLAR ELEV. \_\_\_\_\_  
SHEET 3 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG.	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION				
<p>Fine grained Basalt. lt. grn mostly epidote with minor chlorite. mod. fracture pattern healed with dk. silica. silicification is slight to mod.</p> <p>Scattered zones of basalt tuff, most 6 to 12" wide, occur in above rk. with gradational contacts.</p> <p>Basalt tuff. texture is somewhat obliterated due to metamorphism and silicification.</p> <p>lt grn. epidote is primary alt. product</p> <p>minor calcite on most fractures</p> <p>localized areas are highly silicified and wht to lt. grn. in color.</p> <p>Patches bands and veins of wht. to tan qtz are common.</p> <p>lt. grn basaltic tuff, in localized areas texture is destroyed. epidote is primary alt product.</p> <p>As above localized areas are soft to med hard. due to argillation.</p>		<p>well defined alignment of phenos, colloidal silica and small blebs of chlorite</p> <p>Phenos slightly flattened parallel to lineation</p> <p>textural alignment <math>\approx 45^\circ</math> from core axis</p> <p>porphyritic basalt tuff</p> <p>f.g. basalt</p> <p>slight trace dyrite</p> <p>trace to minor pyrite</p> <p>healed fracture zone</p> <p>numerous gry to blk qtz veinlets</p> <p>Band of feldspar cut by qtz veinlets 2" wide</p> <p>Bands of wht to lt gry colloidal silica are common maybe bedding feature colloidal silica 10" wide</p>						

## GULF MINERAL RESOURCES CO.

## DRILL RECORD

SCALE 1" = 100'

DIRECTION \_\_\_\_\_ HOLE NO. SFO-14  
 INCLINATION 80° PROPERTY Smith Fork  
 STARTED 3/19/80 LOCATION Douglas Co Oregon  
 COMPLETED \_\_\_\_\_ COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH 270-360 COLLAR ELEV. \_\_\_\_\_  
 NOTES BY T. Bullock SHEET 4 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION				
<p>Basaltic Tuff very lt. to lt. grn. mostly epidote. Texture varies from coarse to med with fairly sharp contacts between, much of the finer textured rk. could be due to assimilation of the phenos?</p> <p>Most of core is med. sil.</p> <p>hardness is very uniform core is relatively unfractured</p> <p>core varies between fg. basalt and basalt tuff. gradational between. most core med. sil. Localized areas contain patches and bands of round to semi round Qtz eyes <math>\frac{1}{16}</math> to <math>\frac{1}{8}</math>" wide.</p> <p>Trace calcite on fractures</p> <p>As above. Porphyritic texture largely destroyed. Lt. grn epidote, minor chlorite on fractures.</p> <p>As above much of core is cut by numerous streaks of dk. grn. to blk chlorite. These areas have a slightly schistose look and are relatively soft.</p> <p>Basalt tuff. texture relatively well defined.</p>		<p>Trace to minor pyrite occurs as small blebs in matrix.</p> <p>a weak textural alignment is observed <math>\approx 45^\circ</math> from core axis</p> <p>very slight trace pyrite reduced from H to N 299'</p> <p>mod fracture pattern beaded with gry. Qtz.</p> <p>textural alignment as above <math>100^\circ</math></p> <p>core mod. broken</p> <p>slightly schistose</p>						

GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1"=100 FT.

DIRECTION 270° W  
INCLINATION 90°  
STARTED 3/19/90  
COMPLETED  
DEPTH 360-450  
NOTES BY T. Brubhart

HOLE NO. SFO-14  
PROPERTY South Fork  
LOCATION Douglas Co. Oregon  
COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
COLLAR ELEV. \_\_\_\_\_  
SHEET 5 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG. #	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS			
				SECTION			
<p>Basalt Tuff med. to coarse por. texture. Lt. grn mostly epidote minor chlorite occurs as streaks.</p> <p>Texture is slightly obscured in places.</p> <p>fragments? of fg. basalt rounded &amp; 1" to 2" wide occur in tuff.</p> <p>As above texture largely obscured. rock slightly more sil.</p>		<p>weak textural alignment <math>\approx 45^\circ</math> from core axis</p> <p>Trace pyrite distributed fairly evenly through matrix</p> <p>bands of gray qtz in the form of round eyes are common (collodial silica?)</p>					
<p>Basalt tuff lt. grn mostly epidote minor chlorite</p> <p>most core med hard to hard localized areas display schistosity and are more altered</p>		<p>Mod fractured</p>					
<p>Localized areas are very lt. grn to gray, highly sil. and contain numerous round qtz eyes, av. diam <math>\frac{1}{8}</math>"</p>		<p>2" qtz vein minor chlorite vein contains small frags of basalt, oblique to textural alignment</p>					
<p>most of core is med to dk. grn chlorite occurs in irregular bands <math>\approx</math> parallel to textural alignment</p>		<p>slightly fractured</p> <p>textural alignment <math>\approx 35^\circ</math> from core axis. flattening of phenos/frags is parallel to same.</p>					

## GULF MINERAL RESOURCES CO.

## DRILL RECORD

SCALE 1" = 100'

DIRECTION N 70 W HOLE NO. SFD-14  
 INCLINATION 80° PROPERTY to Smith Falls  
 STARTED 3/19/80 LOCATION Douglas Co Oregon  
 COMPLETED \_\_\_\_\_ COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH 450 540 COLLAR ELEV. \_\_\_\_\_  
 NOTES BY T Budhuet SHEET 6 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG.	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION				
<p>Basalt tuff lt to med grn. mostly epidote with minor chlorite.</p> <p>Only local areas exhibit por. texture. most of core is slightly schistose with varying amounts of sil. Numerous zones contain abundant qtz. eyes <math>\frac{1}{16}</math> to <math>\frac{1}{2}</math>" in diam. that are partially or completely replaced by epidote?</p> <p>Most of core is lt. grn. fg. basalt. weakly defined zones (Frag.?) of basalt tuff are common. boundaries gradational due to partial assimilation.</p>		<p>Mod. fractured</p> <p>455 sample taken for thin section</p> <p>Textural alignment <math>\approx 40^\circ</math> from core axis.</p> <p>Slight trace to trace pyrite in matrix</p> <p><math>\frac{1}{4}</math>" atz veins offset by "recent" fracturing</p> <p>2" atz vein slightly grad. margins contains frags of dh. grn basalt. (selective replacement by chlorite?)</p>						
<p>Basalt Tuff. lt grn. well defined porphyritic texture</p> <p>Fine grained basalt even textured. lt. grn mostly epidote. slight to med sil.</p> <p>Much of core displays a weak por. tex.</p>		<p>Mod. fractured</p> <p>weak qtz veining offset by "recent" fracturing</p> <p>weak schistosity</p> <p>2" qtz vein.</p> <p>Core only slightly schistose</p> <p>Slight trace pyrite</p>						

GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1" = 100'

DIRECTION N70W HOLE NO. SFO-14  
 INCLINATION 80° PROPERTY South Fork  
 STARTED 3/19/80 LOCATION Douglas Co Oregon  
 COMPLETED \_\_\_\_\_ COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH 540-630 COLLAR ELEV. \_\_\_\_\_  
 NOTES BY T. Brubaker SHEET 7 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION				
<p>F.g basalt. It. to med grn even texture. Localized areas display weakly defined por. texture. epidote primary alt. product.</p> <p>Weakly defined eutaxitic structure. Bands and layers of chalcedonic silica are common</p> <p>As above basaltic tuff (spilitic) makes up <math>\approx 25\%</math> of core</p> <p>round belbs of epidote after Qtz? scattered throughout epidote also replacing feldspars</p> <p>Hardness varies from soft to med hard.</p> <p>Basaltic tuff (spilitic) It. grn aphanitic ground mass surrounding wht feldspar and grn epidote phenos. epidote selectively replacing phenos <math>\approx 50\%</math></p> <p>As above slightly darker grn</p>		<p>slightly fractured.</p> <p>2" Qtz vein contains frags of f.g. basalt.</p> <p>weak schistosity <math>\approx 45^\circ</math> from core axis</p> <p>slightly fractured</p> <p>slight trace pyrite</p> <p>Local areas slightly schistose <math>\approx 45^\circ</math> from core axis</p> <p>1" Qtz vein.</p> <p>2" Qtz vein contains angular basalt frags.</p> <p>slightly fractured.</p>						



GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1" = 100'

DIRECTION N70W HOLE NO. SFD-14  
 INCLINATION 52° PROPERTY Smith Fork  
 STARTED 3/17/80 LOCATION Douglas Co. Virginia  
 COMPLETED \_\_\_\_\_ COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH 632-720 COLLAR ELEV. \_\_\_\_\_  
 NOTES BY T. Butchart SHEET 8 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION				
<p>Basaltic tuff (Eutaxitic spilite), mostly lt grn epidote in aphanitic groundmass and selectively replacing feldspar phenos. minor chlorite actinolite? trace calcite on healed fractures. med hard. Localized areas consist of f.g. basalt, slightly gradational contacts.</p>		<p>Trace to minor pyrite in groundmass. Trace in some epidote phenos</p> <p>weak schistosity and flattening of phenos <math>\approx 45^\circ</math> from core axis</p>						
<p>As above bands of chalcedony silica 1 to 6" wide occur parallel to weak schistosity</p> <p>dk grn chlorite on fractures</p>		<p>1" qtz veins</p> <p>mod. fractured &amp; rehealed <math>\frac{1}{2}</math>" qtz veins 1 to 2 per ft. most 30 to 50° from core axis. several are offset by recent fracturing</p>						
<p>Med. to fine grained basalt alternates with basalt tuff lt grn epidote in matrix and replacing some phenos.</p>		<p>Trace pyrite</p>						
<p>As above, med hard to hard</p>								
<p>med to dk grn chlorite occurs in narrow shear zones (1 to 3" wide)</p>		<p>mod. fractured</p> <p>healed shear zones 1 to 3" wide slightly more schistose</p>						
<p>Much of core is relatively soft and splits easily along schistosity</p>		<p>schistosity <math>\approx 45^\circ</math> from core axis</p>						

GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1" = 100'

DIRECTION N 70 W  
 INCLINATION 30°  
 STARTED 3/19/50  
 COMPLETED \_\_\_\_\_  
 DEPTH 720 - 510  
 NOTES BY T. Budhart

HOLE NO. SFD-14  
 PROPERTY South Fork  
 LOCATION Dallas Co. Okla  
 COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 COLLAR ELEV. \_\_\_\_\_  
 SHEET 9 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG.	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION				
<p>Eutaxitic spilite consisting of alternating zones and patches of fine grained basalt and basaltic tuff. Low grade meta. has produced mostly epidote with minor chlorite actinolite. chalcedonic silica and Qtz occur in small bands and patches. Rk is soft to med. hard with a few areas hard. Color lt. gray. aphanitic to aplitic around mass. Much of the texture is partially obliterated.</p>		<p>Trace pyrite throughout ground mass</p> <p>Qtz vein contains fragments of basalt.</p> <p>Core is strongly fractured</p>	100%					
		<p>Weak schistosity is accentuated by narrow streaks of dk. gr. chlorite. This occurs in narrow shear zones</p>	90%					
<p>Mostly lg. basalt darker color due to chlorite along healed fractures.</p>		<p>Med. to strongly fractured</p>						
<p>Basalt tuff. Texture not well defined. due to meta. In local areas contain high concentration of "birds eye" Qtz</p>		<p>Strongly fractured</p>	100%					
<p>Much of core is relatively soft and slightly crumbly</p>		<p>Schistosity is becoming more well defined with depth. This is accompanied by obliteration of original texture</p>						
<p>Basaltic tuff. slightly sil. in places</p>		<p>more eutaxitic in this area</p>						

GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1" = 10'

DIRECTION N70W  
INCLINATION 80°  
STARTED 3/19/80  
COMPLETED  
DEPTH 310-400  
NOTES BY T. Burkhardt

HOLE NO. SFD-14  
PROPERTY South Fork  
LOCATION Douglas Co. Oregon  
COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
COLLAR ELEV. \_\_\_\_\_  
SHEET 10 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG	STRUCTURE AND MINERALIZATION	% REC	ASSAYS				
				SECTION				
Basalt tuff. lt. grn matrix due to epidote. med to dk grn on fractures, chlorite. texture largely obliterated due to meta and fracturing. Core is med. soft to hard. Chalcedonic silica forms narrow zones in localized areas.		Weak schistosity rare sulfides						
		Well defined cataxitic structure						
v.g. basalt. med. to dk. grn. chlorite schist.		strongly fractured	95%					
Basalt tuff as above								
		core is dissected by a network of randomly oriented qtz veinlets. These veinlets are broken and disconnected						
Basalt tuff grades into lt. grn v.f.g. epidote-chlorite schist. Original texture largely destroyed		strongly fractured	95%					
		blebs of wht qtz occur parallel to schistosity. slight trace pyrite						
v.f.g. chlorite/epidote schist		strongly schistose $\approx 40^\circ$ from core axis	100%					

GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1" = 10'

DIRECTION N 80 W  
INCLINATION 90°  
STARTED 3/19/50  
COMPLETED \_\_\_\_\_  
DEPTH 980 - 990  
NOTES BY T. Bushair

HOLE NO. SFD-14  
PROPERTY South Fork  
LOCATION Douglas Co Oregon  
COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
COLLAR ELEV. \_\_\_\_\_  
SHEET 11 OF \_\_\_\_\_

ROCK AND ALTERATION	LOG. F	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION				
chlorite/epidote schist dk. grn. med. hard slightly crumbly. Original texture obliterated. Blebs and lenses of quartz and/or feldspar occur parallel to schistosity.		strongly schistose 30 to 50' from core axis  rare sulfides						
cataclastic basalt gradational with above schist.  most of core is variegatedly etched the result of crushing and healing		strongly fractured						
Scattered areas contain remnant basalt tuff texture.		strongly fractured						
v.f.g. epidote/chlorite schist 1/2 grn in color soft and crumbly  cataclastic basalt		much weaker schistosity than above  Trace disseminated pyrite						
As above, slightly more chlorite		strongly fractured						

95%  
TO  
100%

## GULF MINERAL RESOURCES CO.

## DRILL RECORD

SCALE 1" = 100'DIRECTION N80WHOLE NO. SFD-14INCLINATION 80°PROPERTY South ForkSTARTED 3/19/80LOCATION Douglas Co. Oregon

COMPLETED \_\_\_\_\_

COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_

DEPTH 990 - 1080

COLLAR ELEV. \_\_\_\_\_

NOTES BY T. BuchheitSHEET 12 OF 13

ROCK AND ALTERATION	LOG.	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS					
				SECTION	PPM CU	PPM ZN	AV	AC	
<p>Epidote/chlorite schist. vfg. lt. grn. soft to med. hard much of core is crumbly "cataclastic basalt" blebs and lenses as well as small veins of qtz are numerous.</p> <p>"cataclastic" frags are still discernable where core is not to broken.</p>		<p>Weak schistosity</p> <p>slight trace pyrite occurs as small patches <math>\frac{1}{16}</math>" in diam</p> <p>mod. fractured</p> <p>strongly fractured</p>							
<p>Qtz. sericite schist. Lt gray f.g. wavy and distortedly banded. appears slightly fragmental. soft to med. hard.</p> <p>some intraformational folding</p>		<p>sulfides occur as streaks and bands parallel to schistosity also disseminated. Av. % is 10 to 30. Localized zones up to 1 foot wide contains up to 50% sulfides. Mostly pyrite. mod. intraformational folding</p>	100%	15867	110	130	-	-	
<p>1042-1052 Dacite dike, med to dk grn. oplitic texture is well defined</p>		<p>slight trace disseminated pyrite in dike. schistosity is not displayed in dike.</p>	100%	15868	50	45	Tr.	-	
			100%	15869	70	60	-	-	
			100%	15870	55	160	-	0.08	
		sharp contact	100%	15871	80	30	Tr.	-	
<p>Andesitic? Dk. grn almost black in places aphanitic to oplitic. Small rounded phenos of off wht feldspar <math>\frac{1}{8}</math>" in diam give core Ig. texture. Core is med hard to hard. Fractures contain epidote &amp; qtz</p> <p>Main alt. product is chlorite</p>		<p>healed shear zone, highly sil. minor pyrite</p> <p>Only trace disseminated pyrite most observable pyrite concentrated around healed fractures with qtz</p> <p>mod. fractured</p>	100%	15872	95	155	-	-	





## GULF MINERAL RESOURCES CO.

## DRILL RECORD

SCALE 1" = 10'

DIRECTION N 35° W HOLE NO. SFO-15  
 INCLINATION 45° PROPERTY South Fork  
 STARTED 4/6/50 LOCATION Douglas Co. Oregon  
 COMPLETED 4/17/50 COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH 90 - 180 COLLAR ELEV. 1950  
 NOTES BY T. Burkhardt SHEET 2 OF 7

ROCK AND ALTERATION	LOG	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION				
<p>ufg. basalt. lt. grn, soft to med hard. chlorite/epidote alt. slightly crumbly. Localized areas slightly fragmental.</p> <p>Weak textural alignment = normal to core axis. tiny blebs of med grn epidote (?) accent above alignment.</p> <p>Core contains thin bands of off wht. chert. slightly distorted and offset by fractures</p> <p>As above lt. grn. med hard to hard locally very hard due to abundant silica and locally fragmental texture is well defined. Bands of silica are common (chert)</p> <p>Mod. Late fracture pattern filled with gray to wht qtz. rk. in vicinity silicified and bleached</p> <p>Areas not silicified are med. to dk grn. silicified areas lt grn to gray and exhibit banded and fragmental texture</p> <p>Dk. orn chloriticly alt. basalt dk. grad. contacts soft crumbly minor epidote bleaching along fractures</p>		<p>shear zone 1" wide <sup>minor</sup> chlorite and qtz.</p> <p>Trace pyrite best observed along fractures.</p> <p>Late qtz veins av. width 1/2" offset and disconnected. carry 2 ft.</p> <p>Med. fractured.</p> <p>1" qtz vein</p> <p>shear zones 1-3" wide minor chlorite + qtz. pyrite occurs as small (&lt; 1/4") blebs.</p> <p>core relatively unfractured</p> <p>rare PYRITE in dk</p> <p>mod fractured</p>						





GULF MINERAL RESOURCES CO.

DRILL RECORD

SCALE 1" = 10'

DIRECTION N 35 W HOLE NO. SFD-15  
 INCLINATION 45° PROPERTY South Fork  
 STARTED 4/6/80 LOCATION Pringle Cr. Basin  
 COMPLETED \_\_\_\_\_ COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH 270-360 COLLAR ELEV. 1950  
 NOTES BY T. Burkhardt SHEET 4 OF 7

ROCK AND ALTERATION	LOG.	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION	ppm Cu	ppm Zn	Au	Ag
271-279 (Iron Fm) dk grn. to blk. groundmass surrounds odd shaped blebs lenses and small stringers of lt. grey chert? Localized areas contain minor bands of hematite. Core displays intense intructural folding, fairly hard.		4" zone of 30% pyrite on upper contact. associated with Qtz veining.  minor pyrite trace chalcopyrite						
277-291.5 mixture of Iron Fm and dike rock. mod. to strongly fractured.		qtz lenses and remnant feldspars give local areas a tuffaceous appearance. strongly fractured, alot of broken qtz veining	100	15873	585	0.49%	-	-
292-296 highly fractured dike cuts massive pyrite. mod. qtz veining.		massive sulfide contact 291.5 8" zone of l.g. massive pyrite	100	15874	860	0.27%	-	-
D.S.S. wht. to lt. grey, core made up mostly of QSS fragments 1/2 to 2" in diam. some weak banding is observed. Acd hard to hard.		296-298 90 to 100% massive pyrite	100	15875	600	3.30%	-	-
As above, smaller frags.		50 to 80% massive sulfides form host for QSS frags. mostly pyrite minor chalcopyrite and bornite? up to 3% chalcopyrite + bornite in very localized areas. chalcopyrite appears to be along stringers and in small blebs. maybe remobilized?	100	15876	2070	4.9%	0.036	0.12
fg. basalt dike. strongly altered to chlorite		30 to 50% massive sulfide less fragmental more banded. Pyrite trace chalcopyrite rare bornite local areas contain up to 3% chalcopyrite dike upper contact, jagged	100	15877	646	1.15%	0.010	-
Narrow zone D.S.S.		strongly fractured, pyrite on same lower contact 2-30% sulfides	100	15878	663	0.57%	tr.	0.12
fg. basalt dike minor qtz veining weakly alt. to epidote/chlorite		dike upper contact	100	15879	135	0.11%	tr.	0.20
		rare sulfides relatively unfractured	100	15880	37	0.31%	tr.	0.02

GULF MINERAL RESOURCES CO.

DRILL RECORD  
SCALE 1" = 10'

DIRECTION N 35 W  
INCLINATION 45°  
STARTED 4/6/80  
COMPLETED \_\_\_\_\_  
DEPTH 360 - 450  
NOTES BY T. Burtchard

HOLE NO. 5FD-15  
PROPERTY South Fork  
LOCATION Parsons Co. W. Va.  
COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
COLLAR ELEV. 1950  
SHEET 5 OF 7

ROCK AND ALTERATION	LOG	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS					
				SECTION	Ppm Cu	Ppm Zn	% Au	Ag	
f.g. basalt dike. lt. to med grn. med hard to hard. weak qtz veining		sulfides occur along fractures and in shear zones slight tr. diss. py.							
QSS f.g. lt. gray med. hard. fragmental texture has been replaced by banding. Localized areas are primarily sericite and fairly soft. weak to well defined schistosity is ± 90 to 70° from core axis		lower contact sharp but irregular	100	15331	0.13%	75	-	-	
As above with weak to mod. intraformational folding.		Most sulfides occur in narrow bands and lenses ~ parallel to schistosity sulfides make up 10 to 30% of core with local areas (< 6" thick) approaching 50%. Mostly pyrite with minor chalcopyrite chalcopyrite occurs as small blebs and lenses in and around stringers maybe due to remobilization.	100	15332	800	150	-	0.08	
Core becoming softer due to increase in sericite & decrease in silica.		From around 390 pyrite is much more coarsely crystalline maybe recrystallized?	100	15333	175	590	-	-	
minor late qtz veining			100	15334	230	105	tr	-	
well defined schistosity with fairly intense intraformational folding.		gradual decrease in sulfides < 10% except through short intervals that approach 30% to 40%	100	15335	90	865	tr	-	
			100	15336	105	65	tr	-	
		Local areas contain relatively strong concentrations of chalcopyrite stringers 1 to 3% over intervals of 2 to 3"	100	15337	0.18%	260	tr	0.06	
			100	15338	0.21%	885	0.016	0.08	
core fairly soft and crumbly		noticeable decrease in sulfides below 440'	100	15339	740	560	-	-	

## GULF MINERAL RESOURCES CO.

## DRILL RECORD

SCALE 1" = 10'

DIRECTION N35W HOLE NO. SFD-15  
 INCLINATION 45° PROPERTY South Fork  
 STARTED 4/6/80 LOCATION Pringos Co Oregon  
 COMPLETED 4/17/80 COLLAR COORD. N \_\_\_\_\_ E \_\_\_\_\_  
 DEPTH 450-540 COLLAR ELEV. 1950  
 NOTES BY T. Rulhaert SHEET 6 OF 7

ROCK AND ALTERATION	LOG	STRUCTURE AND MINERALIZATION	% REC.	ASSAYS				
				SECTION	ppm Cu	ppm Zn	Au	Ag
QSS. Lt. gray to wht. fairly soft slightly crumbly. Mostly sericite		Diss pyrite in only trace to minor amounts. Localized areas contain up to 10% in association with fractures and minor qtz. veining	100	15890	265	635	-	0.10
As above slightly more silicified.		Increase in sulfides toward contact up to 10%. pyrite with trace chalcopyrite.	100	15891	365	510	tr	0.04
		Upper contact sharp but not measurable due to slight mismatch	100	15892	240	0.17%	-	0.12
Basalt dike? fine to med textured med hard. lt. to med grn weakly altered to chlorite original texture largely obliterated		strongly to mod. fractured w.s. trace diss py.						
Rhyodacite? lt grn to grn very fine grained slight hint of fragmental texture local zones almost wht. maybe false phase of dacite 499 503 zone of silicious dacite		contact obscured by fracturing 498 subangular fragment(?) of chert 2" in diam contains minor sph. chalcopyrite & pyrite finely diss pyrite relatively abundant compared to surrounding rk. < 1/8"						
silicious dacite more well defined fragmental texture								
523-528 Basalt dike		very slight trace diss py						
Dacite lt to med grn. strongly fragmental, strongly sil. weak qtz veining.		rare sulfides						



# HUNTER MINING LABORATORY, INC.

1593 GREG STREET

SPARKS, NEVADA 89431

TELEPHONE: (702) 358-6227

## REPORT OF ANALYSIS

Submitted by:

Date: May 14, 1980

GULF MINERAL RESOURCES COMPANY  
 Mr. R. Clayton  
 100 W. Grove Street, Suite 575  
 Reno, Nevada 89509

Laboratory Number: 6823

Analytical Method: Fire, AA

Your Order Number:

Report on: 26 Samples

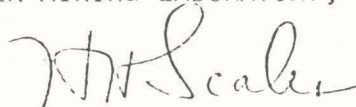
*SOUTH FORK DDHS SFO-1A & SFO-15*

Sample Mark:	Copper ppm	Zinc ppm	Gold oz/ton	Silver oz/ton
<i>SFO-1A</i>				
15867 <i>1020' - 1026</i>	110	130	none	none
68 <i>1026 - 1034</i>	50	45	trace	none
69 <i>1034 - 1042</i>	70	60	none	none
70 <i>1042 - 1052</i>	55	160	none	0.08
71 <i>1052 - 1054</i>	80	30	trace	none
72 <i>1054 - 1061</i>	95	155	none	none
<i>SFO-15</i>				
73 <i>277 - 284</i>	585	0.49%	none	none
74 <i>284 - 292</i>	860	0.27%	none	none
75 <i>292 - 293</i>	600	330	none	none
76 <i>296 - 300</i>	2.0%	4.9%	0.036	0.12
77 <i>300 - 311</i>	0.96%	1.15%	0.010	none
78 <i>311 - 321 1/2</i>	0.63%	0.57%	trace	0.12
79 <i>321 1/2 - 324</i>	1.35%	0.11%	trace	0.20
80 <i>327 - 332 1/2</i>	0.37%	0.31%	trace	0.02
81 <i>370 - 373</i>	0.13%	75	none	none
82 <i>373 - 382 1/2</i>	800	150	none	0.08
83 <i>382 1/2 - 392 1/2</i>	175	590	none	none
84 <i>392 1/2 - 403</i>	280	105	trace	none
85 <i>403 - 413</i>	90	865	trace	none

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Sample Mark:		Copper ppm	Zinc ppm	Gold oz/ton	Silver oz/ton
15886	413-423	105	65	trace	none
87	423-433	0.18%	260	trace	0.06
88	433-443	0.21%	885	0.010	0.08
89	443-453	740	560	none	none
90	453-463	265	635	none	0.10
91	463-473	265	510	trace	0.04
15892	473- <del>483</del> 478	240	0.17%	none	0.12

HUNTER MINING LABORATORY, INC.



H. H. Scales

Trace of Gold indicates presence but below 0.005 oz/ton.