

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 05-23-T-8

Observer Dan/Ray/Hally Date 23 May 90 Obs. time period 10:45-1:00; 2:30-2:35

Identifiable sheep # 8 Sheep group size 23

12-1-10

Group composition: E 12 YE 1 L 10 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description Cliff Creek (east side), on lambing
cliff about 50 yards above small cluster of Doug. Fir at center
on SE face of cliff

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs mahogany
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

12:35 PM - #8 observed browsing on mahogany

- Mostly bedded when first sighted
- began moving and feeding around 11:00
- moved to top as rain fell
- various-sized lambs

- Part of this group observed again at 2:30, 400 yds. NW of previous location in northernmost draw on backside of east lambing cliff; group was moving quickly in heavy rain

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Repeat of
0523-T-8

Group number (month-day-observer-collar no. or letter): MY23-H-A

Observer Holly Ray DAN Date 5/23 Obs. time period _____

Identifiable sheep #8 Sheep group size 235 sheep

Group composition: E 12 YE 1 L 10 Rams _____ Unk _____

Lamb observations: 4E, 4L 2E, 1YE
1E, 1L 5E5L

Ewe ID Lamb at Observe Nursing during 10 minute period Lamb
side? lamb nurse? # of bouts durations health

#8 Y Y

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr Lambing Chffs

ON Mid & E section facing S-SE

Quad map name Dave Lewis Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs C ELE

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

#8 eat mahogany, others feed in mahogany
Rain @ 12:30

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 05-25-T-A

Observer Don/Ray Date 25 May 90 Obs. time period 10:00-10:15

Identifiable sheep _____ Sheep group size 11

Group composition: E 6 YE 1 L 3 Rams I Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description E. lambing cliff, cliff Creek; 50 yds. below pointy knob on east face of cliffs

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs Cele

grass/forbs _____

Proximity to last location: N/A date _____

Precipitation: none rain snow hail other _____ Temperature 32-46°F

Comments: Considerable bird activity - flying, calling, in vicinity of sheep. Observed for ~2 hr but could see birds concentrate in one spot. I heard Ravens calling, saw magpies. Day after snow fall in lambing area.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 05-23-T-A

Observer Don / Ray / Molly Date 23 May 90 Obs. time period 12:00-12:30, 1:55-2:00

Identifiable sheep None Sheep group size 4

Group composition: E 2 YE L 2 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description west side of cliff creek, narrow crack on west side (about 50 yards east of crack)

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs mahogany
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- Neither ewe was collared.
- Ewes were moving + feeding
- Observed again at 1:55, 200 yds. W of previous location, on small bench ~200 yds. W of crack on west side of cliff creek; ewes were feeding

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Repeat of 05-23-77

Group number (month-day-observer-collar no. or letter): M423-A-A

Observer _____ Date _____ Obs. time period _____

Identifiable sheep _____ Sheep group size 4

Group composition: E 2 YE _____ L 2 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr: W side lambing area
low $\frac{1}{4}$ mi upstream from end of Timbered Bench

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PSME shrubs PHMA

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Saw 2E, 2L at 1 draw to SW of this obs -
probably same sheep.

Found dead #10

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): 5/25-G-8

Observer Roy Date 5/25 Obs. time period 1230 PM

Identifiable sheep #8 Sheep group size 12

Group composition: E ~~6~~ YE Q L ~~5~~ Rams Q Unk Q

Lamb observations: 9sec suck from non-collared ewe

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
8	Y	N			Good

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description E Cliff Cr. in lambing cliffs

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs Cole
grass/forbs

Proximity to last location: very near date 5-23

Precipitation: none rain snow hail other Temperature 32-46°F

Comments: Day after ~3" snow fell in cliffs.
All sheep moved, therefore ~~no~~ 8SP comp. is quite definite.

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): 05-25-T-7

Observer Dan Date 25 May 90 Obs. time period 2:45-3:15 PM

Identifiable sheep #7 Sheep group size 5

Group composition: E 2 YE 3 L Rams 1 (III) Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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#7	no				
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description on burn ^{300 yds} past N. edge of lambing cliffs; first ridge past cliffs on E. side of cliff cr.

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees burned P, Me shrubs Ph Ma, Sp Re

grass/forbs FaId, BaSa, CaRu - goats

Proximity to last location: date

Precipitation: none rain † snow hail other Temperature 32-46° F

Comments:

- (Ray also saw this group at 2:30 PM)
- observed these sheep feeding at about 40 yds., they fed about 80% upon grasses + forbs, some use of shrubs also observed
 - 2 ewes considerably bigger than other three, three small ones had horns 4-6 inches long; were about 2/3 size of #7
 - couldn't determine if #7 is pregnant - she looked bulky, but that could be because she had lots of winter hair on midriff
 - all sheep had large ashmarks on body

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): 05-26-T-13

Observer Dan/Holly/Ray Date 26 May 90 Obs. time period 11:10-11:35 AM

Identifiable sheep #13 Sheep group size 3

Group composition: E 1 YE 1 L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
#13	yes	yes		2 sec	chunky-

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description on white cliffs on N. side of

Big Creek above mouth of Gorge

Quad map name Dave Lewis Pk. Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees scattered PsMe, PiPo shrubs cele, RiSe, B. Se

grass/forbs Di

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- sheep were in total chute on cliff
- group saw us and climbed to top of chute and over other side
- lamb guessed to be 1 wk. old

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Thursday May 31

Group number (month-day-observer-collar no. or letter): _____

Observer H.A. Date 5/31/90 Obs. time period 1:00-3:30 looking

Identifiable sheep _____ Sheep group size _____

Group composition: E _____ YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Cr.: searched from Cornish Saddle Camp to S&E into 2 rocky-cliff canyons

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

Rained most of yesterday; Snowed all am & 1/2 of PM today ~ 28° midday; windy. 2" new snow today; snow level down to 6800'.
Difficult to glass during intermittent blizzards; saw one set of ewe & lamb tracks - see map. Probably sheep in canyons or ^{rock} cracks out of the wind. Ray & Dan started upstream before a blizzard hit - they had signals on all 4 sheep (1, 2, 3, 5) upstream.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-1-JA-7

Observer Jim Date 6/1/90 Obs. time period unk

Identifiable sheep #17 Sheep group size 9

Group composition: E 4 YE 4 L Rams I Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Cliff creek - East of Cliff formation

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-1-JA-A

Observer Jim Date 6/1/90 Obs. time period _____

Identifiable sheep none Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Creek - Hidden Basin

in Cliffs

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-1-JA-B

Observer Jim & John Date 6/1/90 Obs. time period _____

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr.

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: *Ewe defending dead lamb from coyote - see lamb mortality form.*

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-1-JA-C

Observer Jim & John Date 6/1/90 Obs. time period _____

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff creek - on first bench

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Ewe looking gaunt, slow shedding of winter coat

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JUL-AG-1

Observer Ake-Guse Date 6/1/90 Obs. time period 9:45-11:30

Identifiable sheep #1? Sheep group size 5

Group composition: E 3 YE 0 L 2 Rams 0 Unk 0

possible
3rd lamb

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
#1	Y	Y			Both lambs healthy & active. #1 Lamb jump on ewes back when ewe standing & bedded. Very playful.

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Upper Lamb Cliffs
3 draws to west 7650'

Quad map name Rainbow Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PSME shrubs GELE

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature <32°F midday
Snow yesterday; scattered snow today, windy.

Comments: Bed just out of the wind on lee hill. Move uphill, E feed on GELE.

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JUL-AG-255

Observer Ake-Guse Date 6/1/90 Obs. time period 9:45-11:00

Identifiable sheep #2, #5 ^(looks like red but radio signal says #5) Sheep group size 19+

Group composition: E 10 YE 0 L 9 Rams 0 Unk 0

Lamb observations: possibly another L

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
#2	Y	N			All lambs healthy acting. Once up they bounded, chased & played despite wind & snow.
#5	Y	N			
black small ewe	Y		27	27	

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood upper Lamb Cliffs 3rd draw up on SE aspect 7400'

Quad map name Rainbow Aerial photo number F4016085 675 12

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees sparse PSME shrubs CELE Sparse
grass/forbs no obs.

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Strowed all yesterday, mostly cloudy spit snow today <32°F in day, windy

Comments: Obs from E ridge into upper Lamb Cliffs. Got strong radio signals on #1, 2, 5 and weak on 3; all to W. All sheep bedded >1 hr, couldn't see lambs until 1 ewe suddenly got up & quickly moved uphill. Other ewes followed, each with a lamb. Last ewe to get up was not observed walking, so don't know if she had a lamb. Bedded on a rock/cliff face in the open, but lee side of ridge. Moved NW uphill out of sight

Feed on CE

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JUL-A-215

Observer _____ Date _____ Obs. time period 2:30-2:45

Identifiable sheep #2 #5 Sheep group size 4

Group composition: E 2 YE _____ L 2 Rams _____ Unk _____

Lamb observations: Counted earlier today

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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#2	Y	N			
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#5	Y	N	— called to lamb, lamb answered & both moved to each other 45 m away		
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood; X & below 1st big draw above Big Basin on S side

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other moved to cliff

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: #5 collar looks red; didnt see upper silver

Strong signals for 5 & 2 only
Obs ¹⁰⁰ 100 m away

#3 & 1 signals strong just upstream

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): Su-01-T-2

Observer Dan Date 1 Jun 90 Obs. time period 10:35-10:50 AM, 12:20-12:50

Identifiable sheep #2 Sheep group size 10

Group composition: E 5 YE — L 4 Rams 1 II Unk —

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
#2	yes	yes	—	3 sec	good - very lively compared to other 3 lambs

Lamb missing? — Searched for? — Found? — Specimen # —

Form of observation: ground airplane radio signal visual

Drainage and description N. side of B. cottonwood cr, directly across from big basin on S. side of BC cr, 7,100 ft elev.

Quad map name Rainbow Peak Aerial photo number —

Topography: cliff outcrop talus rocky soil fine soil other —

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: lower 1/3 hillside ridgetop upper 1/3 hillside mid 1/3 hillside narrow draw or ridgeline valley bottom

Major vegetation: trees PsMe shrubs cele
grass/forbs —

Proximity to last location: ~3/8 mi. W. & upslope date 1 Jun 90

Precipitation: none rain snow hail other — Temperature —

Comments:

- #2's lamb very lively, running and hopping along cliff
- nursing interrupted when the bunch spooked - two ewes saw me when I broke out onto a good vantage point about 17'
- 4 E, 4 L spooked, then ~5 minutes later, 1 E + 1 Ram crossed crack where the whole bunch had been originally

OVER

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-01-T-A

Observer Dan Date 15 Jun 90 Obs. time period 12:25-12:45 PM

Identifiable sheep — Sheep group size 6

Group composition: E 3 YE — L 3 Rams — Unk —

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? — Searched for? — Found? — Specimen # —

Form of observation: ground airplane radio signal visual

Drainage and description N. side of R. Cottonwood Cr., on ridge between 1st + 2nd Draws W. of White Cliff Draw; elev. 7,400 ft

Quad map name Rainbow Peak Aerial photo number —

Topography: cliff outcrop talus rocky soil fine soil other —

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PsMe shrubs —

grass/forbs —

Proximity to last location: — date —

Precipitation: none rain snow hail other — Temperature —

Comments:

- saw these sheep at long range, one ewe appeared to be collared
- ewes feeding on low-growing vegetation

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-01-T-3

Observer Dan Date 1 Jun 90 Obs. time period 12:50-1:45 PM

Identifiable sheep #3 Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
<u>#3</u>	<u>no</u>				

Lamb missing? yes Searched for? yes Found? yes Specimen # B. Cottonwood #1

Form of observation: ground airplane radio signal visual

Drainage and description N. side of B. Cottonwood, first two draws
E. of white cliff draw; elev. 7,100 ft

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psmc shrubs Ribies

grass/forbs Ardr

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- #3 was alone, moving across slope to W., seemed to be lost or searching for something
- #3 moved onto an outcrop where 2 ravens were pecking at something, she chased the ravens off
- #3 nuzzled at carcass of dead lamb + stood directly over it for 1-2 minutes
- as I approached, #3 was reluctant to leave, she stayed about 60 yds. upslope for 15 minutes

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-01-T-B

Observer Dan Roy, Holly Date 1 Jun 90 Obs. time period 5:45-5:48 PM

Identifiable sheep _____ Sheep group size 9

Group composition: E 4 YE _____ L 4 Rams 1 I Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description N. side of B. Cottonwood, near spring
in small draw SW of Saddle Camp, elev. 7600 ft

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme shrubs _____

grass/forbs Faid, Chum, Coge, Ardr

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- Feeding on grass/forbs

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JD-2-G-R

Observer Ray & Dan Date 6-2-90 Obs. time period 5:30 PM-6:30 PM

Identifiable sheep None Sheep group size 3

Group composition: E 2 YE L 1 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Creek 3/4 mi
upstream of mouth of Big Basin Creek.

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pico shrubs Cele

grass/forbs not known

Proximity to last location: N/A date

Precipitation: none rain snow hail other Temperature below freezing
~30°F

Comments: The ewe without a lamb was very dark in color.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-2-G-A

Observer By & Dan Date 6-2-90 Obs. time period 5:30-6:30 PM

Identifiable sheep none Sheep group size 10

Group composition: E 5 YE 0 L 5 Rams 0 Unk 0

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Cr. 1/2 mi. upstream

From the mouth of Big Basin Cr.

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Peme, Pico shrubs lele

grass/forbs not known

Proximity to last location: N/A date

Precipitation: none rain snow hail other Temperature

Comments:

#2 & 5 weak ^{signal} in direction of sheep
#3 medium signal in direction of sheep
Did not see all 5 ewes clearly, but no radio collars were seen

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-02-T-A

Observer Don Ray Date 2 Jun 90 Obs. time period 11:00-11:30 AM

Identifiable sheep _____ Sheep group size 6

Group composition: E 3 YE _____ L 3 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description S. side of B. Cottonwood Cr., at

6800 ft on first ridge W. of second intermittent stream
E. of BB Cr.

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Ps Me shrubs Juniperus

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- group bedded soon after being spotted

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JU-3-G-1,2,5

Observer Ray Date 6/3/90 Obs. time period 11:45-1:45 PM

Identifiable sheep #'s 1,2,5 Sheep group size 11

Group composition: E 6 YE 2 L 5 Rams 2 Unk 2

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
#1	yes	no	—	—	coughing
#2	yes	yes	1	7 at 12:10PM	good
#5	yes	no	—	—	good

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Creek, South slope directly across from mouth of Big Basin Creek

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal shrubs Cole
grass/forbs not known

Proximity to last location: 3/4 mi NE date 6-1-90

Precipitation: none rain snow hail other Temperature ?

Comments: Six ewes, 3 of them with collars (#'s 1,2,5). Jim A & Tim aerial tracked and flew circles over group which helped me locate them. The group spread out along hillside which enabled me to determine that all collared ewes had lambs. I observed the lamb of ewe #1 coughing. None of the lambs seemed spunky. When ewes stopped to feed their lambs immediately layed down until the ewes moved off. Observations of the group were hindered by wind and rain; spotting scope fogged. The group →

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-03-T-A

Observer Dan Date 3 Jun 90 Obs. time period 1:45 PM

Identifiable sheep _____ Sheep group size 2

Group composition: E 1 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description N. side of B. Cottonwood Cr. on cliffy ridge E. of forked draw across from BB cr comp elev. 7,900 ft

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme shrubs cele

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- may have been other sheep; I came upon these sheep at about 20 yds. in a cliff, & I couldn't maneuver quickly enough to see if there were more
- ewe had a pinto appearance due to shedding

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-4-G-A
Observer Ray Date 6/4/90 Obs. time period 11:45 AM 1:30 PM
Identifiable sheep None Sheep group size 9
Group composition: E 5 YE 2 L 4 Rams 2 Unk 2

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Creek 1/2 mi. downstream from mouth of Big Basin Creek.

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Peme, Pial shrubs Cete
grass/forbs not known

Proximity to last location: N/A date

Precipitation: none rain snow hail other Temperature

Comments: The 4 lambs in this group were very active.
This group

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-04-T-3

Observer Dan, Holly Date 4 Jun 90 Obs. time period 9:20-9:55 AM

Identifiable sheep # 3 Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side of B. Cottonwood Cr. on 2nd ridge W. of White Cliff Draw; elev. - 7,700 ft

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme, Pinal shrubs Juniperus
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- began moving at 9:47 AM - had been bedded
- moved slowly, as if sick

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JU4-AT-1,2,5
already obs. today
 Observer Ake-Toml. Date June 4 Obs. time period 1:30-2:30; 2:50-3:40
 Identifiable sheep #1, #2, #5 Sheep group size 15
 Group composition: E 8 YE L 7 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
#1	Y	Y			lamb cough, average size
#2	Y	Y	no	3:22 29 sec	average size
#5	Y	Y		3:15 35 seconds	average size
Other				16 sec, 1 sec	
Other			smallest lamb uncoordinated & gaunt; not from a collared ewe 3:25 it coughed/gagged		

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood; S side 2 draws W of

last obs. They are below "white tops" at 7300; 2 draws E of upper intermittant stream Y draw, below upper basin.

Quad map name Rainbow Aerial photo number

Topography: cliff bedded outcrop talus rocky soil feeding fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs
 grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:
 Of 7 lambs; 2 are large, 4 medium, 1 small & scrawny with poor muscle & agility.
 1:30 5 ewes fed in rocky opening while 1 ewe babysat 5 lambs in open PSME above opening; #1 & #2 fed & bed with their lamb in open PSME & outcrop.
 2:30 6E, 7L bed on outcrop overlooking draw (incl. #2 & 5); #1 feed onto cliff in draw then X draw up red slope West.
 2:50 We observe from closer; 500M away across Big Cottonwood
 2:55 #5 & #2 get up & feed; their lambs & other ewes & lambs remain bedded. Lambs sprawled out bedded in mostly sun. Moderately active lambs, but mostly bed, or follow their ewe, no playing observed.
lamb stays with group.

over
↓

over for info on
JU4-AT-3

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU4-AT-WF

Observer Ake-Toml. Date June 4 Obs. time period 9:30-12:00

Identifiable sheep WF (see below) Sheep group size 10

Group composition: E 5 YE 0 L 5 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
WF	Y	N			large & fat, precocious & off by itself at times (largest lamb of group)

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Big Cottonwood; S side about 1/4 mi upstream from Big Basin bedded on red substrate

Quad map name Rainbow Aerial photo number _____

Topography: smooth cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees scattered PGME shrubs juniper unknown, sparse
grass/forbs unknown

Proximity to last location: N/A date _____

Precipitation: none rain snow hail other _____ Temperature _____

Partial overcast yesterday; today; mild but breezy, mostly sunny.

Comments:

WF = Very large white colored ewe with broad White Face and a distinctive nose up posture when bedded
One ewe feed on ground, lamb does too. too far to s
Mostly sheep bed during entire obs.; at 11:50 group got up & moved W & downhill feeding (toward group JU4-AT-2 collars
Of the 5 lambs: 1 is large (2 wks plus old?); 3 are average (1/2-2 weeks); 1 is very small (< 1 week old).
Of the 5 ewes: 2 are white or light; 3 are ash or brown colored. Small lamb belongs to small white ewe.
Dark ewe coughing while bedded & standing (2 times).

just east of rounded ridgeline

Observe from Blond Bear Point

PHOTO A1-08 of ~~area~~ (no sheep) used by JU4-AT-WF (left), ^{red} JU-A-2 collar (low left) and JU4-AT-3 right gray knob

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU4-A-2 collars

Observer Ake & Toml. Date _____ Obs. time period 19:30-21:00 rare ^{sittings} of sheep

Identifiable sheep 2 radios (#1, 2 and/or 5) Sheep group size 3+

Group composition: E 2 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Big Cottonwood; S side 1 1/2 mi W of Big Basin Camp; 200M below & west of JU4-AT-WF

Quad map name Rainbow Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PSME shrubs unknown

grass/forbs prob: CAGE, ~~STA~~ dragon sage, strawberry

Proximity to last location: they had been below Big Basin? date JU3

Precipitation: none rain snow hail other _____ Temperature _____

See JU4-AT-WF

Comments:

Feed around in ~30% canopy PSME below cliffs & talus.
Never had a good look at this group: didn't get total #s, nor ID of radios.
They remained in this area of gray sock for the entire obs.

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JU-5-6-2, 1, 5

Observer Roy, Holly, Dan Date 6-5-90 Obs. time period 9:35 AM - 4:15 PM

Identifiable sheep #2, #1, #5 Sheep group size 8

Group composition: E 4 YE _____ L 4 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
2	yes	yes		25 sec (9:55) 1 sec (1:20)	good
1	yes	yes		13 sec (11:30)	good
5	yes	no		13 sec (12:22) 30 sec (1:20)	good

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Big Cottonwood two draws upstream of White Cliff Draw.

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal shrubs juniper
grass/forbs unkn

Proximity to last location: upslope & to East ~ 1/4 m date 6-4-90

Precipitation: none rain snow hail other _____ Temperature _____

Comments: joined with JU-5-T-A at 10:55 AM. at location of initial sighting of JU-5-T-A.
At 11:10 AM #1 & #5 moved down, below the timberline possibly to water. Lambs stayed in 2 nursery groups. Collared #2 stayed with the nursery groups. Most ewes from JU-5-T-A stayed in the vicinity of the nursery groups. JU-5-A-3 joined the other 2 groups at 12:45.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-05-T-A

Observer Don Ray, Holly Date 5 Jun 90 Obs. time period 9:05 AM - 4:15 AM

Identifiable sheep _____ Sheep group size 7

Group composition: E 4 YE _____ L 3 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description N. side of B. Cottonwood Cr.;
on ridge E. of 3rd draw W. of white cliff Draw

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees P. me shrubs Juniperus, Patr
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- ~~ewe bedded, a second feeding~~; they are in difficult spot to get a good count
- nursing bout of 18 sec, another lamb approached: the ewe butted it
- group rose at 10:42
- at 10:55, Ju-5-6-1, 2, 5 (4E, 4L) joined this group

OVER

Quality

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-5-T-11

Observer Don Date 5 Jun 90 Obs. time period 8:40-9:30 PM

Identifiable sheep #11 Sheep group size 8

Group composition: E 5 YE L 3 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
#11	no				

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side of B. Cottonwood ca

in draw just W. of Y-shaped draw across from BB Creek

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW ... Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PsMe shrubs Cele

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- relatively certain #11 has no lamb
- 2 nursing bouts observed on non-collared ewes - 1 for 1 sec, other not seen in time to count
- a cow forced #11 to her feet and took her bed

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JU5-A-3

Observer Ake-Guse-Tan Date 6-5-90 Obs. time period 9:00-9:30

Identifiable sheep 3 (deduced then ^{confirmed}) Sheep group size 1

Group composition: E 1 YE 0 L 0 Rams 0 Unk 0

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? 0 Searched for? 0 Found? 0 Specimen # 0

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood S. Side 3rd draw W of "White Cliff Draw"

Quad map name Rainbow Aerial photo number 0

Topography: ^{smooth} cliff outcrop talus rocky soil fine soil other 0

Aspect: N NE E (SE) S SW W NW Slope: 0-30% 30-60% (60-90%) >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees sparse PSME shrubs rare
grass/forbs rare

Proximity to last location: upslope on same ridge if #5 date 0

Precipitation: none rain snow hail other 0 Temperature 0

Comments: mostly clear yesterday; <32° at night, sunny today

Dark colored (dark back) smallish ewe traversed upper dark gray cliff heading East in yellow rock. Out of site 9:20

11:20 Signal on #3 seems to be 1/2 mi downstream of this obs - suspect this is #3 still travelling
11:50 same

[OVER]

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU5-A-11

Observer H.A. Date 6/5/90 Obs. time period 7:00-8:30 pm

Identifiable sheep #11 Sheep group size 8

Group composition: E 5 YE L 3 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood at mouth of Big Basin on N side

Quad map name Rainbow Pk Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PSME ~ 30% CC shrubs feed on shrubs & ground
grass/forbs

* Proximity to last location: DYNAMITE CR date 6/2/90

Precipitation: none rain snow hail other Temperature

Comments: Hiked up Big Basin in evening to track #11 - signal this afternoon from near #2 seemed to be toward Big Basin. She probably crossed over Red Ridge today? (no one checked for her in the last few days) & went down Big Basin and across Big Cottonwood near our camp. Signal bounce. Didn't locate group until almost returned to camp at 8 PM.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU5-A-A

Observer Hake Date 6/5/90 Obs. time period 7:35pm

Identifiable sheep none Sheep group size 2

Group composition: E 1 YE 1 L 1 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Y)

smallish athletic lamb -
jumped over 3 1/2' snow
drift

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood; Big Basin; high on W side just under the red colored peak

Quad map name Rainbow Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside 9000'
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: Big Basin; lots of elk & deer droppings & rubs on W side low in PSME/CARU/Huckleberry feed on ground, Travel S. < 50m from top of peak into upper part of Big Basin, No collar Nanny & kid midslope in Big Basin @ 8000' in draw upstream from black bowl (W aspect) where they were this afternoon. Kid similar size as lambs.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JUG-A - Tracking

Observer Holly Date 6/6/90 Obs. time period 7:30 AM

Identifiable sheep _____ Sheep group size _____

Group composition: E _____ YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description BIG COTTONWOOD

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: TRACK FROM BIG BASIN CAMP;
#11, 1, 2, 5 upstream, faint
#3 upstream, med-strong signal

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-7-G-13
Observer Ray Date June 7 Obs. time period 3:30PM - 4:30PM
Identifiable sheep collared #13 Sheep group size 3
Group composition: E 1 YE 1 L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
<u>13</u>	<u>yes</u>	<u>yes</u>		<u>21 sec at 4:04PM</u>	<u>good</u>

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Big Creek, West side of gorge
directly uphill from Forest Service Admin Site

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: .0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pipo, Peme shrubs Artr, Cele, Crna, Phle
grass/forbs Agsp, Acmi

Proximity to last location: ask Jim date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Observed #13 cough violently 4 times at 4:10PM

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-08-T-B

Observer Dgn Date 8Jun90 Obs. time period 12:46-1:00 PM

Identifiable sheep _____ Sheep group size 2

Group composition: E 2 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description E. side of cliff cr. on 1st ridge
on E. edge of lambing cliff

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psmd shrubs cele

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- ewes were moving when spotted
- alternating between moving and bedding

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 54-08-T-A

Observer Don Date 8 Jun 90 Obs. time period 12:05-12:25 PM

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description E. side of cliff Cr; on prominent
ridgeline at center of lambing cliffs, just W. of trees in center

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees none shrubs cele

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-08-T-C

Observer Dan Date 8 Jun 90 Obs. time period 2:05 - 3:50 PM

Identifiable sheep _____ Sheep group size 14

Group composition: E 8 YE _____ L 5 Rams 1 I Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description E. side of cliff cr. on spiny ridge
on upstream edge of lambing cliffs

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme shrubs cele

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- all but 2 ewes are bedded
- one ewe was moving around, bleating almost continuously, she went out of sight & hearing about 2:20 PM
- 2:50 PM bleating ewe returned - this ewe has shed just past her front shoulders, is light-colored from there back; probably ewe in Ju-8-T-A
- 2:56 PM - nursing bout of 13 sec. - 2:57 PM bleating ewe approached + sniffed

OVER

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Jul-J-B

Observer JA Date Jun 11 Obs. time period 2:00-3:00

Identifiable sheep _____ Sheep group size 6

Group composition: E 4 YE _____ L 2 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr: West Side Lambing Cliffs
Northernmost Cliff

Quad map name DAVE Lewis Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PSME shrubs CELE

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JULI-A+A

Observer HA & JA Date June 11 Obs. time period ~1:00 - 3:30

Identifiable sheep white nose ewe w shoulder/neck shed, rump still white Sheep group size 185

Group composition: E 14 YE 2+ of the 14 ewes L 3 Rams 1 yearling Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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white nose ewe

NO NO

Comments: This ewe was alone when we first saw her 1/2 down Hidden Canyon near talus. She acted like she lost her lamb - vocalize, travel back & forth, & approach other sheep & lamb. She led group back to dike. Ravens flying & calling, but no localized use. Ravens flying & calling, but no localized use.

Lamb missing? Suspected Searched for? around Found? No Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr Lambing Area on the N edge DIKE and moved into HIDDEN CANYON

Quad map name DAVE LEWIS Aerial photo number EVO-37-84

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE (S) SW W NW Slope: 0-30% 30-60% (60-90%) >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees occasional PSME shrubs CELE
grass/forbs scattered dragon sage, scattered AGSP

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: Upper group of 13E, 3L, and 1YR was bedded on top of dike. This group included 5 fully shed ewes & 1YR that were blackened from the burn - probably of the barren ewe group that had included #7. They moved below the dike, some E+L moved W toward Cliff Cr, 1 E & L moved S down in canyon, dark sheep fed then followed white nose ewe back to dike.
→ CELE

#8 not obs today; signal S of this group.
#7 signal weak.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JUL12-A-B

Observer HA & Ray Cooper Date 6/12/90 Obs. time period 3:30-4:30

Identifiable sheep probably white nose ewe Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
<u>White nose</u>	<u>NO</u>	<u>NO</u>			

Lamb missing? X Searched for? X Found? NO Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr Lamb Area - Hidden Basin
NW side

Quad map name Dave Lewis Aerial photo number EVO-37-84

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees NONE shrubs CELE scattered
grass/forbs few

Proximity to last location: same area date JUNE 11

Precipitation: none rain snow hail other Temperature

light rain in last few days

Comments:

Watched & heard ravens in area, but never landed in Hidden Basin. They flew W toward lower edge of dike, but never saw them land there either.

Ewe fed then went out of sight. We later saw a ewe coming up from Cliff Cr toward Hidden Basin - probably the same ewe.

Photos

H1-23-25 of lower

lamb cliffs below dead lamb #2 and near #8 location: beds & dropping of heavy use site. CELE heavy browsed.

BIG CREEK BIGHORN SHEEP EWE-LAMB GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JUL 2-A-8

Observer HA & Ray Cooper Date 6/12/90 Obs. time period 12:30-1:00

Identifiable sheep #8 Sheep group size 7+ (bedded & hand to see)

Group composition: E 5 YE L 2 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	durations	Lamb health
#8	never saw sheep	out of bed	dont know about a lamb		

Lamb missing? Searched for? Ravens land on lamb Found? yes Specimen # Cliff Cr #2

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr Lamb Cliffs; in cliffs S edge above talus at head of Timbered Bench & Cliff Cr; below dead lamb #2 75 meters

Quad map name Dave Lewis Aerial photo number EVO-37-84

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline cliff ledges

Major vegetation: trees shrubs CELE
Very few;
grass/forbs dragon sage AGSP

Proximity to last location: date

Precipitation: none rain yesterday evening snow hail other Temperature
Windy & cool yesterday occasional rain showers

Comments:

Located this group then moved closer to observe & to collect dead lamb - this group moved out of sight at that time so we didn't get a good count and never confirmed #8's lamb. One ewe remained above this group - seemed to be looking for the group, but not overly concerned like the ewes that lost their lambs.

Never saw this group again even tho we hiked a circle thru the cliffs & below these sheep.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-12-T-A
Observer Raj & Dan Date 6-12-90 Obs. time period 4:30-5:00 PM
Identifiable sheep None Sheep group size 6
Group composition: E 3 YE L 3 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Cr. on N Face
directly across from saddle camp.

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Peme, Abia shrubs juniper

grass/forbs unknown

Proximity to last location: N/A date

Precipitation: none rain snow hail other Temperature very cold!

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-13-T-B

Observer Dan Date 13 Jun 90 Obs. time period 3:29-4:21 PM

Identifiable sheep _____ Sheep group size 12

Group composition: E 6 YE _____ L 6 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description N. side B. Cottonwood Cr. in 2nd major

draw E. of BB Cr.

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Petr shrubs Cele

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- ewes spooked from something below them seconds after I spotted them - ~~partly spooked by the weather the draw~~
- sheep moved about 200 yds upslope, then began feeding & moving up
- no collars in this group
- sheep were grazing and browsing (mahogany) in about equal proportions

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-13-6-A

Observer Roy & Dan Date 6/13/90 Obs. time period 10:50 - 11:15

Identifiable sheep None Sheep group size 4

Group composition: E 2 YE _____ L 2 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description Big Cottonwood Cr. Basin directly

opposite of Big Basin

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop _____ upper 1/3 hillside _____ mid 1/3 hillside _____
lower 1/3 hillside valley bottom _____ narrow draw or ridgeline _____

Major vegetation: trees Pine, Pinal shrubs juniper, Cele

grass/forbs not known

Proximity to last location: N/A date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Lambs were observed mounting at 11:05; appeared healthy.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-13-T-2,11

Observer Ray & Sam Date 6/13/90 Obs. time period 9:31 - 2:15

Identifiable sheep collared #'s 2411 Sheep group size 5

Group composition: E 5 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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2 no

11 no

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description Big Cottonwood Cr. - Big Face upstream of Big Basin Cr. Downhill & to the West of Forked draw

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees P. me, P. al, P. tr shrubs C. le,
grass/forbs _____

Proximity to last location: 1.5 mi downstream for #2 date 6-5-90

Precipitation: none rain snow hail other _____ Temperature _____

Comments: As of 11:40 still no lambs have been spotted, although group has traversed ~ 400 yds.
Grp bedded from 11:40 - 1:45 - no lambs seen.
1:45 - 2:00 grp. moved, headed upstream, still no lambs.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ja-13-T-A

Observer Dane Ray Date 13 Jun 90 Obs. time period 9:30 - 11:10 AM

Identifiable sheep _____ Sheep group size _____

Group composition: E 1 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Big Cottonwood, N side on ridge
east of forked draw across from Big Basin Cr. Camp.

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme, Pipo, Pial shrubs Cete,
grass/forbs not known

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- bedded when spotted (1E, 1L)
- ewe began feeding about 9:55, bedded at 10:19
- lost sight at 11:10

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-13-T-3

Observer Dan + Ray Date 13 Jun 90 Obs. time period 8:55-11:20 AM; 4:20 PM

Identifiable sheep #3 Sheep group size 4

Group composition: E 3 YE L 1 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side of B. Cottonwood Cr; 200 yds W. of forked draw across from BB Cr. Camp

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psmc, Pial, Patr shrubs Cele

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- bedded when spotted
- tracking plane flew over + spooked the group a little after 9:00 AM, they moved up ridge about 100 yds + bedded ~ 9:10 AM
- got up at 10:05 + began feeding
- saw #3 again toward evening about 200 yds below Ju-13-T-B

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JUL4-A-A

Observer Holly A. Date 6/14/90 Obs. time period ~2-2:30

Identifiable sheep _____ Sheep group size 2

Group composition: E 2 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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No lambs

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr lambing Cliffs; lower cliffs at head of timbered bench

Quad map name Dave Lewis Aerial photo number EVO-

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs CELE

grass/forbs ^{scattered;} AGSP, dragon sage
FEID

Proximity to last location: sheep seen here 100M west date 6-12-90

Precipitation: none rain snow hail other _____ Temperature _____
currently

Comments:

Feed & bed on E side talus chute we hiked up the 12th. One light (winter coat ewe) and one darker (summer coat) smaller ewe. Only saw 1 ewe at a time. Prob. feed on CELE. No ravens observed. No collars.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-15-G-6

Observer Ray & Dan Date 6/15/90 Obs. time period 2:45 - 4:45

Identifiable sheep #6 Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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#6 no

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Cr. 1/4 mi. downstream

Quad map name Ris Baldy Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pico shrubs

grass/forbs

Proximity to last location: First gnd observation date

Precipitation: none rain snow hail other Temperature

Comments: Appears to be all by herself; No lamb

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-15-T-B

Observer Dan Ray Date 15 Jun 90 Obs. time period 12:30-12:45 PM

Identifiable sheep _____ Sheep group size 12

Group composition: E 8 YE _____ L 4 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description N. side Dynamite Cr, in major draw E. of Little Waterfall Cr.

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psm, Pial, Abia shrubs Cele, Juniperus
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- sheep moving + feeding very quickly
- no collars

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-15-T-A

Observer Ray & Dan Date 6/15/90 Obs. time period 11:40-1:45

Identifiable sheep _____ Sheep group size 12

Group composition: E 6 YE _____ L 6 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Creek, Little Waterfall Cr.

Quad map name Big Baldy Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal, Pipo shrubs Cela

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: First spotted bedded, at 11:48 all visible sheep got up. Did not make accurate count until 1:40.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-16-T-B

Observer Don Date 16 Jun 90 Obs. time period 7:40-8:30 PM

Identifiable sheep _____ Sheep group size 3

Group composition: E 3 YE _____ L 0 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description N. side Dynamite Cr, on cliff
W. of Little Waterfall Cr.

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees P, Me, Ab, P, al shrubs Cele, Juniperus
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- ewes feeding on cliffs for entire obs. period
- they moved across ridge on skyline - ~~they~~
- ~~this obs reflects accurate Ewe-Lamb info - they~~
- ~~also came from direction of Ray's sightings~~

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 5U-16-G-C

Observer Ray Date 6/16/90 Obs. time period 3:25 - 4:15

Identifiable sheep None Sheep group size 15

Group composition: E 9 YE L 6 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Cr. 300 yds. upstream of Main Fork

Quad map name Big Baldy Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Abia shrubs Cela, juniper, Artr
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: Viewed sheep from across canyon at 200 yds distance. Positive of group size & composition.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-16-G-B

Observer Ray Date 6/16/90 Obs. time period 11:00-11:30

Identifiable sheep None Sheep group size 3

Group composition: E 2 YE L 1 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Cr. - 500 yd. West of

Main fork

Quad map name Big Baldy Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: lower 1/3 hillside ridgetop upper 1/3 hillside mid 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine shrubs Cela, Actr (va?)

grass/forbs none

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-16-G-A

Observer Ray Date 5/16/90 Obs. time period 10:50-11:30

Identifiable sheep None Sheep group size 8

Group composition: E ^{||||}5 YE ^{|||}3 L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Creek, 500 yds south of fork in Dynamite Creek

Quad map name Big Baldy Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees None shrubs Cole, Arct (va)
grass/forbs None

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: Sheep were bedded when spotted. Began moving and made definite count.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-16-T-A

Observer Roy & Ann Date 6-16-90 Obs. time period 10:20 - 10:40

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description Dynamite Cr., 3/4 mi. up draw to the North of the fork in Dynamite Cr.

Quad map name Big Baldy Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pony, Pinal shrubs Cole

grass/forbs none

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Female ewe, no collar.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 70-17-G-B

Observer Ray Date 6/17/90 Obs. time period 2:45

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Ridge just east of Waterfall Cr. - Dynamite Cr.

Quad map name Big Baldy Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, pop, shrubs ele, bitterbrush, juniper
grass/forbs dragon sage, foal

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature down cold

Comments: Made observation as I was approaching lead lamb. Only observed her for ~ 30 sec.; she appeared to be alone and is quite possibly the mother of the lead lamb found today.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 10-17-G-A

Observer Ray Date 6/17/90 Obs. time period 12:00-1:00

Identifiable sheep None Sheep group size 12

Group composition: E 8 YE _____ L 4 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Cr., first drainage East of camp.

Quad map name Big Baldy Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Abia, Peme, Piel, Pieg shrubs Cela, juniper

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature real cold

Comments: Op crossed over from SE slope to SW slope. Lambs engaged in play for 10 min.; ~~had~~ head butting, running in circles etc.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-17-T-A

Observer Dan & Ray Date 17 Jun 90 Obs. time period 8:55-9:30, 10:45-11:00 AM

Identifiable sheep "Acrobat" - "11" 111111 Sheep group size 2

Group composition: E 2 YE _____ L 0 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description N. side dynamite cr, on cliffs
W. of L. Waterfall Cr

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme, Ablg, Pial shrubs Cele, Juniperus
grass/forbs _____

Proximity to last location: 50 yds below date 16 Jun (Ju-16-T-B)

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- The "Acrobat" has distinctive shedding pattern - little balls of unshed hair along underside; temporary characteristic obviously
- bedded when first spotted, up & feeding during 2nd observation period - saw me and left about 11:00 AM

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Jul-17-T-B

Observer Don Date 17Jun90 Obs. time period 5:55-6:10 PM

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description N. side of Dynamite Cr, 1/4 mi. up large draw at major fork in Dynamite Cr

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: lower 1/3 hillside ridgetop upper 1/3 hillside mid 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees P₃Me, P₁ol shrubs cele

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

-sheep saw me + moved up slope

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ja-17-T-515

Observer Dan & Ray Date 17 Jun 90 Obs. time period 7:45/8:51-9:10 PM

Identifiable sheep #5 Sheep group size 2

Group composition: E 2 YE L 0 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side Dynamite Cr, cliffs
W. of Little Waterfall Cr.

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme shrubs Cela, Juniperus

grass/forbs dragon sage, Feid

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

-ewes feeding in cliff, #5 went out of sight
in about 5 minutes

Note: Ray saw this ewe at 7:45 PM

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-18-T-A

Observer Don & Ray Date 18 Jun 90 Obs. time period 8:55-9:00 AM

Identifiable sheep _____ Sheep group size 3

Group composition: E 2 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description s. side of Dynamite Cr, on

ridge between s. fork of Dynamite + Dynamite Cr

Quad map name Big Baldy Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: lower 1/3 hillside ridgetop upper 1/3 hillside mid 1/3 hillside
valley bottom narrow draw or ridgeline

Major vegetation: trees Psme, Pidal shrubs Juniperus

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- Seeding when spotted, we didn't observe them for long because of need to get dead lamb out
- possibly same group Ray saw on N. side of Dynamite (Ju-16-G-B)

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): Jul 18-A-113, 14

Observer H.A. Tim Ferguson Date 6/18/90 Obs. time period 8:30-

Identifiable sheep 13; 14; brown ewe Sheep group size 25

Group composition: E 13 YE 1 L 11 Rams 1 YR Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
Brown ewe	x	x		2.2 terminate unsuccessful	
Unk				1.6 terminate	

12
14

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description W Fk Monumental; S of Marble Peak W Fk
7600'; at base of cliff face at talus edge

Quad map name Center Mt Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside upper part
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees sparse occasional PSME shrubs sparse CELE
grass/forbs

Proximity to last location: N/A date

Precipitation: none rain snow hail other Temperature >32F last night
light showers yesterday; partly cloudy

Comments: 1 Ewe with 3 lambs; one lamb very small ~ 1 week old size; other 2 similar to

Cliff Cr & Big Cottonwood lambs in size - 20-25 lb. 2 Lambs play.

9:00-9:30 Ewes got up & moved NE uphill along talus/cliff edge

9:45 Ewes spooked from us 180m away (7E, 2L)

10:00 2S (1 barren ewe, 1 YR) approached our outcrop then stood & stared ~ 45 min @ 50M

~ 10:30 1S (E) travel W above us along cliff/talus & stand 150m above us & watch us & sheep - same

11:00 The 2S travelled / fed below us & W. We heard rocks roll above us - prob. more sheep.

ram feed RICE
saw ram testicles
no udder on ewe - almost all shed out - brown tail mark up to top of white patch; left dimple
w/ram testicles

Various sizes of lambs - all alert

over

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 5u-19-T-B

Observer Dan Date 195un90 Obs. time period 8:37-9:10 PM

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L 0 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description N. side of Big Cottonwood Cr,
3rd major draw E. of forked draw above BB Cr

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme shrubs cele

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- ewe feeding when spotted
- appeared to be looking at something that I couldn't see, up the draw
- bedded about 9:08 PM

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ja-19-T-A

Observer Dan Date 19 Jun 90 Obs. time period 10:11-10:40 AM

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L 0 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description N. side of Big Cottonwood Cr, on ridge W. of forked draw above BB camp

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme, Pipo shrubs cele

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- ewe was bedded, then moved out of sight ≈ 10:40 AM

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): Jul-19-T-9

Observer Dan Date 19 Jun 90 Obs. time period 8:55-11:35 AM

Identifiable sheep #9 Sheep group size 11

Group composition: E 6 YE 1 L 5 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
#9	yes	yes	9:34 AM	730 sec (didn't see all)	
			10:22	15 sec	

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side of B. Cottonwood cr, on 2nd ridge W. of White Cliff Draw

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal shrubs Juniperus
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- all but one ewe bedded when spotted
- nursing bout - 51 sec at 9:20 AM - this ewe then began frolicking
- 9:36 AM - ewe observed rubbing vigorously against a tree
- 9:40-9:45 AM - ewes began getting up, then bedded again within minutes
- mountain goat bedded ~ 250 yds. above the sheep

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JUL19-A-A

Observer HA, Tim Ferguson Date 6/19/90 Obs. time period 8:50-9:15 AM; 4:00-4:30 pm

Identifiable sheep no, but suspect they are Sheep group size 3
the same 3 last obs. here yesterday AM

Group composition: E 2 YE L Rams probably a YR Unk
(if not then a ewe)

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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none

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal ^{NO} visual

Drainage and description W FK Monumental, S facing Cliff just as W FK turns

from flowing SE to E; same loc. as JUL18-A-12,14; bed on outcrop between cliff above talus below
7600'

Quad map name Center Mt Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees NONE occ. PSME shrubs scattered CELE in Chffs above
grass/forbs cant tell

Proximity to last location: same date 6/18/90

Precipitation: none rain snow hail other Temperature
partly cloudy

Comments:

See Drainage description above. Probably same 3 as yesterday AM. (But ~~love~~ sheep we saw yesterday PM travelling W was a different ewe.)

At 4pm saw 1 ewe bedded on same outcrop as AM (spotted ~ 1/2 mi away)

1 Goat
1 Goat

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JUL19-A-B

Observer HA; T.F. Date 6/19/90 Obs. time period 10:15- 10:45

Identifiable sheep Brown ewe w/white nose tip Sheep group size 5

Group composition: E 3 YE L 2 Rams Unk

Suspect
These sheep
different
from yesterday

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
Brown ewe w/white nose tip	Yes		white lower mane on neck		med size, slow walker, feed on ground

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description WFK Monumental; < 1/4 mi below the lake basin on S side stream; feed & bed on smooth rock cliff

Quad map name Edwardsburg Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PSME, PIAL, ABLA shrubs few CELE, RICE on cliff
grass/forbs cant see - Ewe & lamb feed on ground Ewes chew cud & bed

Proximity to last location: NA date

Precipitation: none rain snow hail other Temperature

partly overcast

Comments:

Dont know if this is part of yesterdays group. No radio signal at all from our obs in avalanche slide below this group. Ewe flip ears - bugs?

over
↓

10:30 #320 1 Goat bedded in cliff E of JUL19-A-B sheep; 7500'; NW aspect; 60-90% slope.
11:30 1 Goat feeding above cliff in flat area NE side WFK Mon. across from Lake Basin
1 Dead Cow Moose - winter kill on N side WFK across from avalanche slide obs. point.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU20-A-A

Observer H.A./T.F. Date 6/20/90 Obs. time period 8:30-8:50

Identifiable sheep maybe Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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none

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description W FK Monumental; same location as 6-18^{12/14} & 6-19-A 7600' below cliffs - above talus on an outcrop

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs scattered CELE, RICE

grass/forbs dragon sage, FEID nearby

Proximity to last location: same date 6-19 5pm

Precipitation: none rain snow hail other Temperature mild >32 at night

partly cloudy yesterday; clear today

Comments:

Probably same ewe we have seen here on 6-18 & 6-19
can't ID for sure at this distance. She's bedded on
same outcrop as previous days.

Cooper's hawk feed on G.M. ground squirrel; Doe + young buck along W FK trail

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-20-T-9

Observer Dan Date 20 Jun 90 Obs. time period 5:10-6:25 PM

Identifiable sheep #9 Sheep group size 10

Group composition: E 6 YE L 4 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
#9	no				

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side of Big Cottonwood Cr,
4th draw W. of White Cliff Draw

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psm, Pial, Potr shrubs Juniperus
grass/forbs

Proximity to last location: 100 yds downslope date 19 Jun 90

Precipitation: none rain snow hail other Temperature

Comments:

- recognized this group first by the huge lamb mentioned in Ju-19-T-9
- feeding along slope
- 5:52 head-butting between lambs
- 5:55-5:58 all 4 lambs playing game of chase, tearing back & forth across the slope
- no lamb with #9, but the lambs were running together, rarely near any ewe

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-20-T-B

Observer Dan Date 20 Jun 90 Obs. time period 4:53-6:25 PM

Identifiable sheep _____ Sheep group size 2

Group composition: E 1 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description N. side of B. Cottonwood Cr,
2nd draw W. of White Cliff Draw

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop _____ upper 1/3 hillside _____ mid 1/3 hillside _____
lower 1/3 hillside valley bottom _____ narrow draw or ridgeline _____

Major vegetation: trees Psmc, Potr shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- bedded when spotted
- arose to feed ≈ 5:25 PM
- bedded again ≈ 6:25

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-20-T-A

Observer Dgn Date 20Sun90 Obs. time period 12:57-1:35 PM

Identifiable sheep 11-1-6 Sheep group size 1

Group composition: E 1 YE L 0 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side of B. Cottonwood Cr,
3rd draw E. of forked draw above BB Cr.

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme shrubs Cole

grass/forbs

Proximity to last location: date 6/19/90

Precipitation: none rain snow hail other Temperature

Comments:

- ewe feeding & browsing on mahogany mostly
- probably same ewe as in Ju-19-T-B

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-25-T-2
Observer Dan Date 25 Jun 90 Obs. time period 8:45-8:50 AM
Identifiable sheep #2 Sheep group size 4
Group composition: E 3 YE L Rams 1 I Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description at lick on 1st bench E of cliff creek

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: lower 1/3 hillside ridgetop upper 1/3 hillside mid 1/3 hillside
valley bottom narrow draw or ridgeline

Major vegetation: trees Psne shrubs

grass/forbs Faid, Agsp, Basg, Brte

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- #2 was coughing when spotted

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU26-X-B

Observer Wayne Minshall Date 6/26/90 Obs. time period _____

Identifiable sheep #13 probably Sheep group size 8

Group composition: E 6 YE _____ L 2 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description Goat Cr; W side below Goat Basin
near dead sheep

Quad map name Dave Lewis Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PSME shrubs P PHMA

grass/forbs AGSP P

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature HOT

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-27-T-2,7

Observer Dan Date 27 Jun 90 Obs. time period 12:55, 1:10 PM

Identifiable sheep # 2, 7 Sheep group size 12

Group composition: E 10 YE L 1 Rams 1 I Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description lick on 1st Bench E. of cliff creek

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: lower 1/3 hillside ridgetop upper 1/3 hillside mid 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pcme shrubs

grass/forbs Feid, Agsp, Basq, Brte

Proximity to last location: #2 - same spot date 25 Jun 90

Precipitation: none rain snow hail other Temperature

Comments:

- observed moving onto bench at 12:55
- group was bedded in lick at 1:10, they spooked from me and ran toward steep slope to the E.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-27-G-A

Observer Ry Date 6/27/90 Obs. time period 3:10 - 3:30

Identifiable sheep None Sheep group size 3

Group composition: E 2 YE L 1 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Eastern edge of Big Creek Gorge

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Peme, Pipo shrubs Actr, Cele

grass/forbs Agsp, balsam root

Proximity to last location: N/A date

Precipitation: none rain snow hail other Temperature

Comments: Can not get a signal on #13. She was here yesterday when I aerial tracked, but I cant get a beep on either side of the gorge.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU-28-G-A

Observer Ray Date 6-28-90 Obs. time period 4:00PM

Identifiable sheep None Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Cr. in draw we use to get to bottom of Cr.

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal shrubs juniper, G. l.
grass/forbs dragon sage, Ribes sp.

Proximity to last location: N/A date

Precipitation: none rain snow hail other Temperature

Comments: Quick sighting, only 10 sec or less.

On July 5 we found dead lamb at this same place. The lamb had been dead for ~ 1 wk.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU 29-A-Track

Observer Holly Date 6/29/90 Obs. time period _____

Identifiable sheep _____ Sheep group size _____

Group composition: E _____ YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Tracked Goat Cr / Goat Basin - mouth Cougar Cr - Taylor Ranch

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: #8 & #7 faint signals, but different locations - probably between Cliff & Cougar Cr or up Cliff Cr.
No signals for any other radioed sheep

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-29-T-A

Observer Dan+Ray Date 29 Jun 90 Obs. time period 1:17-2:05 PM

Identifiable sheep _____ Sheep group size 2

Group composition: E 1 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description W. side of B. cottonwood near head; ~1 mile below head

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Abia shrubs Juniperus

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- ewe+lamb feeding when spotted

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-29-T-3,6,11

Observer Don + Ray Date 29 Jun 90 Obs. time period 4:22-5:45 PM

Identifiable sheep #6 + 11 + 3 Sheep group size 8

Group composition: E 8 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description S. side of B. Cottonwood cr;
White Below Head of Drainage E. side of Little Basin

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psme, Pinal, Abia shrubs Juniperus

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- all but one ewe bedded
- group arose from 5:15-5:29 PM

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JU29-A-2

Observer Ake/^{Jon}Hunter Date 6/29/90 Obs. time period 10:30

Identifiable sheep #2 Sheep group size 6

Group composition: E 6 YE L Rams Unk

Lamb observations: NONE

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr; E side IB in shade

Quad map name Dave Lewis Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees few shrubs

grass/forbs AGSP/FEID/BASA

Proximity to last location: #2 Same date 6/27

Precipitation: none rain snow hail other Temperature #01

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-30-T-3

Observer Dan Date 30 Jun 90 Obs. time period 6:10-8:40 PM

Identifiable sheep #3 Sheep group size 4

Group composition: E 4 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side of Dynamite Cr;
just W. of cliffy tower SE of Red Ridge Pk

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pinal shrubs Juniperus
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- group feeding most of time, some bedded until 7:00
- they saw Ju-30-T-6, 11.
- lost sight of this group about 8:15 PM - bedded?

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): Ju-30-T-6,11

Observer Dan Date 30Jun90 Obs. time period 7:22-8:40 PM

Identifiable sheep #6+11 Sheep group size 8

Group composition: E 8 YE L 0 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description head of Dynamite Cr; 200 yds. NE of BC/Dynamite Pass

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Ab1g shrubs Junipers
grass/forbs Faid

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- heard rocks moving behind me + saw Ju-30-T-3 looking toward me, then this group appeared
- 3 ewes, incl. #6 bedded about 8:30 AM
- other 5 ewes moved toward me
- one bedded 70 yds. away, rest moved within 50 yds, then saw me

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JLI-A *Ground Tracking*

Observer Holly Date 7/1/90 Obs. time period 10 PM

Identifiable sheep #8, 7, 2 Sheep group size N/A

Group composition: E YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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#8

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

Ground Tracked all 164-165 signals:
8 Cliff Cr med strength
7 Cliff Cr med
2 Cliff Cr med-weak
No other signals

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-1-T-6,11
Observer Dan Date 1 Jul 90 Obs. time period 11:15-12:55 AM
Identifiable sheep #6 + 11 Sheep group size 8
Group composition: E 8 YE 0 L 0 Rams 0 Unk 0

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? 0 Searched for? 0 Found? 0 Specimen # 0

Form of observation: ground airplane radio signal visual

Drainage and description head of Dynamite creek;
in creek bottom 1/2 mile below BC/Dyn. Pass

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psm, Pial, Abia shrubs _____
grass/forbs _____

Proximity to last location: 1/4 mi. SE date 30 Jun 90

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- Feeding in bottom when spotted, very lush veg. along creek
- saw me and moved 200-300 yds. upslope
- bedded around 12:10, split into same groups as last night - 5 ewes (incl. #11) in one spot, 3 ewes (incl. #6) in another

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-1-T-5

Observer Dan Date 15 Jul 90 Obs. time period 2:45-3:20 PM

Identifiable sheep #5 Sheep group size 4

Group composition: E 4 YE L 0 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description N. side of Dynamite Cr; 2nd draw
W. of major draw across from mouth of Red Lake Cr.

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal, Ablo shrubs Juniperus
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- 2 ewes feeding, 2 bedded when spotted, this pattern maintained throughout obs. period (2 bedded, 2 feeding)

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL2-A-8

Observer H. Akenson Date 7/2/90 Obs. time period 1:30-1:45

Identifiable sheep #8 signal of 7 nearby Sheep group size 7

Group composition: E 7 YE L 0 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? X ^{#8's} Searched for? NO Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr: Backside (N) of lambing cliff
bedded in burn under dead DF ~ 150M from White Rock Dike

Quad map name Dave Lewis Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees dead PSME 20% CC. shrubs
grass/forbs CARU, dragon sage, ARCA Saxifrage

Proximity to last location: Cliff date

Precipitation: none rain snow hail other Temperature 60s

Comments: Yesterday light today windy

#7 signal nearby $\frac{1}{2}$ W - maybe at lower edge of dike
#2 signal on E side Cliff Cr.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-3-T-A

Observer Dan Date 3/5/90 Obs. time period 2:55-3:05 PM

Identifiable sheep _____ Sheep group size 6

Group composition: E 5 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description ~~200~~ Indian Creek; 300 yds. SE of Red Peak (9571)

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial shrubs Juniperus
grass/forbs Fcid

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

-moved out of sight around ridge -feeding

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 11-3-T-B

Observer Dan Date 3/5/90 Obs. time period 3:45-5:15 PM

Identifiable sheep _____ Sheep group size 4

Group composition: E 4 YE _____ L 0 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description Wickiup creek; E. side of
Drainage about 1 mile S. of Red Peak (9468)

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pinal shrubs _____
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- long range sighting
- ewes feeding when spotted
- bedded about 4:00
- #11's signal comes directly from this group, too far to see collars
- Ray arrived w/ spotting scope, but only 2 ewes still visible - no collars

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-3-T-1

Observer Dont Ray Date 3 Jul 90 Obs. time period 5:58-7:10 PM

Identifiable sheep #1 Sheep group size 7

Group composition: E 6 YE 1 L 1 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Head of Dynamite Crj
N. side of Dynamite, S. of Red Red Peak

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Ables shrubs Juniperus
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- group bedded when spotted
- 5:52 - ewe coughing
- 7:04 - group began rising
- 7:06 - nursing bout - 28 sec, not #1

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL3-A-A

Observer Holly & Jim Date 7/3/90 Obs. time period 6:15-6:20 pm

Identifiable sheep NO Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations: NO

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description West Fork Monumental on S side across

From main ^{early} summer use area; in the 1st canyon/draw W of the big cliff talus Basin draining north

Quad map name Center Mt Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs

grass/forbs

Proximity to last location: unknown date

Precipitation: none rain snow hail other Temperature WARM

Rained / snow > 8500' yesterday

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL-4-G-A
Observer Ray Date 7-4-90 Obs. time period 6:00 PM-8:00 PM
Identifiable sheep None Sheep group size 1
Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Big Cottonwood Cr. Straight uphill from Big Basin Cr. Camp.

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Picea shrubs Celastrus, juniper
grass/forbs _____

Proximity to last location: N/A date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: single ewe at least 500 yds from JL-4-G-B

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL-4-G-B

Observer Ray Date 7-4-90 Obs. time period 6:30 PM - 8:00 PM

Identifiable sheep None Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood Cr., on N side of Cr.
directly uphill from Big Basin Cr. Camp.

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine shrubs Salix, juniper
grass/forbs

Proximity to last location: N/A date

Precipitation: none rain snow hail other Temperature

Comments: Approx. 500 yds. from JL-4-G-A

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL4-J-A

Observer Jim Akenson Date 7/4/90 Obs. time period ~ 7:00 pm

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description WFK Monumental Cr; one Ridge E of NFK Monumental; above June Camp. 7200'

Quad map name Center Mt Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PSME scattered shrubs ?
grass/forbs ?

Proximity to last location: unknown date _____

Precipitation: none rain snow hail other _____ Temperature WARM
thin overcast, clear yesterday

Comments:

May be other sheep that travelled E into the draw ahead of this ewe.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL4-A-A

Observer Holly & Jim Date 7/4/90 Obs. time period 9:45-10:00

Identifiable sheep none Sheep group size 4

Group composition: E 4 YE L 0 Rams Unk

Lamb observations: NONE

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description W. Fk Monumental Cr.; S side; in upper basin
1st avalanche slide upstream from the Big Talus Basin draining N.

Quad map name Center Mt Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees ABLA PIAL shrubs ?
grass/forbs ?

Proximity to last location: probably 1/4 mile date 7/3/90 PM

Precipitation: none rain snow hail other Temperature WARM
hazy sky

Comments:
Ewes feeding in green moist patch in talus below cliffs then travel up toward top of peak. No lambs obs. with these ewes no collars

#12 signal upstream & on N side of W Fk. from this location

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL4-A-12

Observer Holly & Jim Date 7/4/90 Obs. time period 12:30 - 1:15, 2:00-2:30

Identifiable sheep #12, #14 Sheep group size 14

Group composition: E 11 YE L 3 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
12	Yes	NO			largest of 4 lambs, white colored
14	NO				

1 lamb coughing violently & often

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description W. Fork Monumental Cr. ; 1/2 mi W of Catherine Lake;

Quad map name Edwardsburg Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees ABLA PIAL shrubs

grass/forbs wet meadow/slide

Proximity to last location: #12 Snowslide Cr N of N FR Monumental date June 21

Precipitation: none rain snow hail other Temperature

Thin overcast

Comments:

Bed then move down into open timber. Move into wet draw & feed.
#12 a very light colored large ewe.

2:20 Obs 8 Elk (5C, 2cf, 1 sp) in wet meadow W of Catherine Lake;
sheep are just above, bed & feed in wet draws above mdw &
between smooth rock outcrops. Lambs stay together - near #12.
Elk spooked SW & uphill, then sheep spooked in same direction.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL5-A-A

Observer H. Kelly Date July 5 Obs. time period _____

Identifiable sheep A 3 collars 8, 2, 6 Sheep group size 17

Group composition: E 17 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cri 1st Bench

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____
grass/forbs AGSP, FEID, POSA, BASA

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature HOT

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL 6~~8~~-A-A

Observer Jeff Yeo Date 7/6/90 Obs. time period 10 AM

Identifiable sheep none Sheep group size 2

Group composition: E 2 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen # Cliff Cr #3

Form of observation: ground airplane radio signal visual

Drainage and description Big Cr; Ram Canyon-low

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Dead lamb found near/below at Jim Peck's transect site

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): July 10 - A - Tracking

Observer Holly Date 7/10/90 Obs. time period 10 AM

Identifiable sheep #2, 7, 8, 6 Sheep group size _____

Group composition: E _____ YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground _____ airplane _____ radio signal _____ visual _____

Drainage and description _____

Quad map name _____ Aerial photo number _____

Topography: cliff _____ outcrop _____ talus _____ rocky soil _____ fine soil _____ other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop _____ upper 1/3 hillside _____ mid 1/3 hillside _____
lower 1/3 hillside _____ valley bottom _____ narrow draw or ridgeline _____

Major vegetation: trees _____ shrubs _____
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: TRACK FROM HOUSE :

2, 7, 8, and #6 all med-weak signal up Cliff Cr. #6 signal last picked up at head of Big Cottonwood on July 8 ~ 8 AM.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 5L-10-T-A

Observer Ray & Dan Date 7-10-90 Obs. time period 7:00 PM - 8:30 PM

Identifiable sheep None Sheep group size 2

Group composition: E 2 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Head of Annie Cr on West side

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal, Abba shrubs juniper
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: Definitely no collars on these two.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL-10-6-A

Observer Ray & Dan Date 7-10-90 Obs. time period 6:45 PM - 8:30 PM

Identifiable sheep None Sheep group size 4

Group composition: E 3 YE L 1 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Head of Annie Cr. on East side

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal, Abba shrubs juniper

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: Possible that there may be a collared ewe, we have no spotting scope to be sure.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 7-11-G-5

Observer Ray Date 7-11-90 Obs. time period 2:30PM

Identifiable sheep #5 Sheep group size 7

Group composition: E 7 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Head of Annie Cr

Quad map name Rainbow Peak Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Peme, Pial, Abka shrubs juniper
grass/forbs Faid

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: spotted dead ewe & lamb from Annie, Big Cottonwood divide. This grp. was bedded 30yds from dead sheep. I spotted them at 100yds. Collar had red, believe it was #5, but may have been #3. Only observed grp for ~90 sec. Dan, later, found #5 in this area.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL-11-G-A

Observer Raj & Dan Date 7-11-90 Obs. time period 10:10 AM - 12:50 PM

Identifiable sheep _____ Sheep group size 5

Group composition: E 5 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Big Cottonwood Cr. on N side

1/2 mi. below high camp

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pem, Pinal, Abia shrubs juniper

grass/forbs Fe id, dragon sage

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Dropped out of sight at ~ 10:45 AM, reappeared at 11:30 AM.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 5L-11-G-11?

Observer Ray & Dan Date 7-11-90 Obs. time period 9:40 AM - 10:15 AM

Identifiable sheep _____ Sheep group size 3

Group composition: E 3 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description Big Cottonwood Cr. on North side
directly across from mouth of Little Basin Cr.

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pene Sid, Abia shrubs Cele

grass/forbs Dragon sage,

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Dropped out of view at 10:15 AM.

One was collared, but due to distance and heat waves we were unable to I.D. No. 11's signal is strong and in the direction of the group.

Dan later confirmed that #11 was the only collared ewe in this area.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JE-11-T-A

Observer Ray & Dan Date 7-11-90 Obs. time period 8:45 AM - 4:00 PM

Identifiable sheep _____ Sheep group size 15

Group composition: E ¹⁰12 YE _____ L ³3 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Head of Big Cottonwood Cr. on North side.

Quad map name Rainbow Peak Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Oak shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Most of group bedded at 9:00 AM.

- 2 nursing bouts observed - 8:55 + 9:05, neither was timed
- group began rising at 10:10
- 10:19 - only 2 ewes still bedded, rest of group went over ridge on L. Indian side
- observed group off + on through day
- group split at some point in afternoon, 6 E + 3 L moved about 1/4 mi. S. of other 6 E

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-12-T-A (unident. collar)

Observer Dan Date 12/5/90 Obs. time period 8:06-8:36 PM / 12:35-1:00
1:45-2:50

Identifiable sheep _____ Sheep group size 7E

Group composition: E 7 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description N. side of B. Cottonwood Crj
2 drainages below Little Basin

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Psmeypial shrubs _____
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- unidentified collar in group
- ? possibly #11?
- bedded at first, began feeding about 8:15 PM
- believe to be same as 51-12-T-11

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-12-T-5

Observer Dan Date 12 Jul 90 Obs. time period 10:02-10:35 AM

Identifiable sheep #5 Sheep group size 8

Group composition: E 8 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Psme shrubs
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- group about evenly split between feeding and bedding

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JL11-A-2,6,8

Observer Holly Date _____ Obs. time period 11:30-1:00

Identifiable sheep 2, 8, 6 Sheep group size 21

Group composition: E 18 YE 1 L _____ Rams I, II Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Cliff Cr: 1st Bench 10 are bedded on bench, 10 standing in shade of the flat topped tree

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Many sheep panting with mouths open wide. Udders noticable in >4-5 ewes. Body condition of 1/2-2/3 of sheep poor for this time of year - bony pelvis, large heads, thin thru loins. 1 ewe coughing. Collared ewe led the group, 12:30; spooked E across draw when 2 helicopters landed. Walked to under a tree (DE) near outcrops - above lower pasture. All 21 bed under one tree.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): J1-13-T-A

Observer Dan Date 13 Jul 90 Obs. time period 1:09-3:00 PM, 4:55-5:10 PM

Identifiable sheep _____ Sheep group size 14

Group composition: E 11 YE _____ L 3 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Head of ~~in cottonwood~~ Cr;

on top ~~SW of camp~~ above head basin of Dynamite

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- split between bedding + feeding, saw me from beginning
- all bedded by 1:30 PM
- same group as J1-11-T-A ?
- on ridgetop near snowdrifts; 1:58 PM - group rose + ate snow
- 1:59 - nursing bout > 8 sec

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): J1-13-T-3

Observer Don Date 13 Jul 90 Obs. time period 10:05-10:45 AM, 12:38-3:00 PM, 4:55-5:10 PM

Identifiable sheep #3 Sheep group size 5

Group composition: E 5 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description head of B. cottonwood Cr; SW of BC/Dyn. Pass

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Ablg shrubs
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

-feeding when spotted
-moved over top into head basin of Dynamite, around noon?

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-13-T-5

Observer Dan Date 13 Jul 90 Obs. time period 7:55-9:35 AM, 7:23-7:50 PM

Identifiable sheep #5 Sheep group size 5

Group composition: E 5 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description head of B. Cottonwood Cr;
head of W. fork of BC Cr at head

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Abia shrubs
grass/forbs Feid

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- bedded during AM obs. period
- Feeding during PM obs. period

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL-14-G-A

Observer Roy & Holly Date 7/14/90 Obs. time period 5:45-6:15 AM

Identifiable sheep None Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Head of Big Cottonwood in talus
directly West of the high camp

Quad map name Rainbow Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Pinal, Abba shrubs
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: just a lone ewe hazing out

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-14-T-1

Observer Dan Date 14 Jul 90 Obs. time period 12:57-1:30 PM

Identifiable sheep # 1 Sheep group size 1

Group composition: E 1 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description ridgetop between B. cottonwood
& Dynamite Cr; 100yds. E. of Red Ridge Peak

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial shrubs

grass/forbs Feid

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

-Feeding on bench E. of RR Peak

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-14-T-9

Observer Dan Date 14 Jul 90 Obs. time period 12:32-2:20 PM

Identifiable sheep # 9 Sheep group size 1

Group composition: E 1 YE L Rams Unk.

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description s. side B. Cottonwood Creek;
in bottom of Little Basin

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Psm shrubs
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- Feeding when spotted
- 12:40 - bedded
- 1:20 - feeding
- 2:00 - bedded

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-14-T-5

Observer Dan Date 14 Jul 90 Obs. time period 11:10-11:45 AM

Identifiable sheep #5 Sheep group size 4

Group composition: E 4 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Head of Dynamite Creek;
1/2 mi. E of BC/Dyn. Pass

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Ablo, Psme shrubs
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

- bedded when spotted
- 11:19 AM - ewes rose, began moving toward bottom

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JL15-A-11

Observer Holly A. Date ^{7/14/90} 7/15/90 Obs. time period ^{9:30 pm} 9:00 AM - 1:30 Tested radio

Identifiable sheep _____ Sheep group size _____

Group composition: E _____ YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood & Probably

near Cornish Saddle Camp and into Cornish Cr., altho Dan got signal twd Little Basin from ANNIE/BC divide.

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____

grass/forbs _____

Proximity to last location: Dan got no signal yesterday date _____

Precipitation: none rain snow hail other _____ Temperature warm-hot

↳ for days

Redtail Hawk circle near lamb cliffs

Comments:

7/14 Got signal of #11 in all directions, med from mouth of Big Basin
7/15 9AM Got directional med-str signal toward Cornish Saddle Camp, from Big Basin Camp, then could not get any signal.
11:30AM Signal weak E/N toward Cornish Camp or W, received from S of Lower Lamb Cliffs

Slide photos w/nat. Guard 1st: From Little Indian Cr → Annie → head Big Cottonwood

Print photos 1-12 From head Big Cottonwood → Big Basin → Lower Lamb Cliffs & Upper Lamb Cliffs
Slide Photos: Big Cottonwood Lamb Cliffs 1-5 → Big Basin & upstr to → Little B. 11, 12 → Ustrn #14

Unknown

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JL16-A-11
 Observer Holy & Dan Date 7/16/90 Obs. time period 11:15 signal 4:25^{-4:55} Saw them
 Identifiable sheep #11 Sheep group size 11
 Group composition: E 11 YE L 0 Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite: Head of basin. Bed & feed in talus below cliff line which is the divide (pass) between the heads of Dynamite & Big Cottonwood.

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees shrubs
 grass/forbs 8600'

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

11:15 Heard decent signal from Dynamite (below Dome Cliffs? x from Lower Red PK signal strong up highest SW Basin adj. Lower Red PK but also downstream twd Red Ridge & general upstream.

4:25 Sheep saw us & got out of bed, half ^(walked) moved E along lower edge of cliff & then 3 toward single sheep (JL16-T-B), others walked up into cliffs - 2 went overtop into Big Cottonwood. Ravens & hawks circle & land near? #11 & 4 others travel back (w) to where we 1st obs them - probably looking for?

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): J1-16-T-C

Observer Dan + Holly Date 16 Jul 90 Obs. time period 10:50-10:55

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description s. side of Dynamite Creek; in basin E. of Red Peak (9571)

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Ablo shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- Feeding when spotted, moved out of sight

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-16-T-B

Observer Don & Holly Date 16 Jul 90 Obs. time period 10:13-10:20 AM

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Creek; 100 yds. S. of top of Red Ridge Peak

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pinal shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-16-T-A

Observer Don + Holly Date 16 Jul 90 Obs. time period 9:41-10:05 AM

Identifiable sheep _____ Sheep group size 5

Group composition: E 5 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Dynamite Creek; along ridgetop
between Red Ridge Pk & Dynamite/B. Cottonwood Pass.

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- one-two ewes feeding, others bedded

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL16-A-A

Observer Holly & Dan Date 7/16/90 Obs. time period 9:25-

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____ *may be others*

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Cr: bedded on the top of lower Red Peak

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW W Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____ grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature Hot

Comments: Spotted from ^{head} Dyn/Big Cottonwood - she's on the skyline Bedded.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-16-6-1,3

Observer Dan, Ray, & Holly Date 16 Jul 90 Obs. time period 7:50-8:30 AM

Identifiable sheep #1 + #3 Sheep group size 3

Group composition: E 3 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Head of B. cottonwood cr; bowl
above W. fork of creek

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Piñon, Psme shrubs

grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments:

-Sedded

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-17-T-13

Observer Don Date 17 Jul 90 Obs. time period 1:12 - 1:23 PM

Identifiable sheep _____ Sheep group size 4

Group composition: E 3 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description S. side of Dynamite creek;
300 yds. NW + above Red Peak Lake

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial, Ablg shrubs _____
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments:

- ewe with lamb saw me immediately; she took off, leading the others on the run; ewes crossed one furrow about 12 feet wide & 4-5 feet deep with soaring leaps
- lamb appeared to be in good shape, had no trouble keeping up with mom; didn't see it cross the furrow, but it did keep pace
- group reappeared at 1:35 on ridgeline NE of lake

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 51-17-T-1,3

Observer Don Date 1754/90 Obs. time period 9:29

Identifiable sheep #1 + #3 Sheep group size 6

Group composition: E 6 YE L Rams Unk

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description head of Dynamite creek; in highest basin in drainage

Quad map name Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pial shrubs
grass/forbs

Proximity to last location: date

Precipitation: none rain snow hail other Temperature

Comments: elevation - 8,700 ft
- feeding when spotted
- saw me at 9:50 at began moving away
- they moved onto a large snowfield at 9:53 AM, ewes began bucking +aring + playing on snow
- they stayed on snowpatch until 10:05, alternately watching me, eating snow, + playing - #1 was quite frolicsome

JL17-A-G1 = Mt Goat (see comments)

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

see Darius obs too

Group number (month-day-observer-collar no. or letter): JL17-A-135(11) 3 collared

Observer Holly Date 7/17/90 Obs. time period 3:35-

Identifiable sheep 1, 3, 5, (11) Sheep group size 10

Group composition: E 10 YE L 0 Rams Unk

6:00 pm? Later joined by #11

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Cr - very head of drainage, N most fork ~8500'

Quad map name Big Baldy Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90%, >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PIAL ABLA shrubs Grouse huck.
grass/forbs FEID } on dry site

Proximity to last location: Head of Big Cottonwood, 3/4 mi W/NW date evening 7/16
same as this obs 9:30 AM 7/17

Precipitation: none rain snow hail other Temperature

Comments:
1 ± obs travelling away from me @ 150M away; they were at head of basin just above flat spring bottom then travelled to snowbank - ate a few bites then travel single file thru talus to a spring in talus where they ate & drank; I decided I was not a threat. Most ewes appear to be in good condition, a few slightly thin thru hips & loins; 2 haven't shed much of winter coat, 2 coughed 4:30 1 Mt Goat 300M East @ 8600' feeding

photo
photo

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JL17-A-C

Observer Holly Date _____ Obs. time period 2:30

Identifiable sheep _____ Sheep group size 4+

Group composition: E 4 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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JL17-A-11
↓
Same area as Dan
3:00-3:30
Travel S.
E asp
upper 1/3
8900'
Slope 890

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description Big Cottonwood / Dynamite upper pass
at heads of drainage - lowest spot in pass (knife edge) 8600'

Quad map name RainbowPk Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E (SE) S SW W (NW) Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PIAL ABLA shrubs grouse huckleberry
grass/forbs sedge

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature Hot & Dry

Comments: only saw part of group

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL18-A-C

Observer Holly Date 7/18/90 Obs. time period 2:50-3:45

Identifiable sheep _____ Sheep group size 5S

Group composition: E 5 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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(JL18-G-A) also probably observed by Ray (he saw a collar in this group)

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Dynamite Cr: 2nd highest basin (below E of upper Red Peak) 8500'

Quad map name BIG BALDY Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____ grass/forbs _____ No veg. observed

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature HOT

Comments: Bedded in talus for entire obs. Later seen at 6:00pm bedded 150M above this location in talus.

Goat on the ridgeline between Little Basin & Big Basin of Cottonwood Cr
8500', bedded, in talus, W aspect 2:20 pm JL18-A-G2

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JL18-A-D

Observer Holly Date 7/18 Obs. time period 3:25-4:40 intermittant

Identifiable sheep _____ Sheep group size 4

Group composition: E 3 YE _____ L 1 Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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No nursing observed, Lamb feed on ground.

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Big Cottonwood Cr; Big Basin, at very head of W.F.R.; 9000' elev. Smallish opening in open PIAL forest

Quad map name RAINBOW Pk Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PIAL shrubs _____

grass/forbs probably: Cymopteris, Arnanaria, Polygonum, Chenactis, FEID

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature Hot

Comments: Sheep feed on the ground. Ewe with lamb looks in excellent body shape - large rounded body, dark colored coat with white nose. No nursing attempts. Ewe very alert. I am 1 mile away observing from Red Ridge Peak.

Sunflower (Hulsea) and Spotted Saxifrage (pink spotted petals) & potentilla & Saxifrage growing in talus on top of Red Ridge Peak; FEID in lower parts of ridge with soil

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL18-A-9,11

Observer Holly Date 7/18 Obs. time period 9:50-10:10 10:50-11:40

Identifiable sheep #9, #11 Sheep group size 8 12:50

Group composition: E 8 YE L Rams Unk

Lamb observations:

NONE

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description Dynamite Cr: Upper Basin, alongside (below) knife edged pass between upper Big Cottonwood & upper Dynamite 8400

Quad map name BIG BALDY Aerial photo number

Topography: cliff outcrop talus ^{with some} rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees ABLA ^{some} PIAL shrubs VASC, ledum in wet areas, grass/forbs FEID, CAGE, POSA, waterleaf, A GSP, penstemon, Saxifrage, pusstrees, dragonsage, heather

Proximity to last location: ^{Now} 300M NE of last location, same basin date 7/17 6:30pm

Precipitation: none rain snow hail other Temperature 16T
Clear skies for a week, but now mostly cloudy

Comments: Group feeding in lower (more soil) talus, with green vegetation evident. Most feed on ground - food seems abundant (step, feed, feed...) & accessible - no search time; one ewe nibbles new shoots on PIAL or ABLA. Group spooked away when I saw me above them. 3 Ewes ^(#9) playful - head butt, rear & charge, rear up, horn threat, twirl on hind quarters, chase & run from each other - play both before & after I was 'spotted'. They were at tail end of group & didn't know/care why group was leaving. **OVER** ↓

7/18 Sheep # totals: 285 (25E, 3L)

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): 7/18-AA

Observer Holly Date 7/18/90 Obs. time period 1:10-2:00

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health

Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Red Ridge (Big Cottonwood): Yellow soil ridge just E of highest peak on Red Ridge (where I am). 9400' elev

Quad map name RAINBOWPK Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N ^{or NONE} NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PIAL adjacent shrubs _____

grass/forbs FEID, potentilla, spotted saxifrage

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature HOT

Comments: Ewe was standing when I saw her, she moved around, but still standing & looking in various directions at 2:00; then went out of sight.

Possibly others out of sight on SE aspect off the top.

On hiking up Red Ridge Sheep make beds in yellow soil or paw out beds in talus til reach yellow soil. Bear droppings (spring & fall - vegetation & PIAL seeds) on Red Ridge above (E) Cotton/Dyn Pass. Springs at upper yellow soil E of Red Ridge Pass on Dynamite side.

Goat in higher basin of Dynamite Cr off lower Red Peak, middle cliff JL18-A-G1
bedded 1:15-1:45

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JL18-A-B

Observer Holly Date 7/18/90 Obs. time period 1:15-1:45

Identifiable sheep _____ Sheep group size 1

Group composition: E 1 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description Red Ridge (Big Cottonwood): Yellow soil ridge between Little Basin & Upper Big Cottonwood. 9200' elev.

Quad map name Rainbow Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PIAL/ABLA nearby shrubs _____
grass/forbs probably FEID, etc

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature HOT

Comments: Ewe was bedded in yellow soil when I saw her, then she got up and walked north along the ridgeline, then cut down (E) into Little Basin.

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): JL-818-G-A = JL18-A-C

Observer Ray Date 7/18/90 Obs. time period 1:30 - 4:00 PM

Identifiable sheep collar, but can't ID Sheep group size 5

Group composition: E 5 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	10 minute period durations	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal _____ visual

Drainage and description Head of Dynamite Cr., in bowl behind the center knob - straight below the taller Red Peak

Quad map name Big Baldy Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees Pine, Picea, Abies shrubs juniper
grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: Radioed ewe in grp., but I can't make an ID. Bedded in talus at 2:15, foraged in green at bottom of bowl from 1:45-2:10. Still bedded at 4:00 PM.

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JL18-A-9

Observer Holly Date 7/18/90 Obs. time period 5:00-5:15, 7:00-9:00

Identifiable sheep #9 Sheep group size 7

Group composition: E 5 YE L 2 Rams Unk

↓
This group plus
JL18-A-E observ.
on NW face of
Big Cottonwood
below RR Peak
from camp
@ 8700' feeding
in open PIAL

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
1st one		yes		11 sec	OK-Good
2nd one		yes		12 sec	short bursts of movement
				plus Nurse again after catch up to group	

Lamb missing? Searched for? Found? Specimen #

Form of observation: ground airplane radio signal visual

Drainage and description BIG COTTONWOOD CR / RED RIDGE: AT

Red Ridge Peak swale yellow soil - between Dynamite Cr & Little Basin (w. side), 9400'
4 ewes were on Red Peak. They were all crossing from Dynamite to Big Cottonwood.

Quad map name RAINBOW PEAK Aerial photo number

Topography: cliff outcrop talus rocky soil fine soil other

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PIAL nearby shrubs

grass/forbs

Proximity to last location: #9 @ 11 Am; moved 1/2 mile NE date today 7/18

Precipitation: none rain snow hail other Temperature

Comments: Group led by 1 ewe & 1 lamb, 75 m. from me in yellow swale, but no time to get a picture! This group not very wary of me - especially considering this is a group with lambs. One lamb falls behind group 100M when they head down the ridge. Only the other lamb stops to look back; then a ewe bleats to the lamb. Lamb does not stop but walks toward group & stops (for rest?) every 10 meters as it moves. Lamb seems vulnerable & acts like it's not very healthy. One mother ewe still only 1/2 shed out from winter coat. Ewes condition ~ 50-50. Group moving in same direction / trail as JL18-A-B-H

**BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990**

Group number (month-day-observer-collar no. or letter): JL18-A-E

Observer Holly Date 7/18 Obs. time period 5:20-5:25

Identifiable sheep _____ Sheep group size 4

Group composition: E 4 YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane _____ radio signal visual

Drainage and description ON Red Ridge Peak - Dynamite Side, suspect they are part of JL18-A-9 group & are headed N to Big Cottonwood

Quad map name RAINBOW Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N TOP NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees PIAL below talus shrubs Ribes (spiny), Potentilla
grass/forbs Saxifraga bronchiales, Hulsea, Hylchera grossularifolia
sm pink spotted fls - sunflower

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature HOT

Comments:

Well established & well used trails along Red Ridge from upper Dynamite / B. Cottonwood pass to the East - on top of ridge or within 20M. Lots of beds in talus - especially S aspect along Red Ridge. This group either came up to the peak along the ridge or came up from the bottom of Dynamite.

This group joined JL18-A-9 in the evening on the

BIG CREEK BIGHORN SHEEP
LAMB MORTALITY FORM
1990

Observer _____ Date _____ Drainage _____

Location _____ Quad map _____

Aspect _____ Slope _____ Physiography _____ Topography _____

Vegetation _____

Carcass information:

Time found _____ Time since death _____

Evidence of cause of death _____

Description of carcass _____

Samples taken _____ Print photo number _____

Chilling and transport of carcass _____

Probable source group of sheep (by radio number) _____

Location of adjacent sheep group _____ distance _____

Search time & clues to finding carcass _____

Comments:

1916 Harmony Drive
Fort Collins, CO 80525
10 December 1998

Hi Pat & Jim,

Thanks for your quick responses to my l-o-o-o-o-n-g letter.

Pat, we received the copy of Galen Leonhardy's essay yesterday. Thank you so much. Yvonne and I read it, were touched by the wisdom and spirituality of Native Americans, and agreed with the final sentence, "... we live at a time when we need to know that the Creator is with us, that we are not alone in a world of isolation, that we are capable of discovery." And we are pleased that your book led us to discover **Discovery**.

I'm more than ever interested in returning to the Middle Fork one more time, and Yvonne is excited to see the country I've described so enthusiastically. So, before getting to your questions, I want to lay the following idea on the table for your reaction to the possibilities.

We would like to come in next summer and spend time in the Flying B and Taylor Ranch areas. This poses some logistic questions. We are not clear on flying possibilities or feasibility of staying a couple of days or so at or near the Taylor Ranch. My understanding is that since U of I purchased it, the landing strip is limited to access for research or teaching purposes. I assume the Flying B strip is open for guests. And that, for either destination, logical airports for departure would be McCall, Challis, or Salmon depending on availability of reliable pilot and plane. Your suggestions will be appreciated.

Then there is the question of transit from the Flying B to Taylor Ranch or vice versa. I'll be celebrating my 78th summer and, though Yvonne is in terrific condition for a 59-year-old, she has limited experience in back country hiking and none in backpack camping. We **might** be able to pack light, use Rattlesnake Cave as a midpoint stopover, and cover the 25 miles (the distance I recall) in 2 days. Any suggestions?

Not to get hung up on our dreams, I'll get to **your** questions, Pat, in order asked:

What was my 15-year-old son doing alone on Big Creek in 1968? Gary had hero-worshipped his older brother, Alan. When Alan was killed in an auto accident in 1965, Gary was devastated. He was a gentle introspective boy, and the loss initiated academic and social problems and attempts to run away from home. He often mentioned wanting to go where "Dad studied bighorn sheep and I won't have to see people." Our agonizing decision was that this was best for him. It was right. And I'll be forever grateful to the Big Creek country and the reserved but dependable watchfulness of Jess and Dorothy Taylor.

What was the Taylor Ranch like in '51-'52? I first visited in 1949 when the Taylor's had just built, or were completing, their cabin. As I recall, a cabin across Pioneer Creek from the Taylor's (the Conyer Cabin?) had a porch where Jess would lead his pack string and Dorothy would check off supplies kept in the cabin as they were loaded for hunting trips. I don't recall other buildings. Fifty years ago is a long time. But I do remember their garden with huge delicious tomatoes! Jess and Dorothy were not at the ranch during the '51-'52 winter when I snowshoed from the Flying B.

Jim, I understand how analysis and publishing of research results takes time, so appreciate your offer to keep me posted.

I thought the enclosed photos and field research data sheets might be of some interest. My only request is: Don't even **think** about returning them!! I might cling to the unrealistic notion that "I'll still do something with them" so these files and photos need some final resting place ... even if it is the Viola dump!

Their value, if any, probably would have been at the beginning rather than end of your studies. Some of the folders contain information showing consideration in the early 60's and 70's to repeat the earlier measurements, but many of my files were lost during the sequence of area biologists after my departure from Salmon in October 1956.

When we come in next summer, I can bring remaining data files and many photos; but if they will not be useful let me know and I'll contribute to the land-fill problem in Fort Collins.

If there is a problem in coming to the Taylor Ranch on a personal odyssey, perhaps I can provide additional historical perspectives to the habitat, vegetation and bighorn studies to help justify our presence. What do you think?

Finally, it was our privilege to become acquainted with the Peek's during their winter in the wilderness. It seems only fair to permit the Peek's a peek at the lives of Yvonne and Dwight ~~in~~ in Colorado and elsewhere. Consequently, I enclose a copy of our Christmas letter.

With appreciation for your friendly helpfulness, I send best wishes for a pleasant and healthy holiday during this holy season ... whether you spend it in Viola or the beautiful Big Creek country!

Dwight

What month do you think would be most favorable for a visit to the Middle Fork?

BIG CREEK BIGHORN SHEEP EWE-LAMB
GROUP OBSERVATION FORM 1990

Group number (month-day-observer-collar no. or letter): _____

Observer _____ Date _____ Obs. time period _____

Identifiable sheep _____ Sheep group size _____

Group composition: E _____ YE _____ L _____ Rams _____ Unk _____

Lamb observations:

Ewe ID	Lamb at side?	Observe lamb nurse?	Nursing during 10 minute period # of bouts	duration	Lamb health
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Lamb missing? _____ Searched for? _____ Found? _____ Specimen # _____

Form of observation: ground airplane radio signal visual

Drainage and description _____

Quad map name _____ Aerial photo number _____

Topography: cliff outcrop talus rocky soil fine soil other _____

Aspect: N NE E SE S SW W NW Slope: 0-30% 30-60% 60-90% >90%

Physiography: ridgetop upper 1/3 hillside mid 1/3 hillside
lower 1/3 hillside valley bottom narrow draw or ridgeline

Major vegetation: trees _____ shrubs _____

grass/forbs _____

Proximity to last location: _____ date _____

Precipitation: none rain snow hail other _____ Temperature _____

Comments: