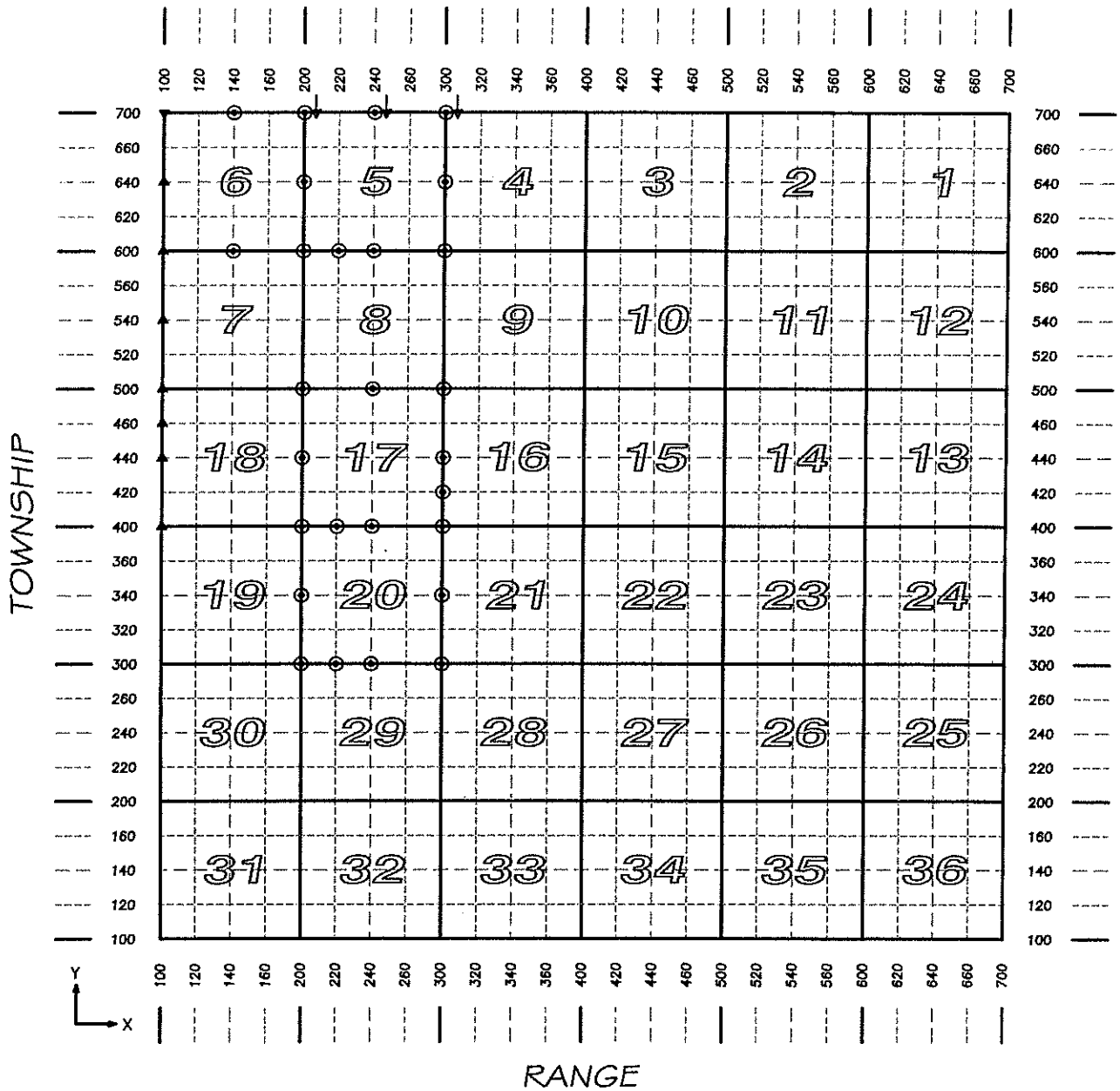


Emery County 2000 Point ID System



$\frac{T}{16} \frac{R}{11} \frac{X}{S} \frac{Y}{E}$
 1611440400 = S 1/4, Sec. 15, T 16 S, R 11 E.

1611

T. 16 S. R. 11 E. SLM

⊙ MONUMENT RECORD FILED

▲ SEE ADJOINING SHEET

| EMERY COUNTY SECTION CORNERS | | | | | | | 1611 |
|---|--------------------|------------|---------|-----------------|------------------|--|----------------|
| NAD 83 (1994) State Plane Coordinate Data, Central Zone | | | | | | | 2000 Id system |
| TOWNSHIP 16 SOUTH, RANGE 11 EAST | | | | | | | |
| SECTION CODE | INTERNATIONAL FEET | | | POSITION | | | |
| | NORTHING | EASTING | ELEV. | LATITUDE | LONGITUDE | | |
| 1611140700 | 6976421.87 | 1857446.60 | 5477.70 | N 39-28-09.9815 | W 110-43-52.3272 | | |
| 1611140600 | 6971229.79 | 1857502.25 | 5467.20 | N 39-27-18.6600 | W 110-43-52.1867 | | |
| 1611200300 | 6955337.75 | 1860322.99 | 5631.50 | N 39-24-41.3470 | W 110-43-17.9871 | | |
| 1611200340 | 6957979.38 | 1860343.19 | 5568.07 | N 39-25-07.4543 | W 110-43-17.4368 | | |
| 1611200400 | 6960627.71 | 1860263.60 | 5437.00 | N 39-25-33.6364 | W 110-43-18.1573 | | |
| 1611200440 | 6963265.76 | 1860293.83 | 5529.80 | N 39-25-59.7075 | W 110-43-17.4794 | | |
| 1611200500 | 6965925.19 | 1860262.37 | 5552.60 | N 39-26-25.9951 | W 110-43-17.5854 | | |
| 1611200600 | 6971231.70 | 1860154.54 | 5484.67 | N 39-27-18.4521 | W 110-43-18.3713 | | |
| 1611200640 | 6973880.18 | 1860131.65 | 5491.45 | N 39-27-44.6308 | W 110-43-18.3694 | | |
| 1611200700 | 6976444.50 | 1860108.69 | 0.00 | N 39-28-09.9776 | W 110-43-18.3776 | | |
| CC - 1611200700 | 6976443.25 | 1860108.70 | 5453.15 | N 39-28-09.9653 | W 110-43-18.3776 | | |
| 1611220300 | 6955353.47 | 1861647.35 | 5572.45 | N 39-24-41.3882 | W 110-43-01.1112 | | |
| 1611220400 | 6960651.52 | 1861590.97 | 0.00 | N 39-25-33.7573 | W 110-43-01.2386 | | |
| WC - 1611220400 | 6960651.58 | 1861594.27 | 5459.66 | N 39-25-33.7576 | W 110-43-01.1965 | | |
| 1611220600 | 6971274.72 | 1861478.01 | 5478.84 | N 39-27-18.7632 | W 110-43-01.4931 | | |
| 1611240300 | 6955369.15 | 1862973.35 | 5512.79 | N 39-24-41.4281 | W 110-42-44.2143 | | |
| 1611240400 | 6960675.31 | 1862916.25 | 5539.30 | N 39-25-33.8774 | W 110-42-44.3465 | | |
| 1611240500 | 6965991.98 | 1862913.20 | 5493.57 | N 39-26-26.4258 | W 110-42-43.7885 | | |
| 1611240600 | 6971318.69 | 1862803.15 | 5498.69 | N 39-27-19.0828 | W 110-42-44.5934 | | |
| 1611240700 | 6976466.16 | 1862753.88 | 0.00 | N 39-28-09.9629 | W 110-42-44.6436 | | |
| CC - 1611240700 | 6976466.33 | 1862753.88 | 5440.14 | N 39-28-09.9645 | W 110-42-44.6436 | | |
| 1611300300 | 6955400.45 | 1865624.47 | 5448.88 | N 39-24-41.5053 | W 110-42-10.4319 | | |
| 1611300340 | 6958055.44 | 1865596.11 | 0.00 | N 39-25-07.7488 | W 110-42-10.4917 | | |
| 1611300400 | 6960722.86 | 1865566.89 | 5387.83 | N 39-25-34.1153 | W 110-42-10.5612 | | |
| 1611300420 | 6962058.63 | 1865566.22 | 5392.39 | N 39-25-47.3176 | W 110-42-10.4180 | | |
| 1611300440 | 6963391.75 | 1865564.95 | 5422.70 | N 39-26-00.4938 | W 110-42-10.2827 | | |
| 1611300500 | 6966058.12 | 1865562.73 | 5547.80 | N 39-26-26.8475 | W 110-42-10.0081 | | |
| 1611300600 | 6971405.95 | 1865449.44 | 5511.31 | N 39-27-19.7135 | W 110-42-10.8448 | | |
| 1611300640 | 6973997.13 | 1865424.08 | 5434.07 | N 39-27-45.3261 | W 110-42-10.8737 | | |
| 1611300700 | 6976488.42 | 1865399.97 | 0.00 | N 39-28-09.9512 | W 110-42-10.8981 | | |
| CC - 1611300700 | 6976488.22 | 1865399.97 | 5435.63 | N 39-28-09.9492 | W 110-42-10.8981 | | |

| EMERY COUNTY SECTION CORNERS | | | | | | | | |
|------------------------------|----------|---------|----------------|-----------------------------------|---------------------------|------------|------------|------|
| NAD 83 CONVERSION DATA | | | | | | | | |
| 1611 | | | | | | | | |
| TOWNSHIP | RANGE | SECTION | ROTATION ANGLE | COMBINED FACTOR GROUND TO GRID | INVERSE GRID TO GROUND | | | |
| T. 16 S. | R. 11 E. | 1 | | | | | | |
| | | 2 | | | | | | |
| | | 3 | | | | | | |
| | | 4 | | | | | | |
| | | 5 | | 0° 30' 17" | 0.99966173 | 1.00033838 | 2005 | |
| | | 6 | | 0° 29' 33" | 0.99966126 | 1.00033885 | 2005 | |
| | | 7 | | | | | | |
| | | 8 | | | | | | |
| | | 9 | | | | | | |
| | | 10 | | | | | | |
| | | 11 | | | | | | |
| | | 12 | | | | | | |
| | | 13 | | | | | | |
| | | 14 | | | | | | |
| | | 15 | | | | | | |
| | | 16 | | | | | | |
| | | 17 | | | 0° 30' 17" | 0.99966452 | 1.00033559 | 2005 |
| | | 18 | | | | | | |
| | | 19 | | | | | | |
| | | 20 | | | 0° 30' 17" | 0.99966624 | 1.00033387 | 2005 |
| | | 21 | | | | | | |
| | | 22 | | | | | | |
| | | 23 | | | | | | |
| | | 24 | | | | | | |
| | | 25 | | | | | | |
| | | 26 | | | | | | |
| | | 27 | | | | | | |
| | | 28 | | | | | | |
| | | 29 | | | | | | |
| | | 30 | | | | | | |
| | | 31 | | | | | | |
| | | 32 | | | | | | |
| | | 33 | | | | | | |
| | | 34 | | | | | | |
| | | 35 | | | | | | |
| | | 36 | | | | | | |

PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | 1/2 (2) | N S | Range 1 1 | | 1/2 (2) | E W | Section | | Meridian (SL) US | |
|--|--|---|--|---|--------|---|---------------------------------|---|--------|--|--|---|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 12/07/05 | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | |
| Name CP-WEST | | COR | | HARN | | TRI | | Type <input checked="" type="radio"/> LOCAL SURVEY | | Accuracy Order | | | |
| USGS Quad Name ELMO UTAH | | Datum Nad27 | | Nad83 | | <input checked="" type="radio"/> Nad83 (1994) | | WGS84 | | Local | | State UTAH | |
| | | | | | | | | | | | | County EMERY | |
| Latitude | | | | | | | Longitude | | | | | | |
| N 3 9 - 2 8 - 0 8 . 2 2 8 1 8 | | | | | | | W 1 1 0 - 4 7 - 1 5 . 1 3 2 7 7 | | | | | | |
| Northing | | | | | | | Easting | | | | | | |
| 6 9 7 6 1 1 2 . 8 0 | | | | | | | 1 8 4 1 5 4 5 . 4 0 | | | | | | |
| Units | | Survey Foot | | <input checked="" type="radio"/> International Foot | | Meter | | Coordinate Type | | <input checked="" type="radio"/> State Plane | | UTM | |
| Zone | | Utah North | | <input checked="" type="radio"/> Utah Central | | Utah South | | Vertical Datum | | NGVD29 | | <input checked="" type="radio"/> NAVD88 | |
| Ellipsoid Height | | 1711.15 M | | FT | | Geoid Height | | M | | 5671.75 FT | | | |
| Base Receiver | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | | |
| | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2 nd | | M | | 3 rd | | M | |
| Session End | | 1" | | M | | 2 nd | | M | | 3 rd | | M | |
| | | | | | | | | | | | | Ave 4.311 Feet M | |
| | | | | | | | | | | | | Ave M | |
| Rover Receiver | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | |
| Station Observation | | | | | | | | | | | | | |
| Observation Type | | <input checked="" type="radio"/> RTK | | FAST STATIC | | STATIC | | OTHER | | | | | |
| First Observation | | | | | | | | | | | | | |
| Station Name (M1) | | 1 4 0 6 0 0 | | Description S 1/4 corner Sec. 6 | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 4.5 | | | | RMS Worst 31.2 | | | | | | | |
| Second Observation | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | Alternate Base Station Used | | | | Yes No | | | |
| Monument and Markings | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | | Other | | | |
| Size | | Size 2 1/2 / 3/4 2005 ECS | | | | Size | | | | Size | | | |
| Material | | Material steel / brass | | | | Material | | | | Material | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611140600

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-10-05

County Reference No. 161140600

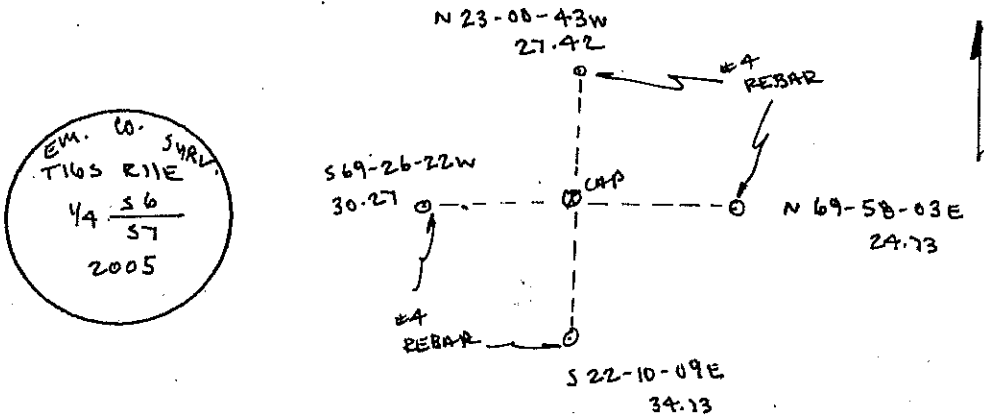
Type of Monument: _____ Section Corner
 _____ Bench Mark

Quarter Corner
 _____ Other _____

Your Description and Observation of Monument Found (Be Specific):
NO MONUMENT SET

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET ALUMINUM EMERY COUNTY SURVEYS CAP 0" ABOVE GROUND LEVEL.
SET 4 #4 REBAR AS SHOWN BELOW.

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

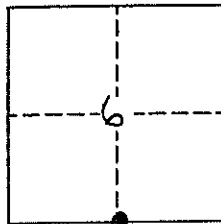
This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 6

Township: 16S

Range: 11E



Craig E. Johansen
 LICENSED SURVEYOR
 No. 16602
 CRAIG E. JOHANSEN
 State of Utah
 Date: 12-12-05

PLSS GPS Observation Sheet

| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | Township T 1 6 | | 1/2 (2) | N S | Range 1 1 | | 1/2 (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | |
|---|---|---|---|-----------------------|--------|--|-----------|---------------------------------|--|------------------------------|---|----------------------------|---|--|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | | Date 12/05/05 | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP-WEST | | Type COR HARN TRI (Other) LOCAL SURVEY | | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name ELMO UTAH | | Datum Nad27 Nad83 (Nad83 (1994)) WGS84 Local | | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 8 | - | 0 | 8 | . | 2 | 2 | 8 | 1 | 8 | W | 1 | 1 | 0 | - | 4 | 7 | - | 1 | 5 | . | 1 | 3 | 2 | 7 | 7 |
| Northing | | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 7 | 6 | 1 | 1 | 2 | . | 8 | 0 | | | | | | 1 | 8 | 4 | 1 | 5 | 4 | 5 | . | 4 | 0 | | | | | | |
| Units | | | | Survey Foot | | (International Foot) | | Meter | | Coordinate Type | | | | (State Plane) | | UTM | | | | | | | | | | | | | | |
| Zone | | Utah North | | (Utah Central) | | Utah South | | Vertical Datum | | | | NGVD29 | | (NAVD88) | | | | | | | | | | | | | | | | |
| Ellipsoid Height | | 1711.15 M | | FT | | Geoid Height | | | | M | | 5671.75 FT | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | | | AM | | PM | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2 nd | | M | | 3 rd | | M | | Ave 4.482 Feet M | | | | | | | | | | | | | | | | |
| Session End | | 1" | | M | | 2 nd | | M | | 3 rd | | M | | Ave M | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type (RTK) FAST STATIC STATIC OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 1 | | 4 | | 0 | | 7 | | 0 | | 0 | | Description N 1/4 corner Sec. 6 | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | | PDOP Worst 1.6 | | | | RMS Worst 22.8 | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used | | | | Yes | | No | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | |
| Size | | Size 2 1/2 / 3/4 | | 2005 ECS | | Size | | Size | | Size | | Size | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | Material | | Material | | Material | | Material | | Material | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611140700

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-10-05

County Reference No. 161140700

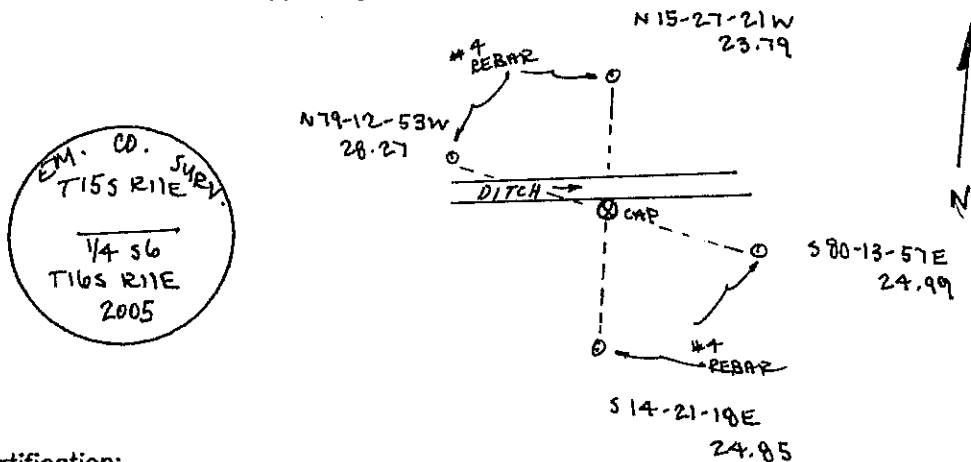
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):
 MONUMENT NEVER SET

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET ALUMINUM EMERY COUNTY SURVEYS CAP 6" ABOVE GROUND LEVEL WITH 4 #4 REBAR AS SHOWN BELOW.

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

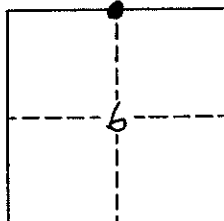
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 6
 Township: 16S
 Range: 11E



Date 12-13-05

PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | | | Township T 1 6 | | | Range 1 1 | | Section E W E | | Meridian SL US | | | | | | | | | | | | | | | | | | | | | |
|--|---|--------------------------|-------------------------------|--|---|--|--------------|--|-------------------------|--------------|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Contacts Name Lee M. Swasey | | | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | Date 11/28/05 | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name ELM GPS 12 | | | | Type COR HARN TRI <input checked="" type="checkbox"/> Other EMERY COUNTY | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | | | Datum Nad27 Nad83 <input checked="" type="checkbox"/> Nad83 (1994) WGS84 Local | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 3 | - | 2 | 5 | . | 4 | 2 | 8 | 1 | 2 | 7 | W | 1 | 1 | 0 | - | 4 | 5 | - | 0 | 1 | . | 5 | 8 | 6 | 1 | 0 | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 4 | 7 | 5 | 8 | 7 | . | 6 | 3 | | | | | | | | 1 | 8 | 5 | 2 | 2 | 5 | 7 | . | 0 | 6 | | | | | | |
| Units Survey Foot <input type="checkbox"/> International Foot <input checked="" type="checkbox"/> Meter | | | | Coordinate Type State Plane <input type="checkbox"/> UTM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="checkbox"/> Utah Central <input checked="" type="checkbox"/> Utah South | | | | Vertical Datum NGVD29 <input type="checkbox"/> NAVD88 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height 1711.15 M | | | | Geoid Height 5671.75 FT | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time AM PM | | | | End Time AM PM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" M | | 2" M | | 3" M | | Ave | | 4.678 Feet M | | | | | | | | | | | | | | | | | | | | | | |
| Session End | | 1" M | | 2" M | | 3" M | | Ave | | M | | | | | | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station Miles | | | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="checkbox"/> RTK <input type="checkbox"/> FAST STATIC <input type="checkbox"/> STATIC <input type="checkbox"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) 2 0 0 3 0 0 | | | | Description SW corner Sec. 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | | PDOP Worst 1.8 | | | | RMS Worst 8.5 | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | | | Alternate Base Station Used Yes No | | | | | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | Pipe/Cap | | | Post | | | Other | | | | | | | | | | | | | | | | | | | | | | | |
| Size | | | Size 2½ / 3¼ 1969 BLM | | | Size | | | Size | | | | | | | | | | | | | | | | | | | | | | | |
| Material | | | Material steel / brass | | | Material | | | Material | | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611200300

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-28-05

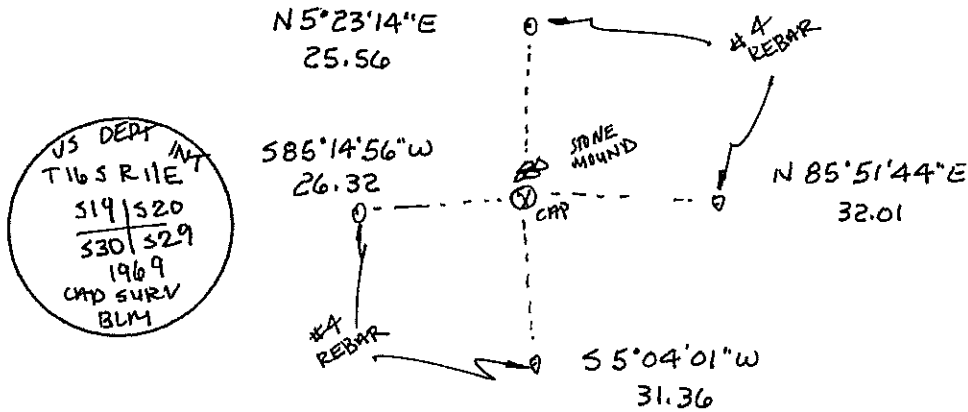
County Reference No. 1611200300

Type of Monument: Section Corner Quarter Corner
 Bench Mark Other _____

Your Description and Observation of Monument Found (Be Specific):
1969 BLM BRASS CAP 3" ABOVE GROUNDLEVEL WITH A STONE MOUND TO THE NORTH

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.

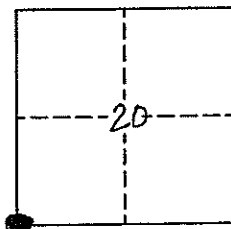


Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.
 Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:
 Section: 20
 Township: 16 S
 Range: 11 E



Craig E. Johansen
 No. 146802
 CRAIG E. JOHANSEN
 STATE OF UTAH
 Date 12-13-05

PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | ¼ (2) | N S | Range 1 1 | | ¼ (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | | | |
|--|---|--|-----------------------|-----------------------------------|--------|--|---------------------------------|--|--------|---------|---|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/28/05 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name ELM GPS 12 | | Type COR HARN TRI <input checked="" type="checkbox"/> Other EMERY COUNTY | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="checkbox"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 3 | - | 2 | 5 | . | 4 | 2 | 8 | 1 | 2 | 7 | W | 1 | 1 | 0 | - | 4 | 5 | - | 0 | 1 | . | 5 | 8 | 6 | 1 | 0 | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 4 | 7 | 5 | 8 | 7 | . | 6 | 3 | | | | | | | 1 | 8 | 5 | 2 | 2 | 5 | 7 | . | 0 | 6 | | | | | | | |
| Units Survey Foot <input type="checkbox"/> International Foot <input checked="" type="checkbox"/> Meter | | Coordinate Type State Plane <input type="checkbox"/> UTM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="checkbox"/> Utah Central <input checked="" type="checkbox"/> Utah South | | Vertical Datum NGVD29 <input type="checkbox"/> NAVD88 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height 1711.15 M | | FT | | Geoid Height M | | 5671.75 FT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time AM PM | | | End Time AM PM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | M | 2 nd | M | 3 rd | M | Ave 4.678 Feet M | | | | | | | | | | | | | | | | | | | | | | | | |
| Session End | | 1" | M | 2 nd | M | 3 rd | M | Ave M | | | | | | | | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | Miles | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="checkbox"/> RTK <input type="checkbox"/> FAST STATIC <input type="checkbox"/> STATIC <input type="checkbox"/> OTHER | | First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 | 0 | 0 | 3 | 4 | 0 | Description W 1/4 corner Sec. 20 | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 1.9 | | | | RMS Worst 11.8 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | FT | Alternate Base Station Used | | | | Yes | No | | | | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | Other | | | | | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2½ / 3¼ 1969 BLM | | | | Size | | Size | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | | Material | | Material | | | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611200340

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-29-05

County Reference No. 1611200340

Type of Monument: _____ Section Corner
 _____ Bench Mark

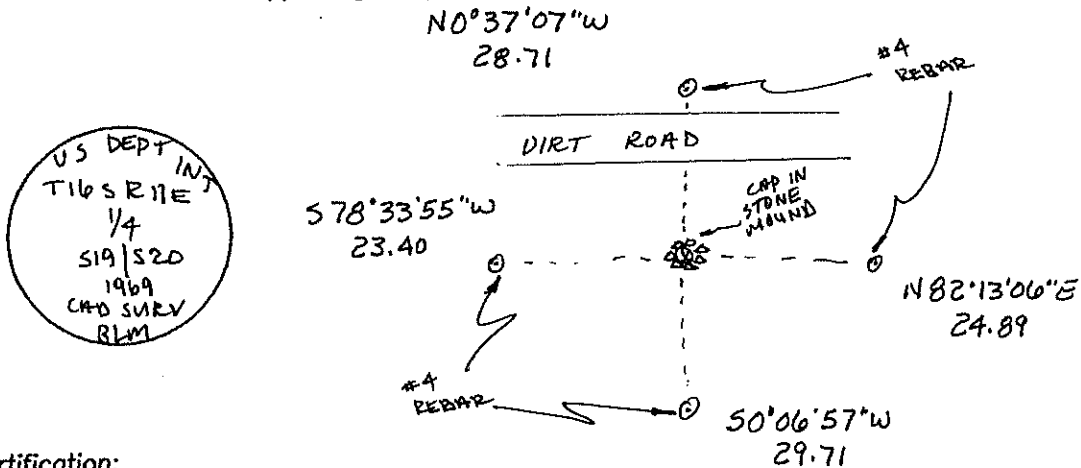
Quarter Corner
 _____ Other _____

Your Description and Observation of Monument Found (Be Specific):

1969 BLM BRASS CAP IN A STONE MOUND

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

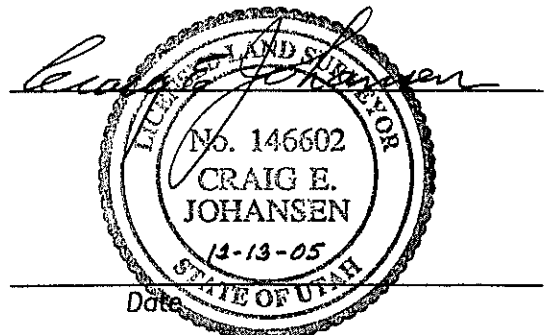
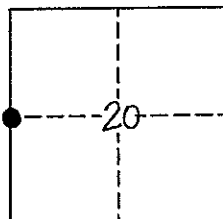
This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 20

Township: 16S

Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | | | Township T 1 6 | | | ½ (2) | N S | Range 1 1 | | ½ (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|-----------------|---|---------------------|--|-----------------|--|---------|--|----------------------------|-----------|--|--|--|----------|--|--|--|-------------------------|--|--|--|----------|--|--|--|
| Contacts Name Lee M. Swasey | | | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/28/05 | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name ELM GPS 12 | | | | Type COR HARN TRI <input checked="" type="checkbox"/> Other EMERY COUNTY | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | | | Datum Nad27 Nad83 <input checked="" type="checkbox"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | |
| Latitude N 3 9 - 2 3 - 2 5 . 4 2 8 1 2 7 | | | | | | | | Longitude W 1 1 0 - 4 5 - 0 1 . 5 8 6 1 0 | | | | | | | | | | | | | | | | | | | | | | | |
| Northing 6 9 4 7 5 8 7 . 6 3 | | | | | | | | Easting 1 8 5 2 2 5 7 . 0 6 | | | | | | | | | | | | | | | | | | | | | | | |
| Units Survey Foot <input type="checkbox"/> International Foot <input checked="" type="checkbox"/> Meter | | | | Coordinate Type State Plane <input checked="" type="checkbox"/> UTM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="checkbox"/> Utah Central <input checked="" type="checkbox"/> Utah South | | | | Vertical Datum NGVD29 <input type="checkbox"/> NAVD88 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height 1711.15 M | | | | FT | | | | Geoid Height M | | | | 5671.75 FT | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | | | Elevation Mask 13 | | | | PDOP Mask 6 | | | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | |
| Start Time AM PM | | | | End Time AM PM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning 1" | | | | M | | | | 2" | | | | M | | | | 3" | | | | M | | | | Ave 4.678 Feet M | | | | | | | |
| Session End 1" | | | | M | | | | 2" | | | | M | | | | 3" | | | | M | | | | Ave | | | | M | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="checkbox"/> RTK <input type="checkbox"/> FAST STATIC <input type="checkbox"/> STATIC <input type="checkbox"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) 2 0 0 4 0 0 | | | | Description NW corner Sec. 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | | PDOP Worst 1.6 | | | | RMS Worst 16.5 | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | | | Alternate Base Station Used | | | | Yes No | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | | |
| Size | | | | Size 2½ / 3¼ 1969 BLM | | | | Size | | | | Size | | | | | | | | | | | | | | | | | | | |
| Material | | | | Material steel / brass | | | | Material | | | | Material | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611200400

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-29-05

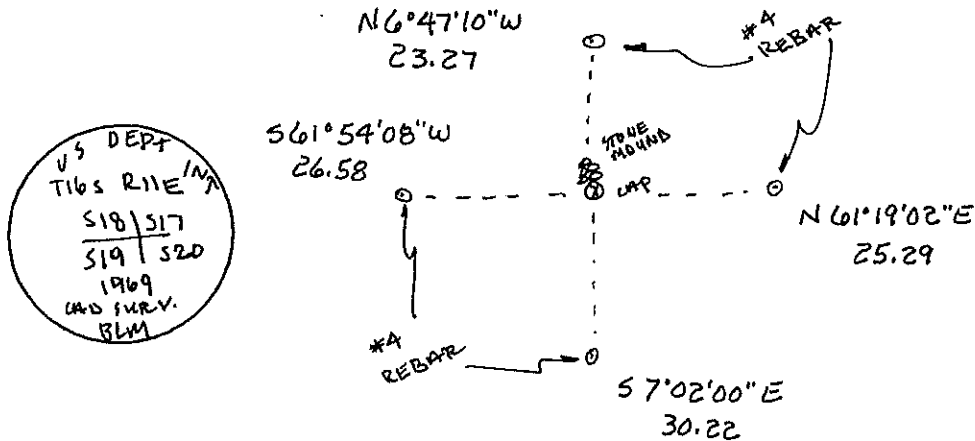
County Reference No. 1611200400

Type of Monument: Section Corner Quarter Corner
 Bench Mark Other _____

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP 6" ABOVE GROUND LEVEL WITH A STONE MOUND TO THE NORTH

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET A #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



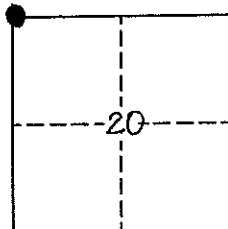
Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.
 Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 20
 Township: 16 S
 Range: 11 E



Date: 12-13-05

PLSS GPS Observation Sheet

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------|---|---|-------|-----------------------------------|-----------|---------------------------------|-------|------------------------------|---------------------|--------------|-------|---|----------------------|------|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | | | Township | | ½ (2) | N S | Range | | ½ (2) | E W | Section | | Meridian | | | | | | | | | | | | | | | | | | |
| | | | | T | 1 | 6 | | S | 1 | 1 | | E | | | | (SL) | US | | | | | | | | | | | | | | | |
| Contacts Name Lee M. Swasey | | | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/28/05 | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name ELM GPS 12 | | | | Type | | | | | | Accuracy | | | | | | | | | | | | | | | | | | | | | | |
| | | | | COR | HARN | TRI | Other | | | EMERY COUNTY | | | Order | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | | | Datum | | | | | | State UTAH | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Nad27 | Nad83 | (Nad83 1994) | | WGS84 | Local | | County EMERY | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 3 | - | 2 | 5 | . | 4 | 2 | 8 | 1 | 2 | 7 | W | 1 | 1 | 0 | - | 4 | 5 | - | 0 | 1 | . | 5 | 8 | 6 | 1 | 0 | |
| Northing | | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 4 | 7 | 5 | 8 | 7 | . | 6 | 3 | | | | | | | | 1 | 8 | 5 | 2 | 2 | 5 | 7 | . | 0 | 6 | | | | | | |
| Units | | | | Survey Foot | | International Foot | | Meter | | | Coordinate Type | | | | State Plane | | UTM | | | | | | | | | | | | | | | |
| Zone | | Utah North | | Utah Central | | Utah South | | Vertical Datum | | | | NGVD29 | | NAVD88 | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height | | | | 1711.15 M | | | | FT | | | Geoid Height | | | | M | | 5671.75 FT | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval | | 5 SEC. | | Elevation Mask | | 13 | | PDOP Mask | | 6 | | Antenna Type | | | L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | AM | | PM | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2 nd | | M | | 3 rd | | M | | Ave | 4.678 Feet M | | | | | | | | | | | | | | | | | |
| Session End | | 1" | | M | | 2 nd | | M | | 3 rd | | M | | Ave | M | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="radio"/> RTK <input type="radio"/> FAST STATIC <input type="radio"/> STATIC <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 | | 0 | | 0 | | 4 | | 4 | | 0 | | Description W 1/4 corner Sec. 17 | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | 60 | | | | PDOP Worst | | | | 1.5 | | | RMS Worst | 9.7 | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | | | | | | | | | | | | | Description | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | Alternate Base Station Used | | | | Yes | | No | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | | | |
| Size | | 2½ / 3¼ | | 1969 BLM | | Size | | Size | | Material | | Material | | | | | | | | | | | | | | | | | | | | |
| Material | | steel / brass | | Material | | Material | | Material | | Material | | Material | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611200440

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-28-05

County Reference No. 1011200440

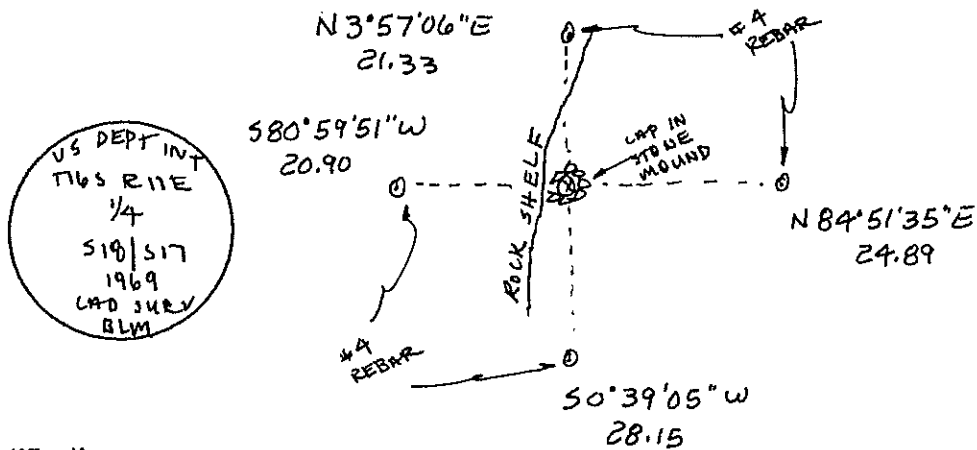
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP IN LARGE STONE MOUND

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

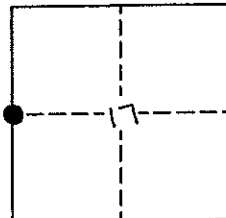
This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 17

Township: 16S

Range: 11E



Craig E. Johansen
 LICENSED LAND SURVEYOR
 No. 146602
 CRAIG E. JOHANSEN
 STATE OF UTAH
 Date: 12-13-05

PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | 1/2 (2) N S | Range 1 1 | | 1/2 (2) E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|--------------------------------------|------------------------------|---|-------------------|---------------------------------|--|----------------------------|---|---|---|-----------|---|---------------------|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/28/05 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name ELM GPS 12 | | COR | | HARN | TRI | Type Other EMERY COUNTY | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Nad27 | | Nad83 | Datum (Nad83 1994) | | WGS84 | Local | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 3 | - | 2 | 5 | . | 4 | 2 | 8 | 1 | 2 | 7 | W | 1 | 1 | 0 | - | 4 | 5 | - | 0 | 1 | . | 5 | 8 | 6 | 1 | 0 | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 4 | 7 | 5 | 8 | 7 | . | 6 | 3 | | | | | | | | 1 | 8 | 5 | 2 | 2 | 5 | 7 | . | 0 | 6 | | | | | | |
| Units Survey Foot | | International Foot | | Meter | | Coordinate Type State Plane | | | | UTM | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North | | Utah Central | | Utah South | | Vertical Datum NGVD29 | | NAVD88 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height 1711.15 M | | FT | | Geoid Height M | | 5671.75 FT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | AM | | PM | | End Time | | AM | | PM | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2 nd | | M | | 3 rd | | M | | Ave | | 4.678 Feet M | | | | | | | | | | | | | | | | |
| Session End | | 1" | | M | | 2 nd | | M | | 3 rd | | M | | Ave | | M | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type (RTK) FAST STATIC STATIC OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 | | 0 | 0 | 5 | 0 | 0 | Description NW corner Sec. 17 | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | 60 | | | | PDOP Worst | | | | 4.8 | | | | RMS Worst | | | | 8.7 | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | FT | | Alternate Base Station Used | | Yes | | No | | | | | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2 1/2 / 3/4 1969 BLM | | | | Size | | | | Size | | | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | | Material | | | | Material | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611200500

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-29-05

County Reference No. 1611200500

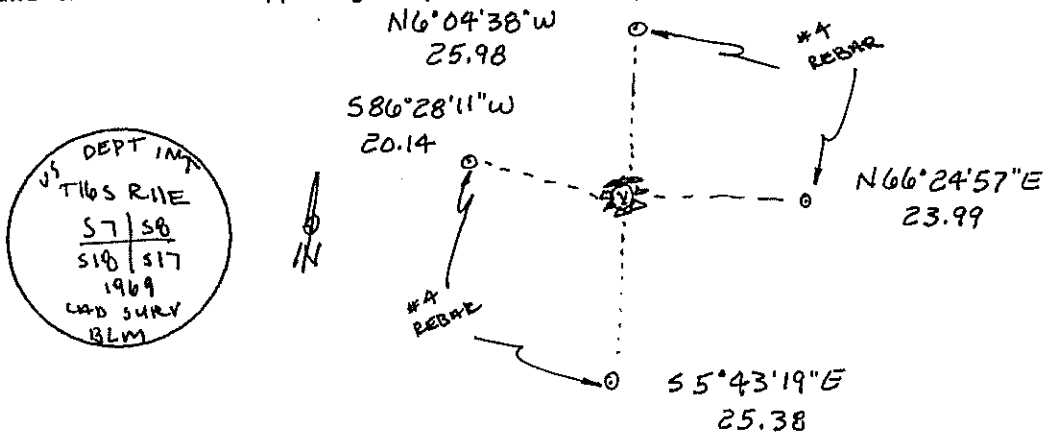
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP IN A STONE MOUND

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET + #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

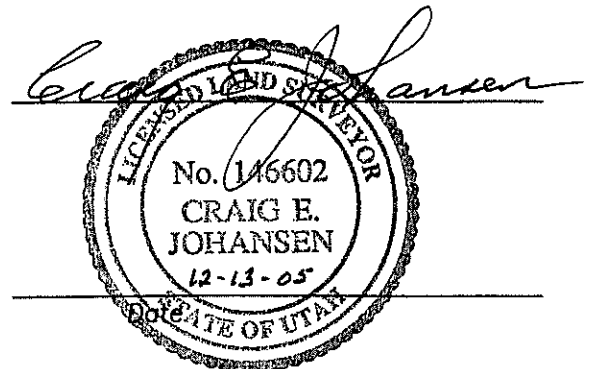
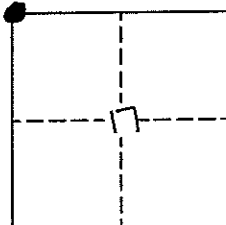
This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 17

Township: 16S

Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | | | Township T 1 6 | | Range S 1 1 | | Section E W | | Meridian SL US | |
|--|--|--------------------------|------------------------------------|--|--|--|--|--|----------|-------------------|--|
| Contacts Name Lee M. Swasey | | | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | Date 11/30/05 | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | |
| Control Station | | | | | | | | | | | |
| Name CP - 1 | | | | Type <input checked="" type="checkbox"/> Other <input type="checkbox"/> Local Survey | | | | Accuracy Order | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | | | Datum Nad27 Nad83 <input checked="" type="checkbox"/> Nad83 (1994) WGS84 Local | | | | State UTAH County EMERY | | | |
| Latitude N 3 9 - 2 6 - 1 6 . 2 0 1 4 5 | | | | | | Longitude W 1 1 0 - 4 2 - 2 8 . 1 7 5 6 3 | | | | | |
| Northing 6 9 6 4 9 6 8 . 4 0 | | | | | | Easting 1 8 6 4 1 4 7 . 1 2 | | | | | |
| Units Survey Foot <input type="checkbox"/> International Foot <input checked="" type="checkbox"/> Meter | | | | Coordinate Type State Plane <input checked="" type="checkbox"/> UTM | | | | | | | |
| Zone Utah North <input type="checkbox"/> Utah Central <input checked="" type="checkbox"/> Utah South | | | | Vertical Datum NGVD29 <input type="checkbox"/> NAVD88 <input checked="" type="checkbox"/> | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | | | Geoid Height M 5538.90 FT | | | | | | | |
| Base Receiver | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | |
| Start Time AM PM | | | | End Time AM PM | | | | | | | |
| Antenna Height | | | | | | | | | | | |
| Session Beginning | | 1 st M | | 2 nd M | | 3 rd M | | Ave | | 4.157 Feet M | |
| Session End | | 1 st M | | 2 nd M | | 3 rd M | | Ave | | M | |
| Rover Receiver | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | |
| Approximate Distance From Base Station Miles | | | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | |
| Station Observation | | | | | | | | | | | |
| Observation Type <input checked="" type="checkbox"/> RTK <input type="checkbox"/> FAST STATIC <input type="checkbox"/> STATIC <input type="checkbox"/> OTHER | | | | | | | | | | | |
| First Observation | | | | | | | | | | | |
| Station Name (M1) 2 0 0 6 0 0 | | | | Description SW corner Sec. 5 | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | |
| Number of Measurements 60 | | | | PDOP Worst 2.7 | | | | RMS Worst 11.1 | | | |
| Second Observation | | | | | | | | | | | |
| Station Name (M2) | | | | Description | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | | | Alternate Base Station Used Yes No | | | |
| Monument and Markings | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | |
| Stone | | | Pipe/Cap | | | Post | | | Other | | |
| Size | | | Size 2 1/2 / 3 1/4 1969 BLM | | | Size | | | Size | | |
| Material | | | Material steel / brass | | | Material | | | Material | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611200600

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

County Reference No. 1611200600

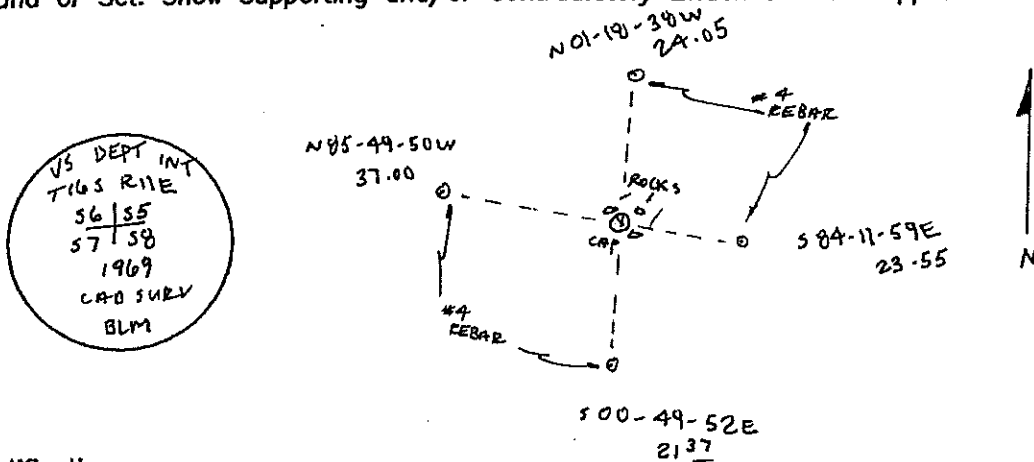
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):
1969 BLM BRASS CAP 6" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

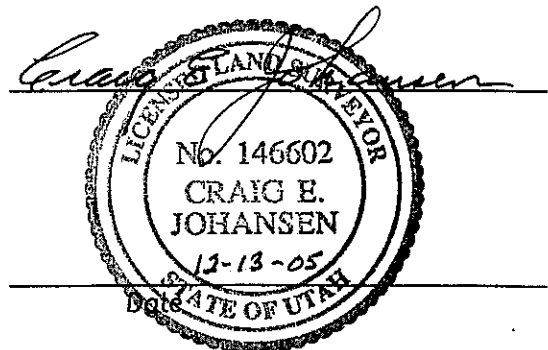
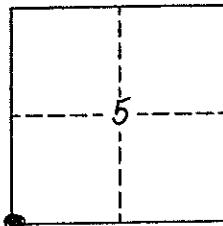
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 5
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | Township T 1 6 | | | Range 1 1 | | Section E W | | Meridian SL US | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---------------------------------|--|------------------------------|--|--------------------------|---|---|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI Other Local Survey | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 Nad83 (1994) WGS84 Local | | | | | State UTAH | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | County EMERY | | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | |
| Northing | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | |
| Units Survey Foot International Foot Meter | | Coordinate Type State Plane UTM | | Zone Utah North Utah Central Utah South | | Vertical Datum NGVD29 NAVD88 | | Ellipsoid Height M 5481.181 FT | | | | Geoid Height M 5538.90 FT | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 4000 SSI | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | AM PM | | End Time | | AM PM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1 st M | | 2 nd M | | 3 rd M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | | | | | | | | | |
| Session End | | 1 st M | | 2 nd M | | 3 rd M | | Ave M | | | | | | | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 5800 | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | Miles | | Antenna Type 5800 INTERNAL | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type RTK | | FAST STATIC | | STATIC | | OTHER | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 0 0 6 4 0 | | Description W 1/4 corner Sec. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 2.9 | | | RMS Worst 13.7 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | FT | | Alternate Base Station Used | | Yes No | | | | | | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | Post | | Other | | | | | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2 1/2 / 3 1/4 1969 BLM | | | Size | | Size | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | Material | | Material | | | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611200640

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

County Reference No. 161200640

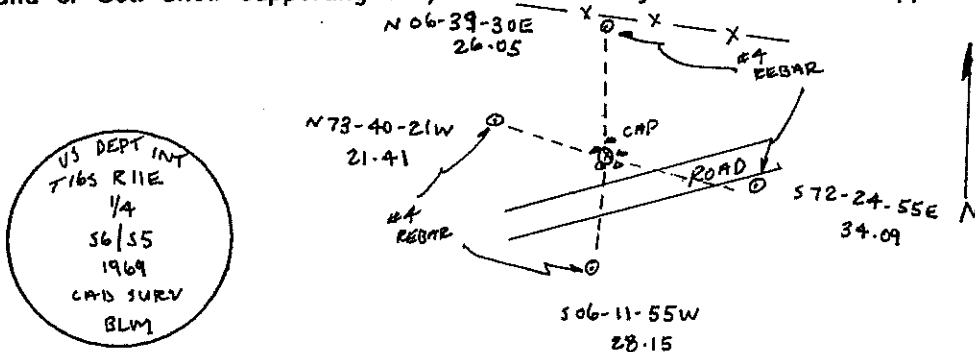
Type of Monument: _____ Section Corner
 _____ Bench Mark

Quarter Corner
 _____ Other _____

Your Description and Observation of Monument Found (Be Specific):
1969 BLM BRASS CAP 6" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

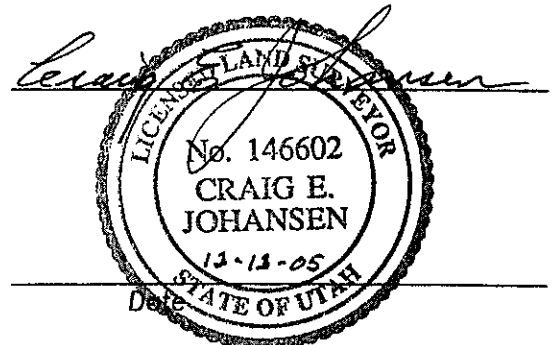
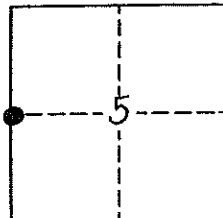
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 5
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | Township T 1 6 | | ½ (2) | N S | Range 1 1 | | ½ (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | |
|---|---|--|---|---|---------------|--|-----------|------------------------------------|-------------------------|--|---|----------------------------|---|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | | Date 12/01/05 | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | COR | | HARN | | TRI | | Type Other Local Survey | | | | Accuracy Order | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Nad27 | | Nad83 | | Datum (Nad83 1994) | | WGS84 | | Local | | State UTAH | | County EMERY | | | | | | | | | | | | | | | | |
| Latitude | | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 |
| Northing | | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | |
| Units Survey Foot | | <input checked="" type="radio"/> International Foot | | <input type="radio"/> Meter | | Coordinate Type <input checked="" type="radio"/> State Plane | | | | <input type="radio"/> UTM | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North | | <input checked="" type="radio"/> Utah Central | | <input type="radio"/> Utah South | | Vertical Datum NGVD29 | | | | <input checked="" type="radio"/> NAVD88 | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height M | | 5481.181 FT | | Geoid Height M | | | | 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | AM | | PM | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave 4.206 Feet M | | | | | | | | | | | | | | | | |
| Session End | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave M | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type | | <input checked="" type="radio"/> RTK | | <input type="radio"/> FAST STATIC | | <input type="radio"/> STATIC | | <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 0 0 7 0 0 C C | | Description Closing Corner to NE corner Sec. 6 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 2.1 | | | | RMS Worst 10.9 | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | Alternate Base Station Used | | | | Yes No | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2½ / 3¼ 1969 BLM | | | | Size | | | | Size | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | | Material | | | | Material | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611200700 CC

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-01-05

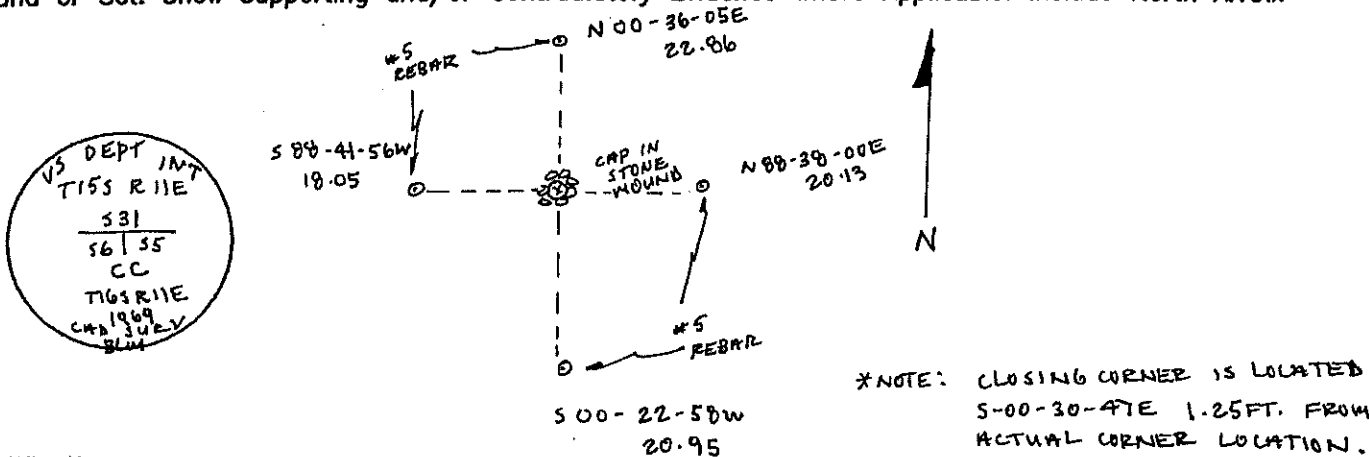
County Reference No. 16/1200700CC

Type of Monument: Section Corner _____ Quarter Corner
 _____ Bench Mark _____ Other _____

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP 6" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #5 REBAR #5 SHOWN BELOW
 BUILT STONE MOUND AROUND CAP

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.

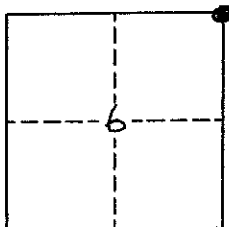


Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.
 Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:
 Section: 6
 Township: 16S
 Range: 11E



Craig E. Johansen

 Date: _____

PLSS GPS Observation Sheet

| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | Township T 1 6 | | 1/2 (2) N S | Range 1 1 | | 1/2 (2) E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|-----------------------|---|--------------|--|----------------------|--|------------------------------|---------------------|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="radio"/> Other Local Survey | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | |
| Units | | Survey Foot | | <input checked="" type="radio"/> International Foot | | Meter | | Coordinate Type | | | | <input checked="" type="radio"/> State Plane | | UTM | | | | | | | | | | | | | | | | | |
| Zone | | Utah North | | <input checked="" type="radio"/> Utah Central | | Utah South | | Vertical Datum | | | | NGVD29 | | <input checked="" type="radio"/> NAVD88 | | | | | | | | | | | | | | | | | |
| Ellipsoid Height | | M | | 5481.181 FT | | Geoid Height | | | | M | | 5538.90 FT | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 4000 SSI | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | AM PM | | | End Time | | | AM PM | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | | | |
| Session End | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave M | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 5800 | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | Miles | | | Antenna Type 5800 INTERNAL | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="radio"/> RTK <input type="radio"/> FAST STATIC <input type="radio"/> STATIC <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 2 0 3 0 0 | | Description W 1/16 corner Sec. 20 / Sec. 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 1.9 | | | | RMS Worst 96.1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used | | Yes No | | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | Other | | | | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2 1/2 / 3 1/4 1969 BLM | | | | Size | | Size | | | | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | | Material | | Material | | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611220300

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

County Reference No. 1611220300

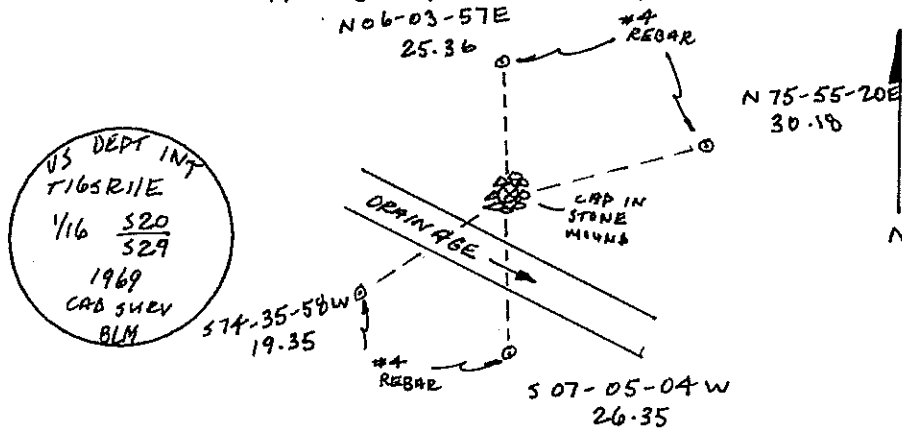
Type of Monument: _____ Section Corner
 _____ Bench Mark

Quarter Corner _____
 Other 1/16 CORNER

Your Description and Observation of Monument Found (Be Specific) :
1969 BLM BRASS CAP IN A STONE MOUND

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET A #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

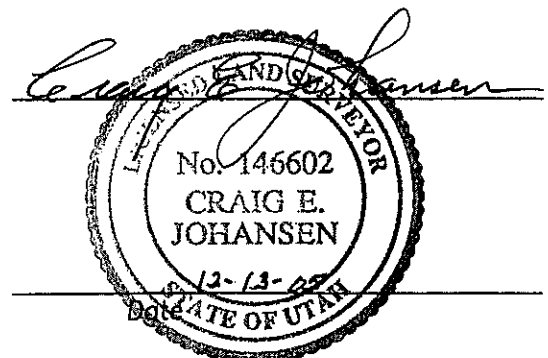
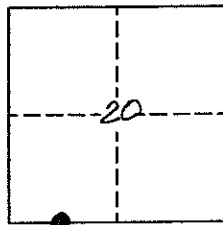
This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 20

Township: 16S

Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | | | Township | | 1/2 (2) | N S | Range | | 1/2 (2) | E W | Section | | Meridian | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|-----------------------------------|--------|--|---|------------------------------|--|--|---|----------|----|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | | | | T | 1 | 6 | S | 1 | 1 | | E | | | (SL) | US | | | | | | | | | | | | | | | | |
| Contacts Name Lee M. Swasey | | | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | | | Type COR HARN TRI <u>Other</u> Local Survey | | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | | | Datum Nad27 Nad83 <u>(Nad83 1994)</u> WGS84 Local | | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | |
| Northing | | | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | |
| Units Survey Foot <u>International Foot</u> Meter | | | | Coordinate Type <u>State Plane</u> UTM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <u>Utah Central</u> Utah South | | | | Vertical Datum NGVD29 <u>NAVD88</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | | | Geoid Height M 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | AM | | | | PM | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | |
| Session End | | | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave M | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <u>RTK</u> FAST STATIC STATIC OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | | | 2 | 2 | 0 | 4 | 0 | 0 | W | C | Description Witness Corner to W 1/16 corner Sec. 17 / Sec. 20 | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | | PDOP Worst 1.8 | | | | RMS Worst 8.6 | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | | | FT | | Alternate Base Station Used | | | | Yes | | No | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | | |
| Size | | | | Size 2 1/2 / 3/4 1969 BLM | | | | Size | | | | Size | | | | | | | | | | | | | | | | | | | |
| Material | | | | Material steel / brass | | | | Material | | | | Material | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611220400 WC

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

County Reference No. 1611220400

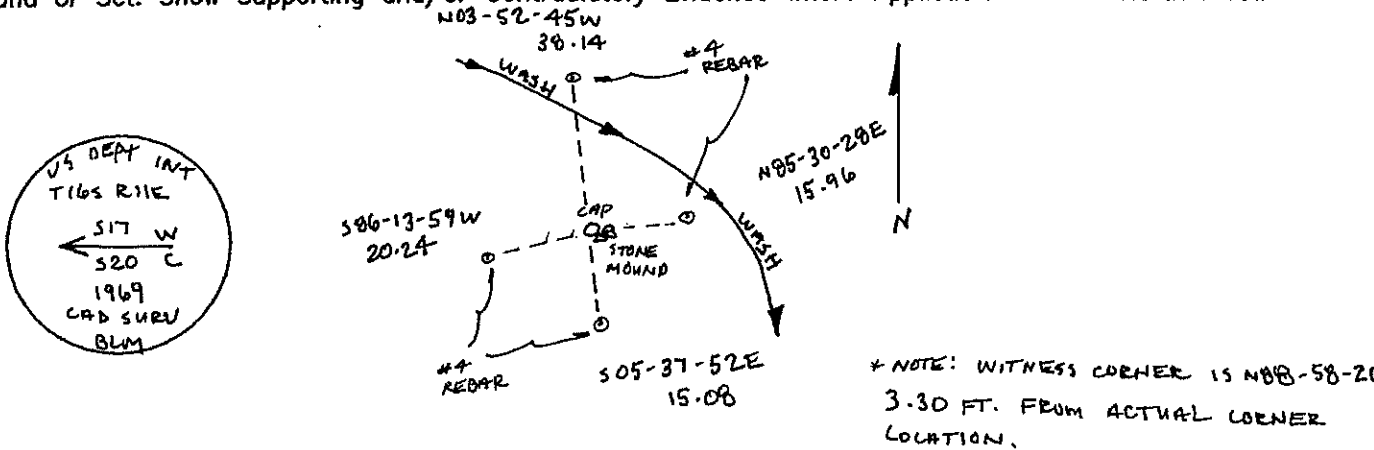
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other WITNESS CORNER

Your Description and Observation of Monument Found (Be Specific):
1969 BLM BRASS CAP 3" ABOVE GROUND LEVEL WITH A STONE MOUND TO THE SOUTHEAST

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.

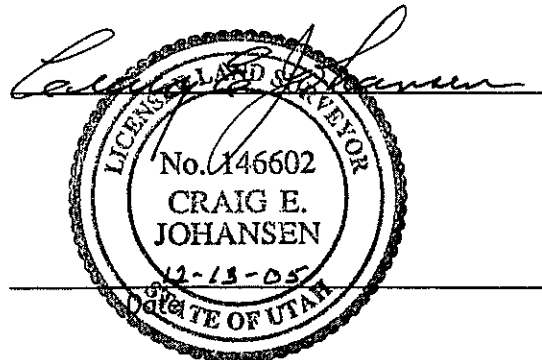
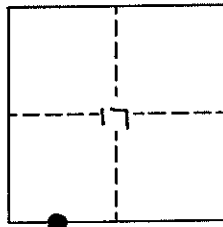


Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.
 Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:
 Section: 17
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | 1/2 (2) | N S | Range 1 1 | | 1/2 (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | | |
|--|---|--|------------------------------------|--|--------|---|----------|--|--------|----------|--------|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="radio"/> Other Local Survey | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | |
| Units Survey Foot <input type="radio"/> International Foot <input checked="" type="radio"/> Meter | | | | | | Coordinate Type <input type="radio"/> State Plane <input checked="" type="radio"/> UTM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="radio"/> Utah Central <input checked="" type="radio"/> Utah South | | | | | | Vertical Datum NGVD29 <input type="radio"/> NAVD88 <input checked="" type="radio"/> | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | | | | | Geoid Height M 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time AM PM | | | | End Time AM PM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" M | | 2" M | | 3" M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | | | | | | | | | |
| Session End | | 1" M | | 2" M | | 3" M | | Ave M | | | | | | | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station Miles | | | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="radio"/> RTK <input type="radio"/> FAST STATIC <input type="radio"/> STATIC <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 2 0 6 0 0 | | Description W 1/16 corner Sec. 5 / Sec. 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 2.2 | | | | RMS Worst 17.7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used | | | Yes No | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | Pipe/Cap | | | | Post | | | Other | | | | | | | | | | | | | | | | | | | | | |
| Size | | | Size 2 1/2 / 3 1/4 1969 BLM | | | | Size | | | Size | | | | | | | | | | | | | | | | | | | | | |
| Material | | | Material steel / brass | | | | Material | | | Material | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611220600

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

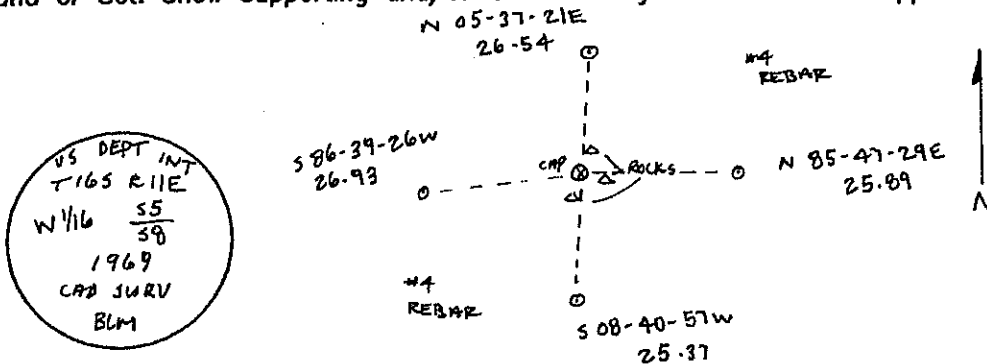
County Reference No. 161220600

Type of Monument: Section Corner Quarter Corner
 Bench Mark Other 1/16 CORNER

Your Description and Observation of Monument Found (Be Specific):
1969 BLM BRASS CAP 6" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.

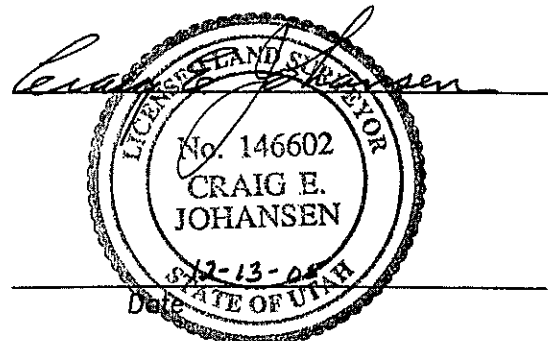
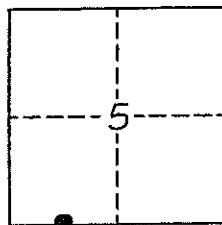


Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.
 Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:
 Section: 5
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township | | ½ (2) | N S | Range | | ½ (2) | E W | Section | | Meridian | | | | | | | | | | | | | | | | | | | | |
|--|---|--|-------------------------------|---|-----------------------------------|--|---------------------------------|-----------------------------|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| | | T | 1 | 6 | | S | 1 | 1 | | E | | (SL) US | | | | | | | | | | | | | | | | | | | | |
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="radio"/> Other <input type="radio"/> Local Survey | | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local | | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | | |
| Units | | Survey Foot | | <input checked="" type="radio"/> International Foot | | Meter | | Coordinate Type | | <input checked="" type="radio"/> State Plane | | UTM | | | | | | | | | | | | | | | | | | | | |
| Zone | | Utah North | | <input checked="" type="radio"/> Utah Central | | Utah South | | Vertical Datum | | NGVD29 | | <input checked="" type="radio"/> NAVD88 | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height | | M | | 5481.181 FT | | Geoid Height | | M | | 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | AM | | PM | | End Time | | | AM | | PM | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | | | | |
| Session End | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave M | | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="radio"/> RTK <input type="radio"/> FAST STATIC <input type="radio"/> STATIC <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 | | 4 | | 0 | | 3 | | 0 | | 0 | | Description S 1/4 corner Sec. 20 | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 0.9 | | | | RMS Worst 11.1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used | | Yes | | No | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | Pipe/Cap | | | | Post | | | Other | | | | | | | | | | | | | | | | | | | | | | |
| Size | | | Size 2½ / 3¼ | | | | Size 1969 BLM | | | Size | | | | | | | | | | | | | | | | | | | | | | |
| Material | | | Material steel / brass | | | | Material | | | Material | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611240300

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

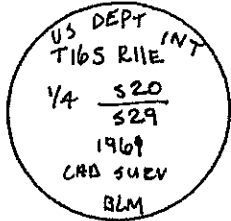
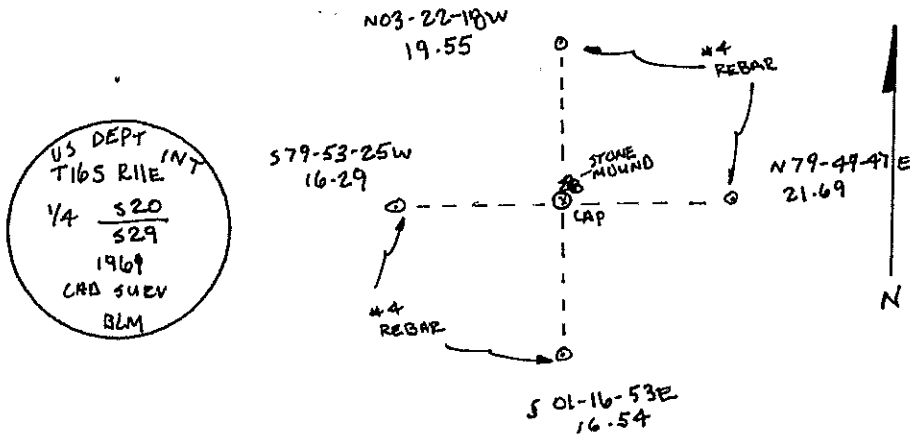
County Reference No. 1611240300

Type of Monument: Section Corner ✓ Quarter Corner
 Bench Mark Other

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP 7" ABOVE GROUND LEVEL WITH A SMALL STONE MOUND TO THE NORTH

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



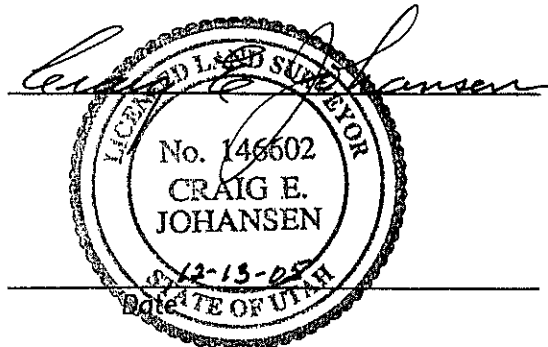
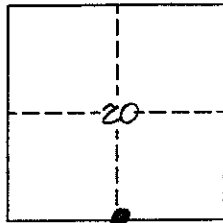
Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:
 Section: 20
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | 1/2 (2) | N S | Range 1 1 | | 1/2 (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | | |
|--|---|--|-------------------------------|--------------------------|-----------------------------------|--|---------------------------------|--|------------------------------|-----------------|-----|---------------------|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 12/07/05 | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP-WEST | | Type COR HARN TRI <input checked="" type="radio"/> Other LOCAL SURVEY | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name ELMO UTAH | | Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 8 | - | 0 | 8 | . | 2 | 2 | 8 | 1 | 8 | W | 1 | 1 | 0 | - | 4 | 7 | - | 1 | 5 | . | 1 | 3 | 2 | 7 | 7 | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 7 | 6 | 1 | 1 | 2 | . | 8 | 0 | | | | | | 1 | 8 | 4 | 1 | 5 | 4 | 5 | . | 4 | 0 | | | | | | | |
| Units Survey Foot <input type="radio"/> International Foot <input checked="" type="radio"/> Meter | | Coordinate Type State Plane <input type="radio"/> UTM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="radio"/> Utah Central <input checked="" type="radio"/> Utah South | | Vertical Datum NGVD29 <input type="radio"/> NAVD88 <input checked="" type="radio"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height 1711.15 M | | FT | | Geoid Height M | | 5671.75 FT | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | AM | | PM | | End Time | | | AM | | | PM | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave 4.311 Feet M | | | | | | | | | | | | | | | | | |
| Session End | | 1 st | | M | | 2 nd | | M | | 3 rd | | M | | Ave M | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="radio"/> RTK <input type="radio"/> FAST STATIC <input type="radio"/> STATIC <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 | | 4 | | 0 | | 4 | | 0 | | 0 | | Description S 1/4 corner Sec. 17 | | | | | | | | | | | | | | | | | |
| Occupation time | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | PDOP Worst 3.3 | | | | RMS Worst 10.3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used | | | Yes | | | No | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | Pipe/Cap | | | | Post | | | Other | | | | | | | | | | | | | | | | | | | | | |
| Size | | | Size 2 1/2 / 3/4 | | | | 2005 ECS | | | Size | | | | | | | | | | | | | | | | | | | | | |
| Material | | | Material alum. / alum. | | | | Material | | | Material | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611240400

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-10-05

County Reference No. 1611240400

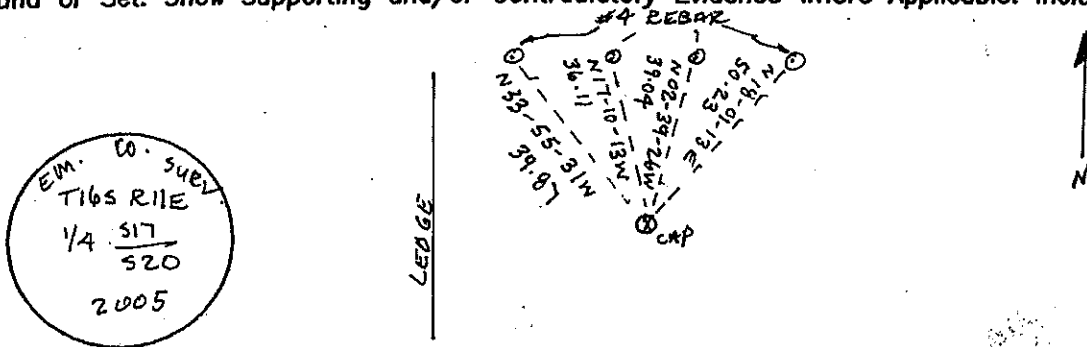
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):
 NO EVIDENCE OF ORIGINAL MONUMENT FOUND

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET AN ALUMINUM EMERY COUNTY SURVEYS CAP 10" ABOVE GROUND LEVEL
 SET 4 #4 REBAR AS SHOWN BELOW.

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

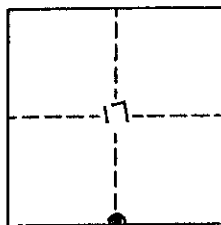
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 17
 Township: 16S
 Range: 11E



Craig E. Johansen
 No. 146602
 CRAIG E. JOHANSEN
 STATE OF UTAH
 Date: 12-13-05

PLSS GPS Observation Sheet

| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | Township T 1 6 | | | ½ (2) | N S | Range 1 1 | | ½ (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---------------------------|----------|--|--------------|---------------------------------|-------------------------|------------------------------|-----------------------------------|--------------------|----------------------------|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | | Date 11/28/05 | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name ELM GPS 12 | | COR | | | HARN | | | TRI | | | Type Other EMERY COUNTY | | | Accuracy Order | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Nad27 | | | Nad83 | | | Datum (Nad83 (1994)) | | | WGS84 | | | Local | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | State UTAH | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | County EMERY | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 3 | - | 2 | 5 | . | 4 | 2 | 8 | 1 | 2 | 7 | W | 1 | 1 | 0 | - | 4 | 5 | - | 0 | 1 | . | 5 | 8 | 6 | 1 | 0 |
| Northing | | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 4 | 7 | 5 | 8 | 7 | . | 6 | 3 | | | | | | | 1 | 8 | 5 | 2 | 2 | 5 | 7 | . | 0 | 6 | | | | | | |
| Units | | Survey Foot | | International Foot | | Meter | | Coordinate Type | | | | State Plane | | UTM | | | | | | | | | | | | | | | | | |
| Zone | | Utah North | | Utah Central | | Utah South | | Vertical Datum | | | | NGVD29 | | NAVD88 | | | | | | | | | | | | | | | | | |
| Ellipsoid Height | | 1711.15 M | | | | FT | | Geoid Height | | | | M | | 5671.75 FT | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | | | AM | | PM | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2 nd | | M | | 3 rd | | M | | Ave 4.678 Feet M | | | | | | | | | | | | | | | | | |
| Session End | | 1" | | M | | 2 nd | | M | | 3 rd | | M | | Ave M | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type (RTK) FAST STATIC STATIC OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 | | 4 | | 0 | | 5 | | 0 | | 0 | | Description N 1/4 corner Sec. 17 | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 2.4 | | | | RMS Worst 26.4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | Alternate Base Station Used | | | | Yes | | No | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2½ / 3¼ 1969 BLM | | | | Size | | | | Size | | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | | Material | | | | Material | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611240500

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-29-05

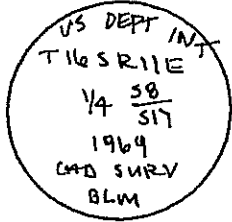
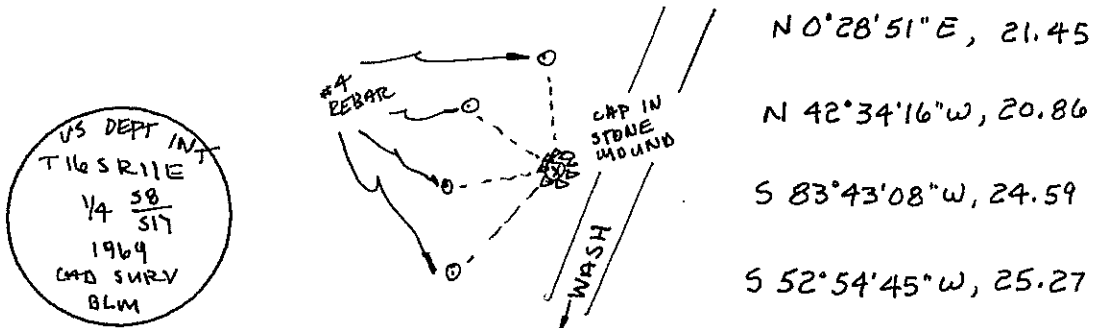
County Reference No. 1611240500

Type of Monument: Section Corner Quarter Corner
 Bench Mark Other

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP IN A STONE MOUND
 STAMPING ON CAP FACES SOUTH.

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.

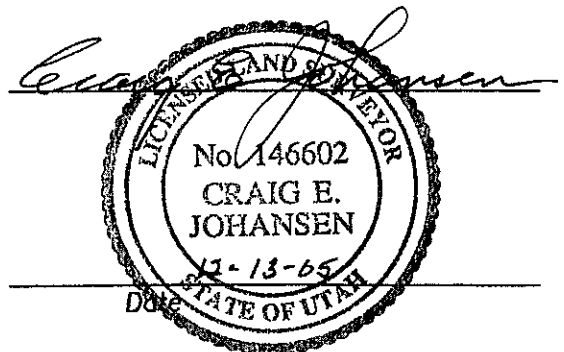
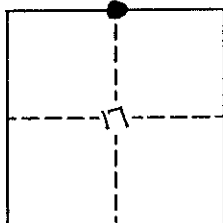


Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.
 Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:
 Section: 17
 Township: 16 S
 Range: 11 E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | 1/2 (2) | N S | Range 1 1 | | 1/2 (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | | |
|--|---|--|-----------------------------------|--------------------|--------|--|---------------------------------|--|--|---------|----|---------------------|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="radio"/> Other Local Survey | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | |
| Northing | | | | | | | | | | | | | Easting | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | |
| Units Survey Foot <input type="radio"/> International Foot <input checked="" type="radio"/> Meter | | Coordinate Type State Plane <input checked="" type="radio"/> UTM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="radio"/> Utah Central <input checked="" type="radio"/> Utah South | | Vertical Datum NGVD29 <input type="radio"/> NAVD88 <input checked="" type="radio"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | Geoid Height M 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time AM PM | | | End Time AM PM | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | M | 2" | M | 3" | M | Ave 4.157 Feet M | | | | | | | | | | | | | | | | | | | | | | | |
| Session End | | 1" | M | 2" | M | 3" | M | Ave M | | | | | | | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station Miles | | | Antenna Type 5800 INTERNAL | | | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="radio"/> RTK <input type="radio"/> FAST STATIC <input type="radio"/> STATIC <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 | 4 | 0 | 6 | 0 | 0 | | Description S 1/4 corner Sec. 5 | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 3.5 | | | | RMS Worst 11.2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | Alternate Base Station Used | | | Yes | No | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | Other | | | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2 1/2 / 3 1/4 1969 BLM | | | | Size | | | Size | | | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | | Material | | | Material | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611240600

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

County Reference No. 1611240600

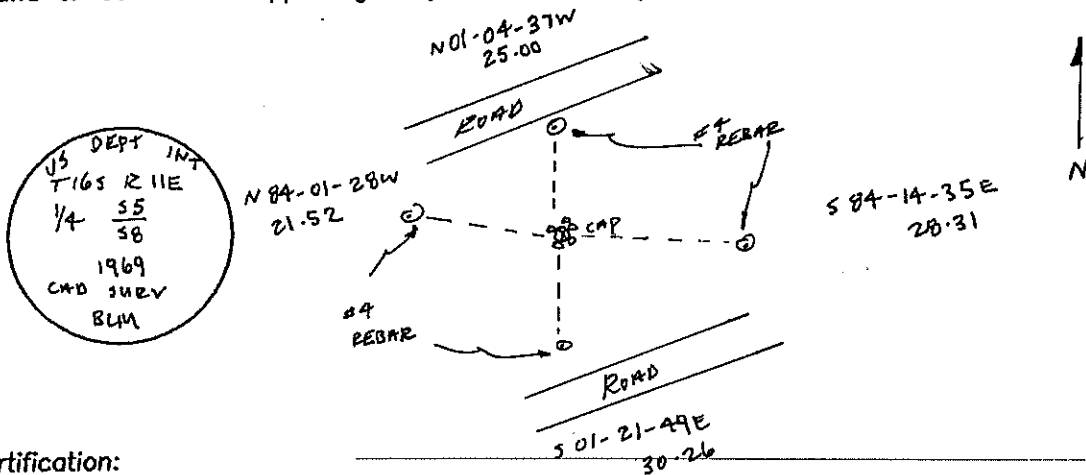
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP 6" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification: _____

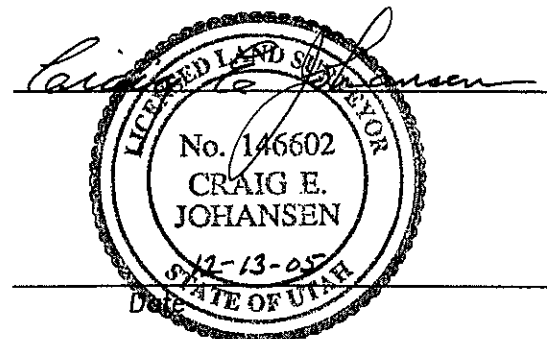
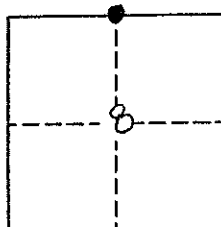
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 8
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | | | Township | | 1/2 (2) | N S | Range | | 1/2 (2) | E W | Section | Meridian | | | | | | | | | | | | | | | | | | |
|--|---|--------------------------|----------------------------------|---|------|--|---|---------------------------------|---|---|--------|---------|----------|-------------|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | | | | T | 1 | 6 | S | 1 | 1 | | E | | (SL) US | | | | | | | | | | | | | | | | | | |
| Contacts Name Lee M. Swasey | | | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 12/01/05 | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | | | Type <input checked="" type="checkbox"/> Other <input type="checkbox"/> Local Survey | | | | | | Accuracy | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | | | COR | HARN | TRI | Datum <input checked="" type="checkbox"/> Nad83 (1994) <input type="checkbox"/> WGS84 <input type="checkbox"/> Local | | | Order State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | |
| Units Survey Foot <input type="checkbox"/> International Foot <input checked="" type="checkbox"/> Meter <input type="checkbox"/> | | | | Coordinate Type State Plane <input checked="" type="checkbox"/> UTM <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="checkbox"/> Utah Central <input checked="" type="checkbox"/> Utah South <input type="checkbox"/> | | | | Vertical Datum NGVD29 <input type="checkbox"/> NAVD88 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | | | Geoid Height M 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | AM | | PM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2" | | M | | 3" | | M | Ave | 4.206 Feet | | M | | | | | | | | | | | | | | | |
| Session End | | 1" | | M | | 2" | | M | | 3" | | M | Ave | M | | M | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="checkbox"/> RTK <input type="checkbox"/> FAST STATIC <input type="checkbox"/> STATIC <input type="checkbox"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 2 | | 4 | | 0 | | 7 | | 0 | | 0 | | C | C | Description N 1/4 corner Sec. 5 | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | | PDOP Worst 2.1 | | | | RMS Worst 17.8 | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | | | | | | | | | | | | | Description | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used | | | Yes | | No | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | Pipe/Cap | | | | Post | | | Other | | | | | | | | | | | | | | | | | | | | | |
| Size | | | Size 2 1/2 / 3/4 1969 BLM | | | | Size | | | Size | | | | | | | | | | | | | | | | | | | | | |
| Material | | | Material steel / brass | | | | Material | | | Material | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611240700 CC

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-01-05

County Reference No. 1611240700

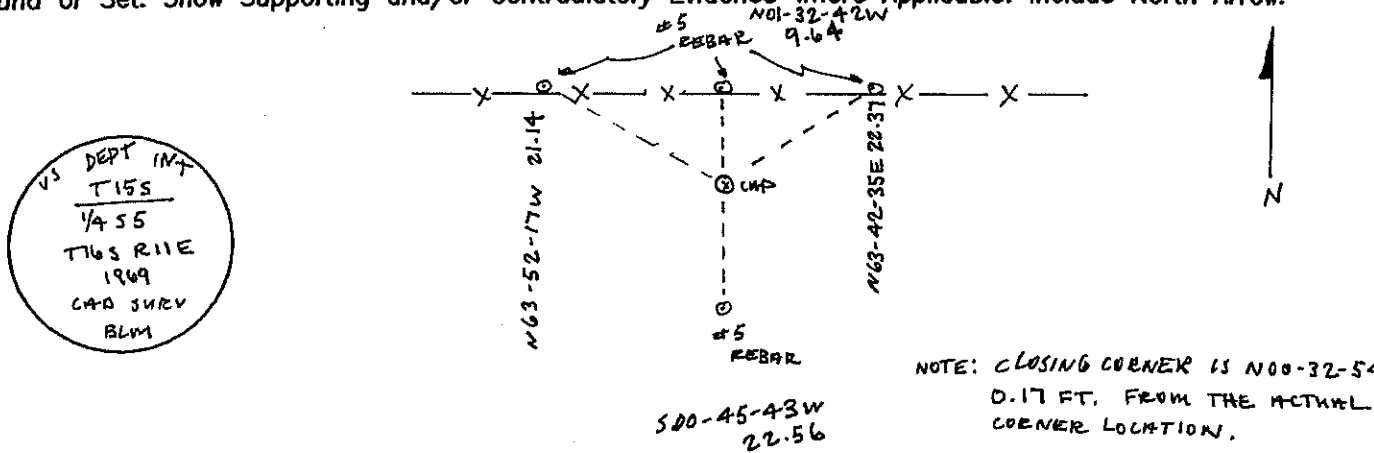
Type of Monument: _____ Section Corner
 _____ Bench Mark

Quarter Corner
 _____ Other _____

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP 8" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #5 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

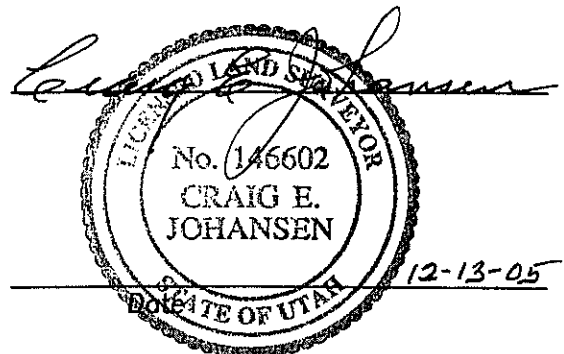
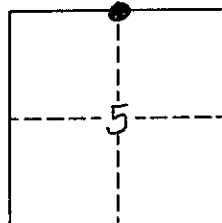
Address: 90 S. 100 E. Castle Dale, Utah 84513

Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 5
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| | | | | | | | | | | | | |
|--|--|---|-----------------------------------|--------------------|-----------------------------|--|---------------------------------|--|----------|---------|--|---------------------|
| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | ½ (2) | N S | Range 1 1 | | ½ (2) | E W | Section | | Meridian (SL) US |
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <u>Other</u> Local Survey | | | | | | Accuracy Order | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <u>(Nad83 (1994))</u> WGS84 Local | | | | | | State UTAH County EMERY | | | | |
| Latitude N 3 9 - 2 6 - 1 6 . 2 0 1 4 5 | | | | | | Longitude W 1 1 0 - 4 2 - 2 8 . 1 7 5 6 3 | | | | | | |
| Northing 6 9 6 4 9 6 8 . 4 0 | | | | | | Easting 1 8 6 4 1 4 7 . 1 2 | | | | | | |
| Units Survey Foot <u>International Foot</u> Meter | | Coordinate Type <u>State Plane</u> UTM | | | | | | | | | | |
| Zone Utah North <u>Utah Central</u> Utah South | | Vertical Datum NGVD29 <u>NAVD88</u> | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | Geoid Height M 5538.90 FT | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 4000 SSI | | | | Serial Number | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | |
| Start Time AM PM | | | End Time AM PM | | | Antenna Height | | | | | | |
| Session Beginning | | 1 st M | | 2 nd M | | 3 rd M | | Ave 4.157 Feet M | | | | |
| Session End | | 1 st M | | 2 nd M | | 3 rd M | | Ave M | | | | |
| Rover Receiver | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 5800 | | | | Serial Number 4253117118 | | | | | |
| Approximate Distance From Base Station Miles | | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | |
| Station Observation | | | | | | | | | | | | |
| Observation Type <u>(RTK)</u> FAST STATIC STATIC OTHER | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | |
| Station Name (M1) 3 0 0 3 0 0 | | Description SE corner Sec. 20 | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | |
| Number of Measurements 60 | | PDOP Worst 1.3 | | | | RMS Worst 14.7 | | | | | | |
| Second Observation | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | |
| Inverse Distance Between M1 and M2 | | | FT | | Alternate Base Station Used | | | Yes No | | | | |
| Monument and Markings | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | Other | | | |
| Size | | Size 2½ / 3¼ 1969 BLM | | | | Size | | | Size | | | |
| Material | | Material steel / brass | | | | Material | | | Material | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300300

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-1-05

County Reference No. 1611300300

Type of Monument: Section Corner
 Bench Mark

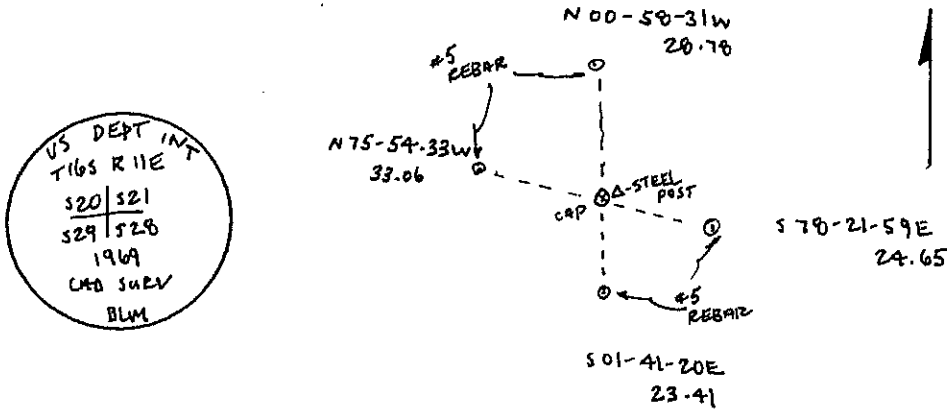
Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):

1969 BLM BRASS CAP 9" ABOVE GROUND LEVEL WITH #5 STEEL POST DRIVEN ALONGSIDE

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #5 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

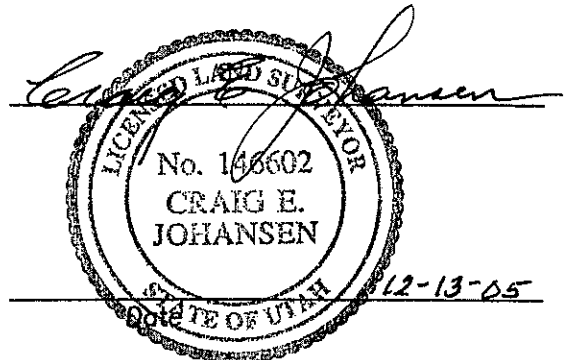
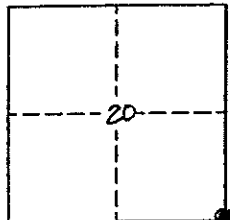
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: .20
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | | | Township | | | ½ (2) | N S | Range | | ½ (2) | E W | Section | | Meridian | | | | | | | | | | | | | | | |
|---|---|------------|---|---|------|-----------------------------------|----------------------|---------------------------------|-------|------------------------------|----------|--|---------|---|----------|------|----|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | T | 1 | 6 | | S | 1 | 1 | | E | | | | (SL) | US | | | | | | | | | | | | | |
| Contacts Name Lee M. Swasey | | | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | | | Type | | | | | | | | Accuracy | | | | | | | | | | | | | | | | | | |
| | | | | COR | HARN | TRI | (Other) Local Survey | | | | | Order | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | | | Datum | | | | | | | | State UTAH | | | | | | | | | | | | | | | | | | |
| Nad27 | | Nad83 | | (Nad83 1994) | | WGS84 | | Local | | County EMERY | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 |
| Northing | | | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | |
| Units | | | | Survey Foot | | (International Foot) | | Meter | | Coordinate Type | | | | (State Plane) | | UTM | | | | | | | | | | | | | | |
| Zone | | Utah North | | (Utah Central) | | Utah South | | Vertical Datum | | | | NGVD29 | | (NAVD88) | | | | | | | | | | | | | | | | |
| Ellipsoid Height | | | | M | | 5481.181 FT | | Geoid Height | | | | M | | 5538.90 FT | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval | | 5 SEC. | | Elevation Mask | | 13 | | PDOP Mask | | 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | AM | | PM | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2" | | M | | 3" | | M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | | |
| Session End | | 1" | | M | | 2" | | M | | 3" | | M | | Ave M | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type (RTK) FAST STATIC STATIC OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 3 | | 0 | | 0 | | 3 | | 4 | | 0 | | Description E 1/4 corner Sec. 20 | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | | PDOP Worst 2.8 | | | | RMS Worst 8.8 | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | | | | | | | | | | | | | Description | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | Alternate Base Station Used | | | | Yes | | No | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | |
| Size | | | | Size 2½ / 3¼ 1969 BLM RM's | | | | Size | | | | Size | | | | | | | | | | | | | | | | | | |
| Material | | | | Material steel / brass | | | | Material | | | | Material | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300340

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

County Reference No. 1611300340

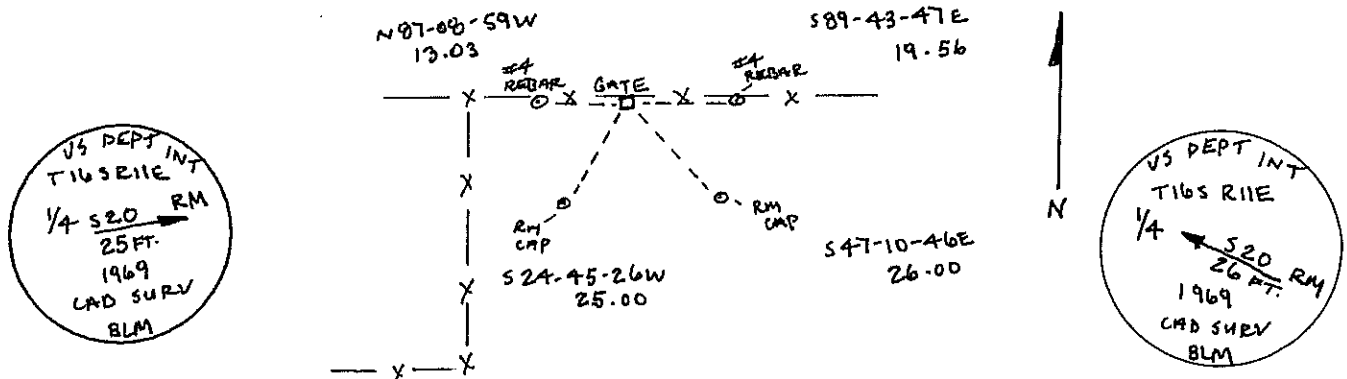
Type of Monument: _____ Section Corner
 _____ Bench Mark

Quarter Corner
 _____ Other _____

Your Description and Observation of Monument Found (Be Specific):
 2 1969 BLM BRASS CAPS SET AS REFERENCE MARKERS
 NO EVIDENCE OF ACTUAL CORNER FOUND

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 2 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

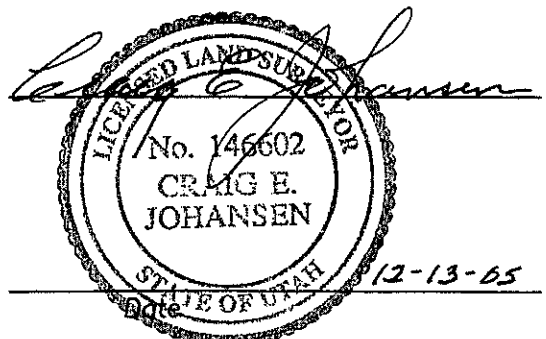
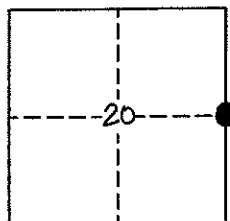
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 20
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E <small>(Meridian Township Range)</small> | | Township T 1 6 | | ½ (2) | N S | Range 1 1 | | ½ (2) | E W | Section | | Meridian SL US | | |
|---|--|---|-----------------------------------|---|--------|---|---------------------------------|--|--|-------------|--|--------------------------|-------------------------------------|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI Other Local Survey | | | | | | | Accuracy Order | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 Nad83 (1994) WGS84 Local | | | | | | | State UTAH County EMERY | | | | | |
| Latitude N 3 9 - 2 6 - 1 6 . 2 0 1 4 5 | | | | | | Longitude W 1 1 0 - 4 2 - 2 8 . 1 7 5 6 3 | | | | | | | | |
| Northing 6 9 6 4 9 6 8 . 4 0 | | | | | | Easting 1 8 6 4 1 4 7 . 1 2 | | | | | | | | |
| Units Survey Foot International Foot Meter | | Coordinate Type State Plane UTM | | Zone Utah North Utah Central Utah South | | Vertical Datum NGVD29 NAVD88 | | Ellipsoid Height M 5481.181 FT | | | | | Geoid Height M 5538.90 FT | |
| Base Receiver | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 4000 SSI | | | | Serial Number | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | |
| Start Time AM PM | | | End Time AM PM | | | Antenna Height | | | | | | | | |
| Session Beginning | | 1" M | | 2 nd M | | 3 rd M | | Ave 4.157 Feet M | | Session End | | | | |
| | | 1" M | | 2 nd M | | 3 rd M | | Ave | | M | | | | |
| Rover Receiver | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | |
| Approximate Distance From Base Station Miles | | | Antenna Type 5800 INTERNAL | | | | | | Antenna Height 6.6 FT | | | | | |
| Station Observation | | | | | | | | | | | | | | |
| Observation Type RTK FAST STATIC STATIC OTHER | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | |
| Station Name (M1) 3 0 0 4 0 0 | | Description SE corner Sec, 17 | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 2.6 | | | | RMS Worst 10.9 | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used | | Yes No | | | | |
| Monument and Markings | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | | Other | | | | |
| Size | | Size 2½ / 3¼ 1969 BLM | | | | Size | | | | Size | | | | |
| Material | | Material steel / brass | | | | Material | | | | Material | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300400

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

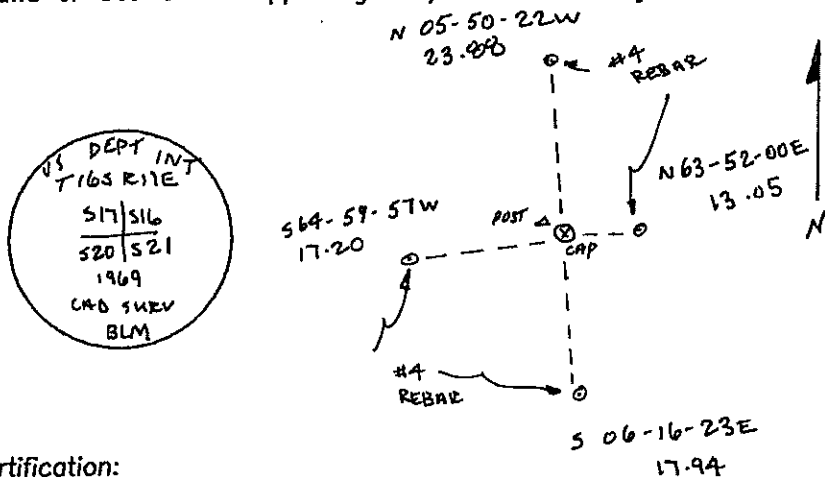
County Reference No. 1611300400

Type of Monument: Section Corner Quarter Corner
 Bench Mark Other _____

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP 8" ABOVE GROUND LEVEL WITH A STEEL FENCE POST DRIVEN ALONGSIDE

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.

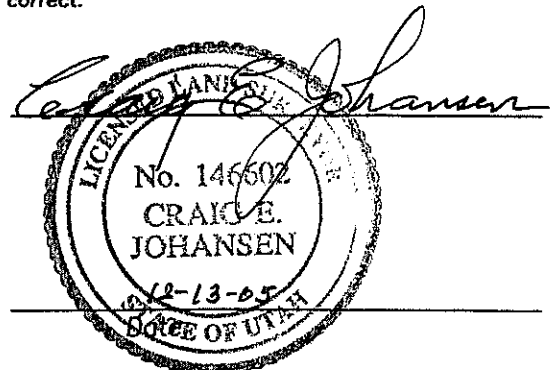
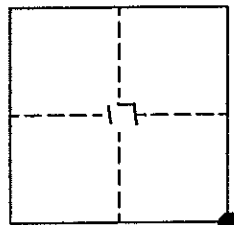


Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.
 Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:
 Section: 17
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|-----------------------------------|---|---|--|------------------------------|--------|---------|----------|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Project Name SL T16S R11E (Meridian Township Range) | | Township | | ½ (2) | N S | Range | | ½ (2) | E W | Section | Meridian | | | | | | | | | | | | | | | | | | | |
| Contacts Name Lee M. Swasey | | T | | 1 | 6 | S | 1 | 1 | E | | (SL) US | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | COR | | HARN | TRI | Type <input checked="" type="checkbox"/> Other <input type="checkbox"/> Local Survey | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Nad27 | | Nad83 | Datum <input checked="" type="checkbox"/> Nad83 (1994) <input type="checkbox"/> WGS84 <input type="checkbox"/> Local | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | |
| Units Survey Foot <input type="checkbox"/> International Foot <input checked="" type="checkbox"/> Meter <input type="checkbox"/> | | Coordinate Type State Plane <input checked="" type="checkbox"/> UTM <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="checkbox"/> Utah Central <input checked="" type="checkbox"/> Utah South <input type="checkbox"/> | | Vertical Datum NGVD29 <input type="checkbox"/> NAVD88 <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | Geoid Height M 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 4000 SSI | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | AM | | PM | | End Time | | AM | | PM | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2" | | M | | 3" | | M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | | |
| Session End | | 1" | | M | | 2" | | M | | 3" | | M | | Ave M | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 5800 | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="checkbox"/> RTK <input type="checkbox"/> FAST STATIC <input type="checkbox"/> STATIC <input type="checkbox"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 3 | | 0 | | 0 | | 4 | | 2 | | 0 | | Description S 1/16 corner Sec. 17 - Sec. 16 | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 4.0 | | RMS Worst 5.0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | FT | | Alternate Base Station Used | | Yes | | No | | | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | Post | | Other | | | | | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2½ / 3¼ 1969 BLM | | Size | | Size | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | Material | | Material | | | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300420

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

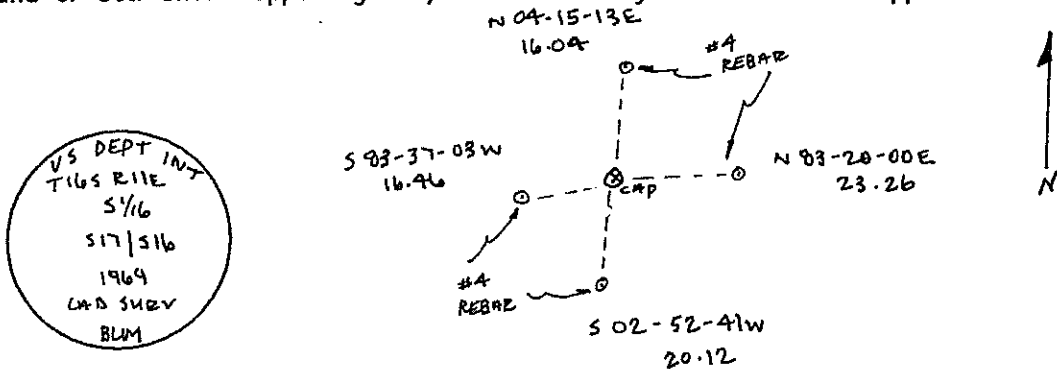
County Reference No. 1611300420

Type of Monument: _____ Section Corner
 _____ Bench Mark
 _____ Quarter Corner
 Other 1/16 CORNER

Your Description and Observation of Monument Found (Be Specific):
1969 BLM BRASS CAP 4" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.

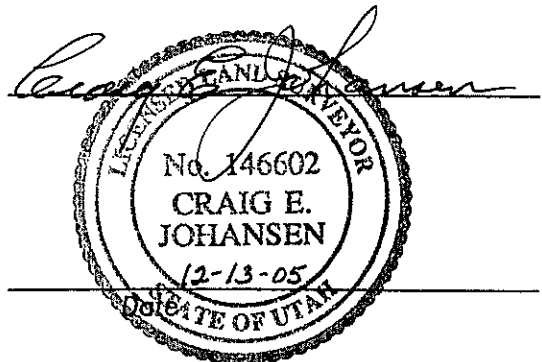
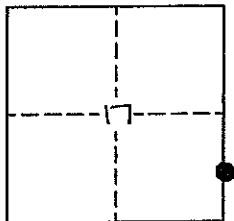


Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.
 Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:
 Section: 17
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | ½ (2) | N S | Range 1 1 | | ½ (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | | | |
|--|---|--|------------------------|----------------------------------|--------|--|----------|-----------------------------|--------|-----------------------|--------|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="radio"/> Other Local Survey | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | | |
| Northing | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | | |
| Units Survey Foot <input checked="" type="radio"/> International Foot <input type="radio"/> Meter | | | | | | Coordinate Type State Plane <input type="radio"/> UTM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input checked="" type="radio"/> Utah Central <input type="radio"/> Utah South | | | | | | Vertical Datum NGVD29 <input checked="" type="radio"/> NAVD88 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | | | | | Geoid Height M 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM PM | | End Time | | | | | | AM PM | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" M | | 2" M | | 3" M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | | | | | | | | | | |
| Session End | | 1" M | | 2" M | | 3" M | | Ave | | M | | | | | | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="radio"/> RTK <input type="radio"/> FAST STATIC <input type="radio"/> STATIC <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 3 0 0 4 4 0 | | Description E 1/4 corner Sec. 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | | PDOP Worst 3.4 | | | | RMS Worst 16.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used | | | Yes No | | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | | Pipe/Cap | | | | Post | | | Other | | | | | | | | | | | | | | | | | | | | | | |
| Size | | | Size 2½ / 3¼ 1969 BLM | | | | Size | | | Size | | | | | | | | | | | | | | | | | | | | | | |
| Material | | | Material steel / brass | | | | Material | | | Material | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300440

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-30-05

County Reference No. 1611300440

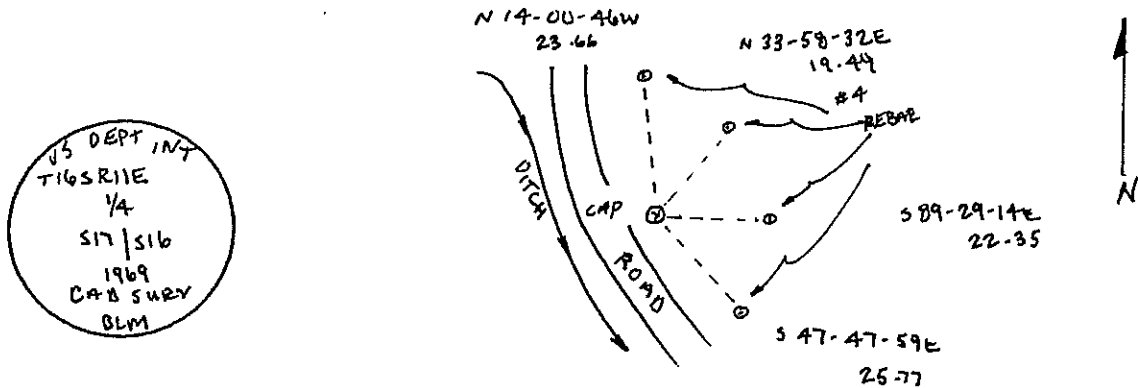
Type of Monument: _____ Section Corner
 _____ Bench Mark

Quarter Corner
 _____ Other _____

Your Description and Observation of Monument Found (Be Specific):
1969 BLM BRASS CAP 6" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

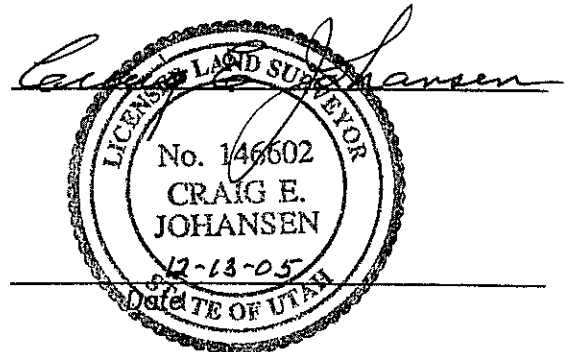
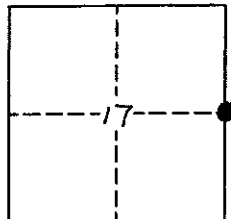
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 17
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | 1/2 (2) | N S | Range 1 1 | | 1/2 (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | |
|--|---|--|---|---|--------|--|-----------|--|--------|------------------------------|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="radio"/> Other <input type="radio"/> Local Survey | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 |
| Northing | | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | |
| Units | | Survey Foot | | <input checked="" type="radio"/> International Foot | | Meter | | Coordinate Type | | | | <input checked="" type="radio"/> State Plane | | UTM | | | | | | | | | | | | | | | | |
| Zone | | Utah North | | <input checked="" type="radio"/> Utah Central | | Utah South | | Vertical Datum | | | | NGVD29 | | <input checked="" type="radio"/> NAVD88 | | | | | | | | | | | | | | | | |
| Ellipsoid Height | | M | | 5481.181 FT | | Geoid Height | | M | | 5538.90 FT | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | | | AM | | PM | | End Time | | | | AM | | PM | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" | | M | | 2" | | M | | 3" | | M | | Ave 4.157 Feet M | | | | | | | | | | | | | | | | |
| Session End | | 1" | | M | | 2" | | M | | 3" | | M | | Ave M | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type | | <input checked="" type="radio"/> RTK | | FAST STATIC | | STATIC | | OTHER | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 3 | | 0 | | 0 | | 5 | | 0 | | 0 | | Description NE corner Sec. 17 | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | | | PDOP Worst 3.4 | | | | RMS Worst 17.3 | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | FT | | Alternate Base Station Used | | | | Yes | | No | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2 1/2 / 3 1/4 1969 BLM | | | | Size | | | | Size | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | | Material | | | | Material | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300500

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-29-05

County Reference No. 1611300500

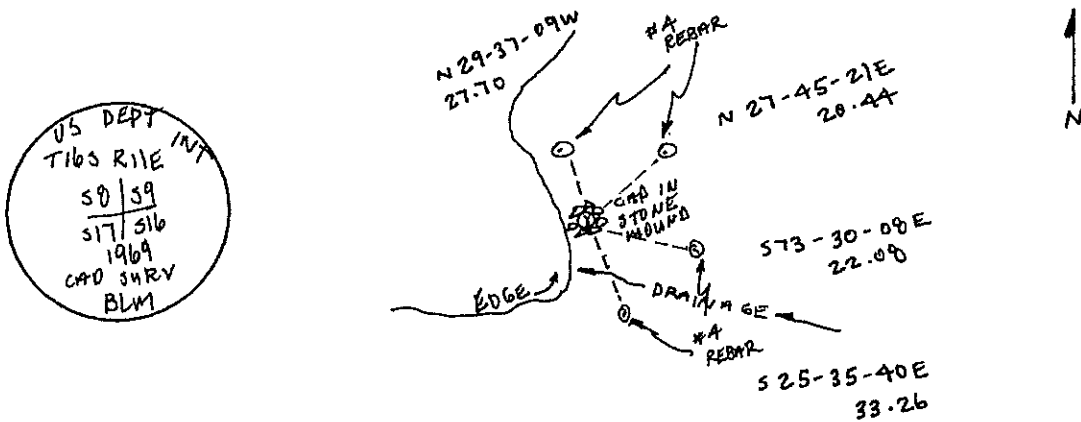
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP IN A STONE MOUND

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 *4 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

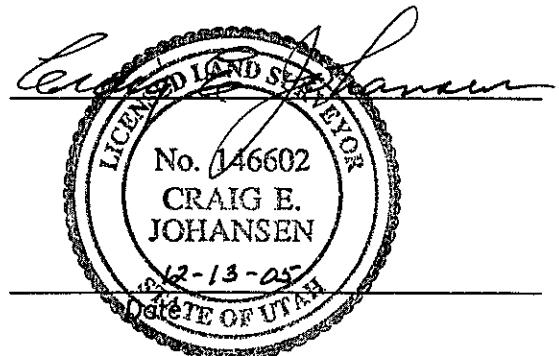
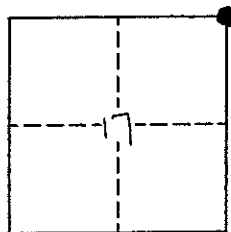
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 17
 Township: 16 S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | ¼ (2) | N S | Range 1 1 | | ¼ (2) | E W | Section | | Meridian (SL) US | |
|--|--|---|--|-------------------------------------|--------|--|--|--|--------|----------|--|---------------------|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="checkbox"/> Other Local Survey | | | | | | Accuracy Order | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="checkbox"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | |
| Latitude N 3 9 - 2 6 - 1 6 . 2 0 1 4 5 | | | | | | | Longitude W 1 1 0 - 4 2 - 2 8 . 1 7 5 6 3 | | | | | | |
| Northing 6 9 6 4 9 6 8 . 4 0 | | | | | | | Easting 1 8 6 4 1 4 7 . 1 2 | | | | | | |
| Units Survey Foot <input checked="" type="checkbox"/> International Foot Meter | | Coordinate Type State Plane UTM | | | | | | | | | | | |
| Zone Utah North <input checked="" type="checkbox"/> Utah Central Utah South | | Vertical Datum NGVD29 <input checked="" type="checkbox"/> NAVD88 | | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | Geoid Height M 5538.90 FT | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 4000 SSI | | | | Serial Number | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | |
| Start Time | | AM PM | | End Time | | AM PM | | | | | | | |
| Antenna Height | | | | | | | | | | | | | |
| Session Beginning | | 1" M 2" M 3" M | | Ave 4.157 Feet M | | | | | | | | | |
| Session End | | 1" M 2" M 3" M | | Ave | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | |
| Approximate Distance From Base Station | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | |
| Station Observation | | | | | | | | | | | | | |
| Observation Type <input checked="" type="checkbox"/> RTK <input type="checkbox"/> FAST STATIC <input type="checkbox"/> STATIC <input type="checkbox"/> OTHER | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | |
| Station Name (M1) | | 3 0 0 6 0 0 | | Description SE corner Sec. 5 | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 1.9 | | | | RMS Worst 13.1 | | | | | | | |
| Second Observation | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | |
| Inverse Distance Between M1 and M2 | | FT | | Alternate Base Station Used | | | | Yes No | | | | | |
| Monument and Markings | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | | Other | | | |
| Size | | Size 2½ / 3¼ 1969 BLM | | | | Size | | | | Size | | | |
| Material | | Material steel / brass | | | | Material | | | | Material | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300600

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-1-05

County Reference No. 161/300600

Type of Monument: Section Corner
 Bench Mark

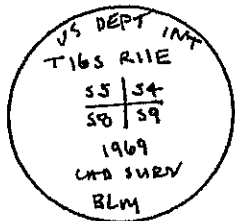
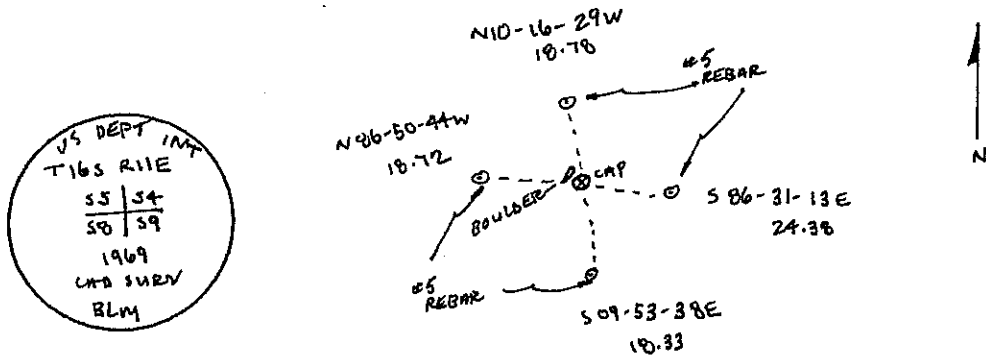
Quarter Corner
 Other _____

Your Description and Observation of Monument Found (Be Specific):

1969 BLM BRASS CAP 4" ABOVE GROUND LEVEL WITH A BOULDER PLANTED ALONGSIDE

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #5 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

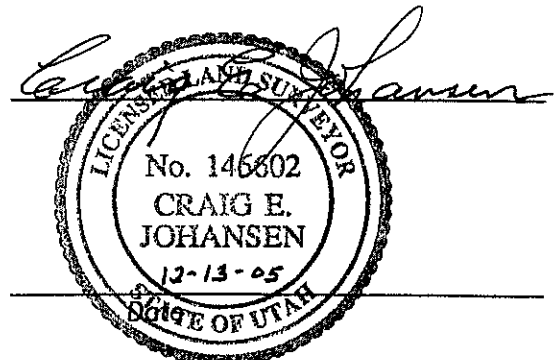
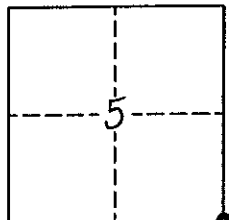
Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 5
 Township: 16S
 Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | 1/2 (2) | N S | Range 1 1 | | 1/2 (2) | E W | Section | | Meridian (SL) US | | |
|--|--|---|------------------------------------|---|--------|--|---------------------------------|--|--|----------|--|----------------------------|-------------------------------------|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 11/30/05 | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="checkbox"/> Other Local Survey | | | | | | | Accuracy Order | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="checkbox"/> Nad83 (1994) WGS84 Local | | | | | | | State UTAH County EMERY | | | | | |
| Latitude N 3 9 - 2 6 - 1 6 . 2 0 1 4 5 | | | | | | Longitude W 1 1 0 - 4 2 - 2 8 . 1 7 5 6 3 | | | | | | | | |
| Northing 6 9 6 4 9 6 8 . 4 0 | | | | | | Easting 1 8 6 4 1 4 7 . 1 2 | | | | | | | | |
| Units Survey Foot <input type="checkbox"/> International Foot <input checked="" type="checkbox"/> Meter | | Coordinate Type State Plane <input checked="" type="checkbox"/> UTM | | Zone Utah North <input type="checkbox"/> Utah Central <input checked="" type="checkbox"/> Utah South | | Vertical Datum NGVD29 <input type="checkbox"/> NAVD88 <input checked="" type="checkbox"/> | | Ellipsoid Height M 5481.181 FT | | | | | Geoid Height M 5538.90 FT | |
| Base Receiver | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 4000 SSI | | | | Serial Number | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | |
| Start Time AM PM | | | End Time AM PM | | | Antenna Height | | | | | | | | |
| Session Beginning | | 1" M | | 2 nd M | | 3 rd M | | Ave 4.157 Feet M | | | | | | |
| Session End | | 1" M | | 2 nd M | | 3 rd M | | Ave M | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | |
| Type TRIMBLE | | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | |
| Approximate Distance From Base Station Miles | | | Antenna Type 5800 INTERNAL | | | | | | Antenna Height 6.6 FT | | | | | |
| Station Observation | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="checkbox"/> RTK <input type="checkbox"/> FAST STATIC <input type="checkbox"/> STATIC <input type="checkbox"/> OTHER | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | |
| Station Name (M1) 3 0 0 6 4 0 | | Description E 1/4 corner Sec. 5 | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 1.4 | | | | RMS Worst 9.5 | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | |
| Inverse Distance Between M1 and M2 | | | | | | FT | | Alternate Base Station Used Yes No | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | |
| Stone | | | Pipe/Cap | | | | Post | | | Other | | | | |
| Size | | | Size 2 1/2 / 3 1/4 1969 BLM | | | | Size | | | Size | | | | |
| Material | | | Material steel / brass | | | | Material | | | Material | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300640

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-01-05

County Reference No. 1611300640

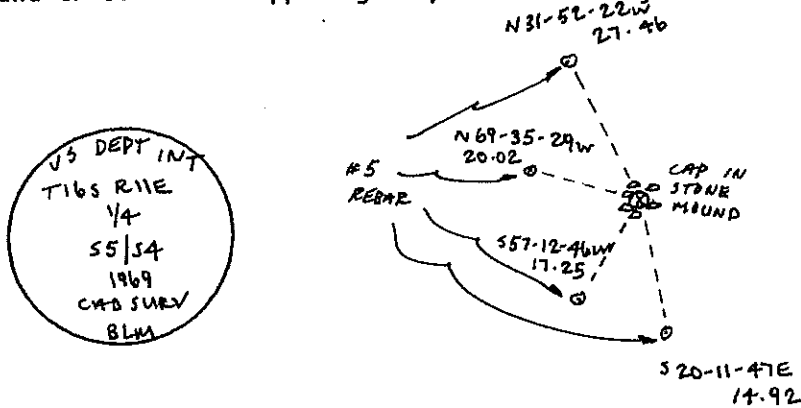
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other

Your Description and Observation of Monument Found (Be Specific):
1969 BLM BRASS CAP IN STONE MOUND

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #5 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513

Phone: (435) 381-2523

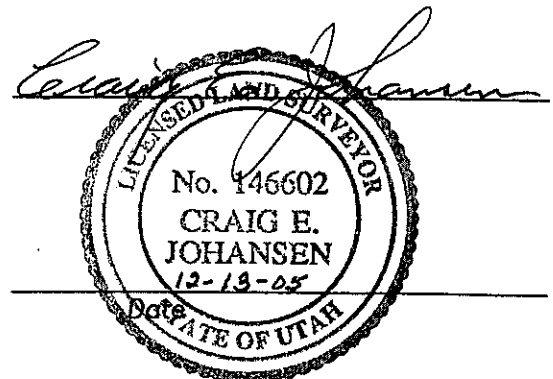
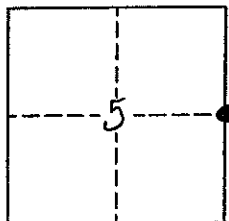
This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 5

Township: 16S

Range: 11E



PLSS GPS Observation Sheet

| Project Name SL T16S R11E (Meridian Township Range) | | Township T 1 6 | | 1/2 (2) | N S | Range 1 1 | | 1/2 (2) | E W | Section | | Meridian (SL) US | | | | | | | | | | | | | | | | | | | | |
|--|---|--|---|-------------------------------------|--------|--|-----------|--|--------|--------------|---|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| Contacts Name Lee M. Swasey | | Source Agency JOHANSEN & TUTTLE ENGINEERING | | | | | | Date 12/01/05 | | | | | | | | | | | | | | | | | | | | | | | | |
| Contacts Phone (435) 381-2523 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Control Station | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Name CP - 1 | | Type COR HARN TRI <input checked="" type="radio"/> Other Local Survey | | | | | | Accuracy Order | | | | | | | | | | | | | | | | | | | | | | | | |
| USGS Quad Name OLSEN RESERVOIR UTAH | | Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local | | | | | | State UTAH County EMERY | | | | | | | | | | | | | | | | | | | | | | | | |
| Latitude | | | | | | | Longitude | | | | | | | | | | | | | | | | | | | | | | | | | |
| N | 3 | 9 | - | 2 | 6 | - | 1 | 6 | . | 2 | 0 | 1 | 4 | 5 | W | 1 | 1 | 0 | - | 4 | 2 | - | 2 | 8 | . | 1 | 7 | 5 | 6 | 3 | | |
| Northing | | | | | | | Easting | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 9 | 6 | 4 | 9 | 6 | 8 | . | 4 | 0 | | | | | | 1 | 8 | 6 | 4 | 1 | 4 | 7 | . | 1 | 2 | | | | | | | | |
| Units Survey Foot <input type="radio"/> International Foot <input checked="" type="radio"/> Meter | | Coordinate Type State Plane <input checked="" type="radio"/> UTM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zone Utah North <input type="radio"/> Utah Central <input checked="" type="radio"/> Utah South | | Vertical Datum NGVD29 <input type="radio"/> NAVD88 <input checked="" type="radio"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ellipsoid Height M 5481.181 FT | | Geoid Height M 5538.90 FT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 4000 SSI | | | | Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Logging Interval 5 SEC. | | Elevation Mask 13 | | PDOP Mask 6 | | Antenna Type L1/L2 w/GROUND PLANE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Start Time | | AM PM | | End Time | | AM PM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antenna Height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Session Beginning | | 1" M | | 2" M | | 3" M | | Ave | | 4.206 Feet M | | | | | | | | | | | | | | | | | | | | | | |
| Session End | | 1" M | | 2" M | | 3" M | | Ave | | M | | | | | | | | | | | | | | | | | | | | | | |
| Rover Receiver | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type TRIMBLE | | Model 5800 | | | | Serial Number 4253117118 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approximate Distance From Base Station | | Miles | | Antenna Type 5800 INTERNAL | | | | Antenna Height 6.6 FT | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Observation Type <input checked="" type="radio"/> RTK <input type="radio"/> FAST STATIC <input type="radio"/> STATIC <input type="radio"/> OTHER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| First Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M1) | | 3 0 0 7 0 0 C C | | Description NE corner Sec. 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements 60 | | PDOP Worst 1.9 | | | | RMS Worst 11.9 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Second Observation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Station Name (M2) | | Description | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Occupation time | | PDOP Best | | | | RMS Best | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of Measurements | | PDOP Worst | | | | RMS Worst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inverse Distance Between M1 and M2 | | FT | | Alternate Base Station Used | | | | Yes | | No | | | | | | | | | | | | | | | | | | | | | | |
| Monument and Markings | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type / Size | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stone | | Pipe/Cap | | | | Post | | | | Other | | | | | | | | | | | | | | | | | | | | | | |
| Size | | Size 2 1/2 / 3 1/4 1969 BLM | | | | Size | | | | Size | | | | | | | | | | | | | | | | | | | | | | |
| Material | | Material steel / brass | | | | Material | | | | Material | | | | | | | | | | | | | | | | | | | | | | |

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly

See Emery County Land Survey Monument Record Sheet 1611300700 CC

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-01-05

County Reference No. 1611300700 CC

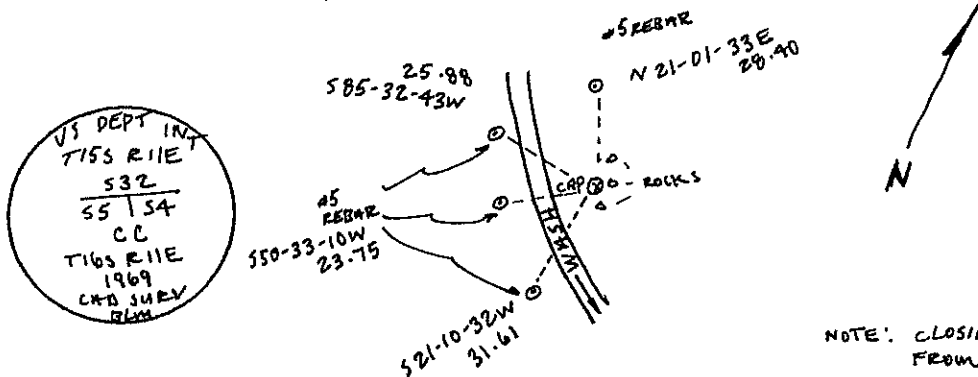
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other CLOSING CORNER

Your Description and Observation of Monument Found (Be Specific):
 1969 BLM BRASS CAP 8" ABOVE GROUND LEVEL

Description of Monument, Reference Monument or Accessories Established by You to Perpetuate the Location of this Point: SET 4 #5 REBAR AS SHOWN BELOW

Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



Certification:

Firm name and/or Surveyor: Johansen & Tuttle Eng.

Address: 90 S. 100 E. Castle Dale, Utah 84513 Phone: (435) 381-2523

This is to certify that I was in responsible charge of the surveying work described in this record and that to the best of my knowledge the information presented herein is true and correct.

Location Diagram:

Section: 5

Township: 16S

Range: 11E

