

### PLSS GPS Observation Sheet

Project Name <b>SL T16S R10E</b> <small>(Meridian Township Range)</small>				Township		½ (2)	N S	Range		½ (2)	E W	Section		Meridian																		
				T	1	6	S	1	0		E			(SL)	US																	
Contacts Name <b>Lee M. Swasey</b>				Source Agency <b>JOHANSEN &amp; TUTTLE ENGINEERING</b>						Date <b>11/22/05</b>																						
Contacts Phone <b>(435) 381-2523</b>																																
<b>Control Station</b>																																
Name <b>ELM GPS 12</b>				Type COR HARN TRI <u>Other</u> <b>EMERY COUNTY</b>						Accuracy Order																						
USGS Quad Name <b>OLSEN RESERVOIR UTAH</b>				Datum Nad27 Nad83 <u>Nad83 (1994)</u> WGS84 Local						State <b>UTAH</b> County <b>EMERY</b>																						
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 <u>International Foot</u> Meter				Coordinate Type State Plane <u>UTM</u>				Zone Utah North <u>Utah Central</u> Utah South				Vertical Datum NGVD29 <u>NAVD88</u>				Ellipsoid Height <b>1711.15 M</b> FT				Geoid Height <b>M</b> <b>5671.75 FT</b>												
<b>Base Receiver</b>																																
Type <b>TRIMBLE</b>				Model <b>4000 SSI</b>				Serial Number				Logging Interval <b>5 SEC.</b>				Elevation Mask <b>13</b>		PDOP Mask <b>6</b>		Antenna Type <b>L1/L2 w/GROUND PLANE</b>												
Start Time				AM		PM		End Time				AM		PM		Antenna Height																
Session Beginning				1"		M		2"		M		3"		M		Ave <b>4.685 Feet M</b>																
Session End				1"		M		2"		M		3"		M		Ave <b>M</b>																
<b>Rover Receiver</b>																																
Type <b>TRIMBLE</b>				Model <b>5800</b>				Serial Number <b>4253117118</b>				Approximate Distance From Base Station				Miles		Antenna Type <b>5800 INTERNAL</b>				Antenna Height <b>6.6 FT</b>										
<b>Station Observation</b>																																
Observation Type <u>RTK</u> FAST STATIC STATIC OTHER				First Observation																												
Station Name (M1)				5		0		0		7		0		0		C		C		Description <b>Closing Corner to NE corner Sec. 3</b>												
Occupation time				PDOP Best				RMS Best				Number of Measurements <b>60</b>				PDOP Worst <b>4.3</b>		RMS Worst <b>43.8</b>														
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																		
<b>Monument and Markings</b>																																
Type / Size																																
Stone				Pipe/Cap				Post				Other																				
Size				Size <b>2½ / ¾ 1969 BLM</b>				Size				Size																				
Material				Material <b>steel / brass</b>				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 1610500700 CC

# EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-22-05

County Reference No. 160500700 CC

Type of Monument:  Section Corner  
 Bench Mark

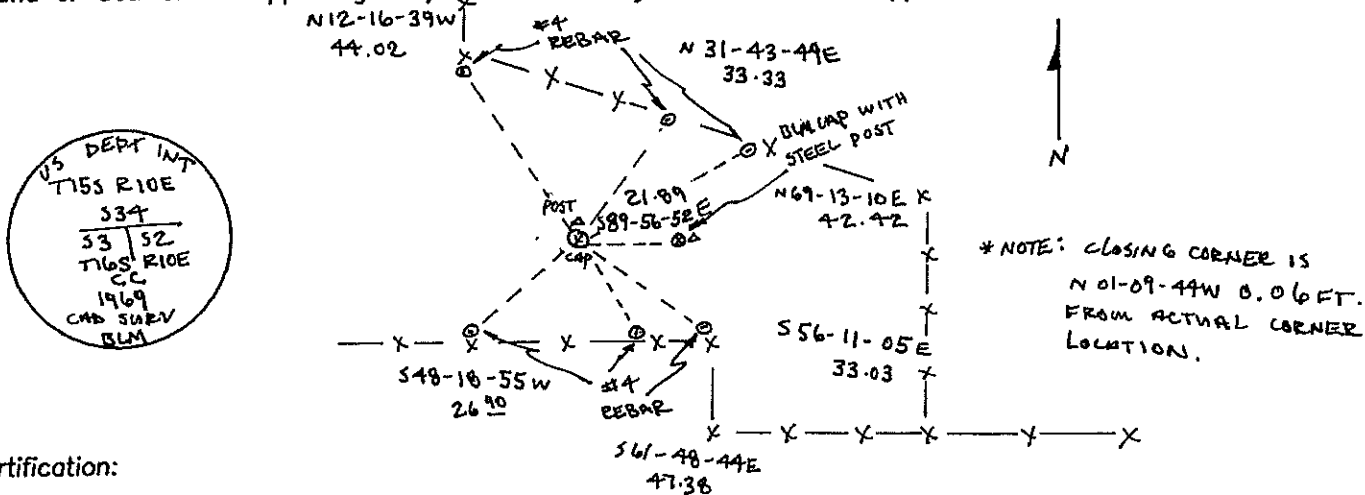
Quarter Corner  
 Other CLOSING CORNER

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

1969 BLM BRASS CAP 4" ABOVE GROUND LEVEL WITH #4 STEEL FENCE POST DRIVEN ALONGSIDE

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:

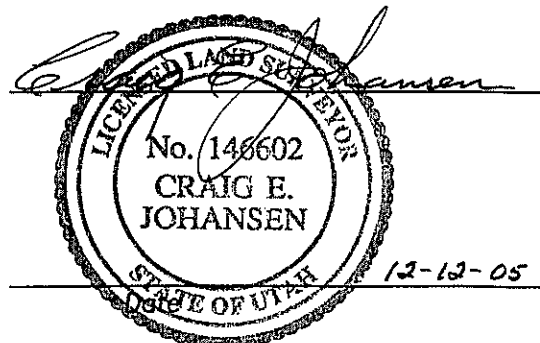
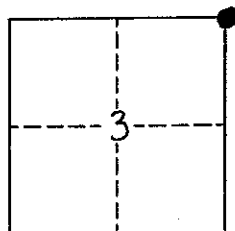
Firm name and/or Surveyor: Johansen & Tuttle Eng.

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: 3  
 Township: 16S  
 Range: 10E



## PLSS GPS Observation Sheet

Project Name <b>SL T16S R10E</b> <small>(Meridian Township Range)</small>				Township		½ (2)	N S	Range		½ (2)	E W	Section	Meridian																		
				T	1	6	S	1	0		E		(SL) US																		
Contacts Name <b>Lee M. Swasey</b>				Source Agency <b>JOHANSEN &amp; TUTTLE ENGINEERING</b>						Date <b>12/05/05</b>																					
Contacts Phone <b>(435) 381-2523</b>																															
<b>Control Station</b>																															
Name <b>CP-WEST</b>				Type COR HARN TRI <u>Other</u> LOCAL SURVEY						Accuracy																					
USGS Quad Name <b>ELMO UTAH</b>				Datum Nad27 Nad83 <u>Nad83 (1994)</u> WGS84 Local						Order																					
										State <b>UTAH</b>																					
										County <b>EMERY</b>																					
<b>Latitude</b>						<b>Longitude</b>																									
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	
<b>Northing</b>													<b>Easting</b>																		
6	9	7	6	1	1	2	.	8	0						1	8	4	1	5	4	5	.	4	0							
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 <b>1711.15 M</b>				Geoid Height <b>M 5671.75 FT</b>																											
<b>Base Receiver</b>																															
Type <b>TRIMBLE</b>				Model <b>4000 SSI</b>				Serial Number																							
Logging Interval <b>5 SEC.</b>			Elevation Mask <b>13</b>		PDOP Mask <b>6</b>		Antenna Type <b>L1/L2 w/GROUND PLANE</b>																								
Start Time				AM		PM		End Time			AM		PM																		
<b>Antenna Height</b>																															
Session Beginning		1 <sup>st</sup>		M		2 <sup>nd</sup>		M		3 <sup>rd</sup>		M		Ave <b>4.482 Feet M</b>																	
Session End		1 <sup>st</sup>		M		2 <sup>nd</sup>		M		3 <sup>rd</sup>		M		Ave <b>M</b>																	
<b>Rover Receiver</b>																															
Type <b>TRIMBLE</b>				Model <b>5800</b>				Serial Number <b>4253117118</b>																							
Approximate Distance From Base Station				Miles		Antenna Type <b>5800 INTERNAL</b>				Antenna Height <b>6.6 FT</b>																					
<b>Station Observation</b>																															
Observation Type <u>(RTK)</u> FAST STATIC				STATIC				OTHER																							
<b>First Observation</b>																															
Station Name (M1)		4		0		0		7		0		0		Description <b>NE corner Sec. 4</b>																	
Occupation time				PDOP Best				RMS Best																							
Number of Measurements <b>60</b>				PDOP Worst <b>1.9</b>				RMS Worst <b>11.3</b>																							
<b>Second Observation</b>																															
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																	
<b>Monument and Markings</b>																															
<b>Type / Size</b>																															
Stone			Pipe/Cap				Post			Other																					
Size			Size <b>2½ / 3¼ 1969 BLM</b>				Size			Size																					
Material			Material <b>steel / brass</b>				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 1610400700

# EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-9-05

County Reference No. 1610400700

Type of Monument:  Section Corner  
 Bench Mark

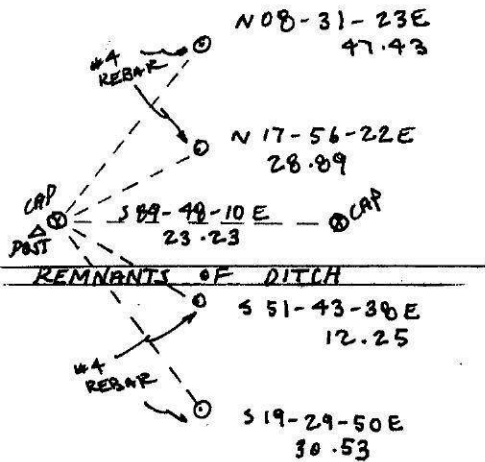
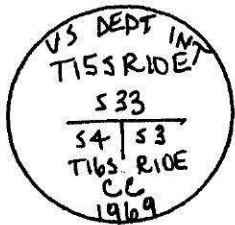
Quarter Corner  
 Other CLOSING CORNER

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

1969 BLM BRASS CAP WITH A STEEL FENCE POST DRIVEN ALONGSIDE.  
 A 1969 BLM BRASS CAP CONTROLLING TOWNSHIP 15 SOUTH SECTION 33 SETS TO  
 THE EAST AS SHOWN BELOW

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:

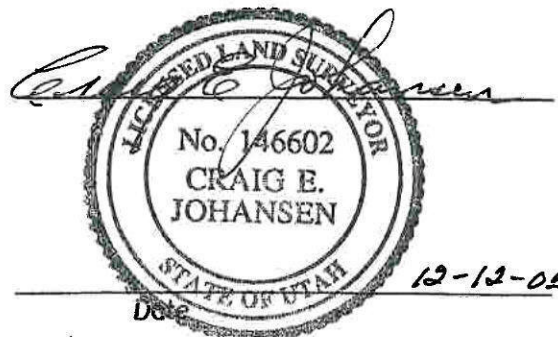
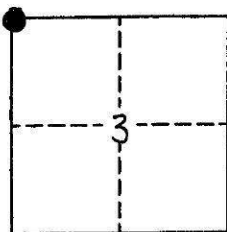
Firm name and/or Surveyor: Johansen & Tuttle Eng.

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: 3  
 Township: 16S  
 Range: 10E



## PLSS GPS Observation Sheet

Project Name <b>SL T16S R10E</b> <small>(Meridian Township Range)</small>		Township T 1 6		½ (2)	N S	Range S 1 0		½ (2)	E W	Section	Meridian <input checked="" type="radio"/> SL <input type="radio"/> US																			
Contacts Name <b>Lee M. Swasey</b>		Source Agency <b>JOHANSEN &amp; TUTTLE ENGINEERING</b>						Date <b>12/05/05</b>																						
Contacts Phone <b>(435) 381-2523</b>																														
<b>Control Station</b>																														
Name <b>CP-WEST</b>		Type COR HARN TRI <input checked="" type="radio"/> LOCAL SURVEY						Accuracy Order																						
USGS Quad Name <b>ELMO UTAH</b>		Datum Nad27 Nad83 <input checked="" type="radio"/> Nad83 (1994) WGS84 Local						State <b>UTAH</b>																						
								County <b>EMERY</b>																						
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 <b>1711.15 M</b>		FT		Geoid Height <b>M</b>		<b>5671.75 FT</b>																
<b>Base Receiver</b>																														
Type <b>TRIMBLE</b>		Model <b>4000 SSI</b>				Serial Number																								
Logging Interval <b>5 SEC.</b>		Elevation Mask <b>13</b>		PDOP Mask <b>6</b>		Antenna Type <b>L1/L2 w/GROUND PLANE</b>																								
Start Time		AM		PM		End Time		AM		PM																				
<b>Antenna Height</b>																														
Session Beginning		1"		M		2 <sup>nd</sup>		M		3 <sup>rd</sup>		M		Ave		<b>4.482 Feet M</b>														
Session End		1"		M		2 <sup>nd</sup>		M		3 <sup>rd</sup>		M		Ave		<b>M</b>														
<b>Rover Receiver</b>																														
Type <b>TRIMBLE</b>		Model <b>5800</b>				Serial Number <b>4253117118</b>																								
Approximate Distance From Base Station		Miles		Antenna Type <b>5800 INTERNAL</b>				Antenna Height <b>6.6 FT</b>																						
<b>Station Observation</b>																														
Observation Type <input checked="" type="radio"/> RTK		FAST STATIC		STATIC		OTHER																								
<b>First Observation</b>																														
Station Name (M1)		4 2 0 7 0 0		Description <b>W 1/16 corner Sec. 3</b>																										
Occupation time		PDOP Best				RMS Best																								
Number of Measurements <b>60</b>		PDOP Worst <b>1.9</b>				RMS Worst <b>26</b>																								
<b>Second Observation</b>																														
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																				
<b>Monument and Markings</b>																														
<b>Type / Size</b>																														
Stone		Pipe/Cap				Post				Other																				
Size		Size <b>2½ / 3¼ 1969 BLM</b>				Size				Size																				
Material		Material <b>steel / brass</b>				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 1610420700



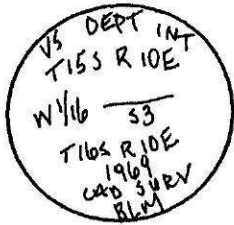
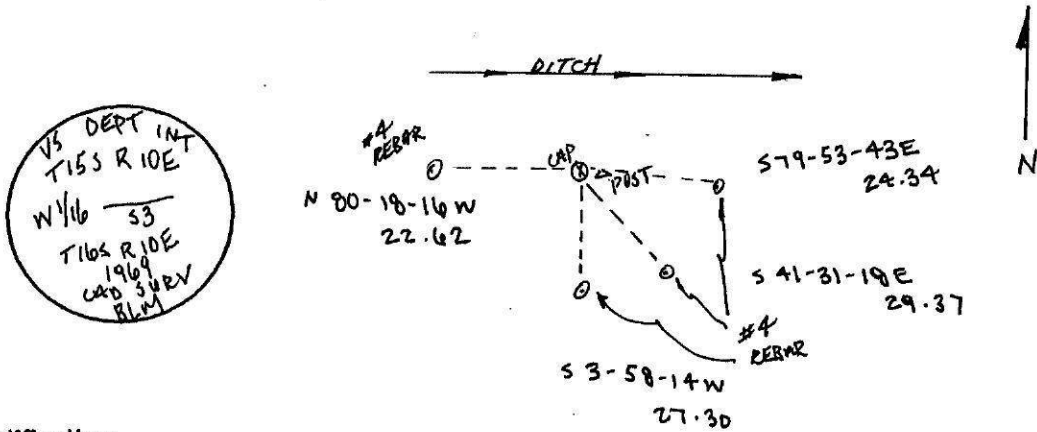
# EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-2-05 County Reference No. 1610420700  
 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 8" ABOVE GROUND LEVEL WITH A STEEL FENCE POST 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.



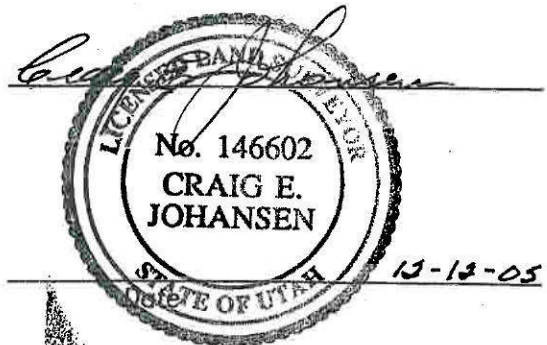
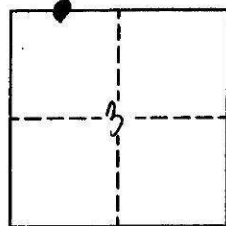
Certification:

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: 3  
 Township: 165  
 Range: 10E



## PLSS GPS Observation Sheet

Project Name <b>SL T16S R10E</b> (Meridian Township Range)				Township		½ (2)	N S	Range		½ (2)	E W	Section		Meridian																		
				T	1	6	S	1	0		E			(SL) US																		
Contacts Name Lee M. Swasey				Source Agency						Date																						
Contacts Phone (435) 381-2523				JOHANSEN & TUTTLE ENGINEERING						11/11/05																						
<b>Control Station</b>																																
Name ELM GPS 12				Type						Accuracy																						
				COR	HARN	TRI	(Other) EMERY COUNTY			Order																						
USGS Quad Name				Datum						State UTAH																						
OLSEN RESERVOIR 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																		
<b>Base Receiver</b>																																
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																					
<b>Antenna Height</b>																																
Session Beginning		1 <sup>st</sup>	M	2 <sup>nd</sup>	M	3 <sup>rd</sup>	M	Ave 4.718 Feet M																								
Session End		1 <sup>st</sup>	M	2 <sup>nd</sup>	M	3 <sup>rd</sup>	M	Ave			M																					
<b>Rover Receiver</b>																																
Type TRIMBLE				Model 5800				Serial Number 4253117118																								
Approximate Distance From Base Station				Miles	Antenna Type 5800 INTERNAL				Antenna Height 6.6 FT																							
<b>Station Observation</b>																																
Observation Type (RTK) FAST STATIC STATIC OTHER																																
<b>First Observation</b>																																
Station Name (M1)		4	4	0	7	0	0	Description N 1/4 corner Sec. 3																								
Occupation time				PDOP Best				RMS Best																								
Number of Measurements 60				PDOP Worst 2.6				RMS Worst 13.4																								
<b>Second Observation</b>																																
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																						
<b>Monument and Markings</b>																																
<b>Type / Size</b>																																
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 1610440700

# EMERY COUNTY LAND SURVEY MONUMENT RECORD

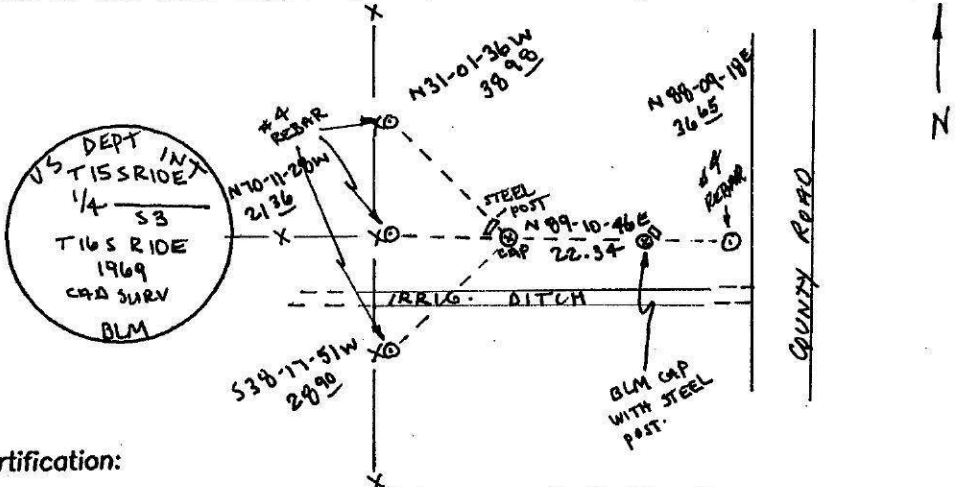
Date of field work: 11-11-05 County Reference No. 1610700440 <sup>440700</sup>

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

Your Description and Observation of Monument Found ( Be Specific ):  
 1969 BLM BRASS CAP 4" ABOVE GROUND LEVEL WITH A STEEL FENCE POST DRIVEN ALONGSIDE  
 ANOTHER BLM BRASS CAP FOR TOWNSHIP 15 SOUTH SECTION 34 SETS EAST AS SHOWN BELOW.

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

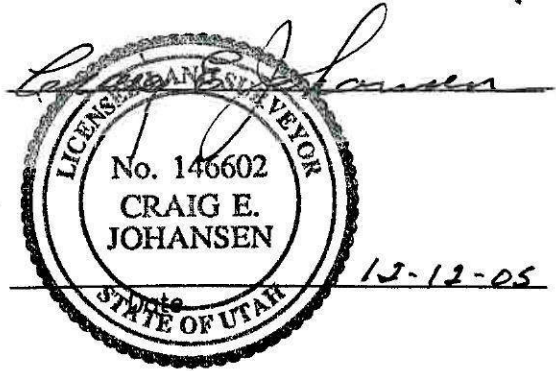
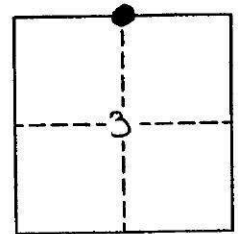
Sketch showing Relative Location of Monument Accessories and Two Reference Points Stating Whether  
 Found or Set. Show Supporting and/or Contradictory Evidence where Applicable. Include North Arrow.



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: 3  
 Township: 16S  
 Range: 10E





## PLSS GPS Observation Sheet

Project Name <b>SL T16S R10E</b> <small>(Meridian Township Range)</small>		Township		¼ (2)	N S	Range		¼ (2)	E W	Section		Meridian																			
		T	1	6	S	1	0			E			(SL) US																		
Contacts Name <b>Lee M. Swasey</b>		Source Agency <b>JOHANSEN &amp; TUTTLE ENGINEERING</b>							Date <b>11/22/05</b>																						
Contacts Phone <b>(435) 381-2523</b>																															
<b>Control Station</b>																															
Name <b>ELM GPS 12</b>		Type COR HARN TRI <input checked="" type="checkbox"/> Other <b>EMERY COUNTY</b>							Accuracy Order																						
USGS Quad Name <b>OLSEN RESERVOIR UTAH</b>		Datum Nad27 Nad83 <input checked="" type="checkbox"/> Nad83 (1994) WGS84 Local							State <b>UTAH</b> County <b>EMERY</b>																						
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 checked="" type="checkbox"/> International Foot		Meter		Coordinate Type			<input checked="" type="checkbox"/> State Plane		UTM																		
Zone		Utah North		<input checked="" type="checkbox"/> Utah Central		Utah South		Vertical Datum			NGVD29		<input checked="" type="checkbox"/> NAVD88																		
Ellipsoid Height		1711.15 M		FT		Geoid Height			M		5671.75 FT																				
<b>Base Receiver</b>																															
Type <b>TRIMBLE</b>				Model <b>4000 SSI</b>				Serial Number																							
Logging Interval <b>5 SEC.</b>		Elevation Mask <b>13</b>		PDOP Mask <b>6</b>		Antenna Type <b>L1/L2 w/GROUND PLANE</b>																									
Start Time				AM		PM		End Time				AM		PM																	
Antenna Height																															
Session Beginning		1"		M		2 <sup>nd</sup>		M		3 <sup>rd</sup>		M		Ave <b>4.685 Feet M</b>																	
Session End		1"		M		2 <sup>nd</sup>		M		3 <sup>rd</sup>		M		Ave <b>M</b>																	
<b>Rover Receiver</b>																															
Type <b>TRIMBLE</b>				Model <b>5800</b>				Serial Number <b>4253117118</b>																							
Approximate Distance From Base Station				Miles		Antenna Type <b>5800 INTERNAL</b>				Antenna Height <b>6.6 FT</b>																					
<b>Station Observation</b>																															
Observation Type		<input checked="" type="checkbox"/> RTK		FAST STATIC		STATIC		OTHER																							
First Observation																															
Station Name (M1)		5	0	0	6	4	0	Description <b>E 1/4 corner Sec. 3</b>																							
Occupation time		PDOP Best				RMS Best																									
Number of Measurements <b>60</b>		PDOP Worst <b>2.9</b>				RMS Worst <b>10.6</b>																									
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																			
<b>Monument and Markings</b>																															
Type / Size																															
Stone		Pipe/Cap				Post				Other																					
Size		Size <b>2½ / 3¼ 1969 BLM</b>				Size				Size																					
Material		Material <b>steel / brass</b>				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 1610500640

# EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-22-05

County Reference No. 161050640

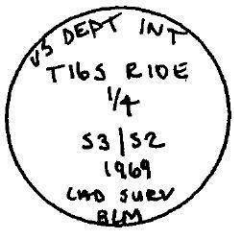
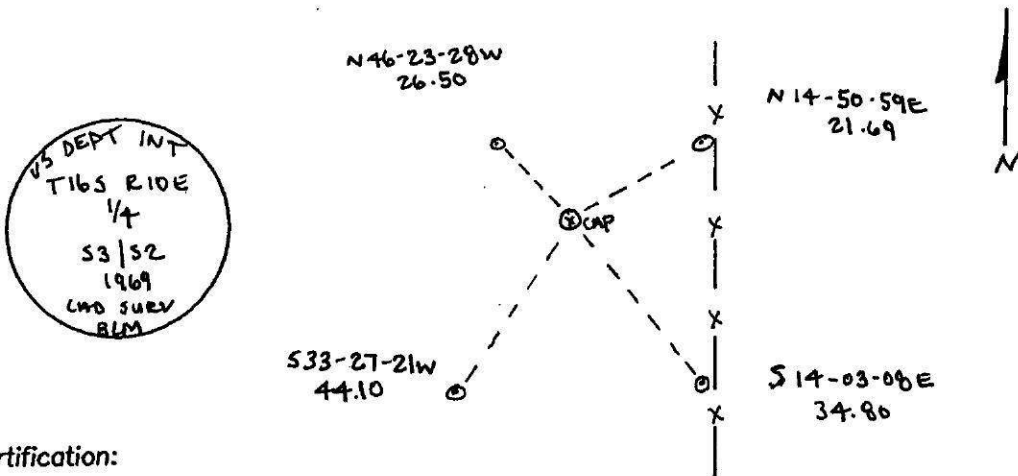
Type of Monument:          Section Corner  
         Bench Mark

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 \*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.



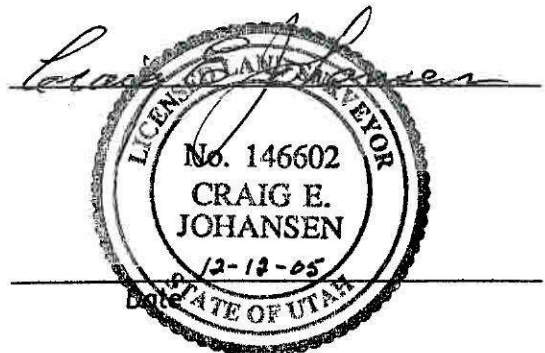
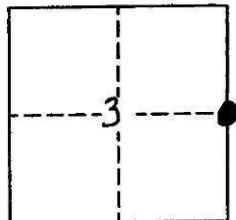
Certification:

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: 3  
Township: 16S  
Range: 10E



## PLSS GPS Observation Sheet

<b>Project Name</b> SL T16S R10E (Meridian Township Range)				<b>Township</b>		½ (2)	N S	<b>Range</b>		½ (2)	E W	<b>Section</b>		<b>Meridian</b>																		
				T	1	6		S	1	0		E			(SL) US																	
<b>Contacts Name</b> Lee M. Swasey				<b>Source Agency</b>						<b>Date</b>																						
<b>Contacts Phone</b> (435) 381-2523				JOHANSEN & TUTTLE ENGINEERING						11/18/05																						
<b>Control Station</b>																																
<b>Name</b> ELM GPS 12				<b>Type</b>						<b>Accuracy</b>																						
				COR	HARN	TRI	Other			EMERY COUNTY			Order																			
<b>USGS Quad Name</b>				<b>Datum</b>						<b>State</b> UTAH																						
OLSEN RESERVOIR UTAH				Nad27	Nad83	Nad83 (1994)		WGS84	Local	County			EMERY																			
<b>Latitude</b>								<b>Longitude</b>																								
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	
<b>Northing</b>								<b>Easting</b>																								
6	9	4	7	5	8	7	.	6	3								1	8	5	2	2	5	7	.	0	6						
<b>Units</b>				Survey Foot	International Foot		Meter		<b>Coordinate Type</b>				State Plane	UTM																		
<b>Zone</b>				Utah North	Utah Central		Utah South		<b>Vertical Datum</b>				NGVD29	NAVD88																		
<b>Ellipsoid Height</b>				1711.15 M		FT		<b>Geoid Height</b>				M	5671.75 FT																			
<b>Base Receiver</b>																																
<b>Type</b> TRIMBLE				<b>Model</b> 4000 SSI				<b>Serial Number</b>																								
<b>Logging Interval</b> 5 SEC.		<b>Elevation Mask</b> 13		<b>PDOP Mask</b> 6		<b>Antenna Type</b> L1/L2 w/GROUND PLANE																										
<b>Start Time</b>				AM	PM	<b>End Time</b>				AM	PM																					
<b>Antenna Height</b>																																
<b>Session Beginning</b>		1 <sup>st</sup>	M	2 <sup>nd</sup>	M	3 <sup>rd</sup>	M	<b>Ave</b> 4.761 Feet				M																				
<b>Session End</b>		1 <sup>st</sup>	M	2 <sup>nd</sup>	M	3 <sup>rd</sup>	M	<b>Ave</b>				M																				
<b>Rover Receiver</b>																																
<b>Type</b> TRIMBLE				<b>Model</b> 5800				<b>Serial Number</b> 4253117118																								
<b>Approximate Distance From Base Station</b>				Miles	<b>Antenna Type</b> 5800 INTERNAL				<b>Antenna Height</b> 6.6 FT																							
<b>Station Observation</b>																																
<b>Observation Type</b>				RTK		FAST STATIC		STATIC		OTHER																						
<b>First Observation</b>																																
<b>Station Name (M1)</b>		5	0	0	6	0	0	<b>Description</b> SE corner Sec. 3																								
<b>Occupation time</b>				<b>PDOP Best</b>				<b>RMS Best</b>																								
<b>Number of Measurements</b> 60				<b>PDOP Worst</b> 3.2				<b>RMS Worst</b> 22.0																								
<b>Second Observation</b>																																
<b>Station Name (M2)</b>		<b>Description</b>																														
<b>Occupation time</b>				<b>PDOP Best</b>				<b>RMS Best</b>																								
<b>Number of Measurements</b>				<b>PDOP Worst</b>				<b>RMS Worst</b>																								
<b>Inverse Distance Between M1 and M2</b>								FT	<b>Alternate Base Station Used</b>				Yes	No																		
<b>Monument and Markings</b>																																
<b>Type / Size</b>																																
<b>Stone</b>				<b>Pipe/Cap</b>				<b>Post</b>				<b>Other</b>																				
<b>Size</b>				Size 2½ / 3¼ 1969 BLM				<b>Size</b>				<b>Size</b>																				
<b>Material</b>				Material steel / brass				<b>Material</b>				<b>Material</b>																				

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 1610500600



# EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-18-05

County Reference No. 1610500600

Type of Monument:  Section Corner  
 Bench Mark

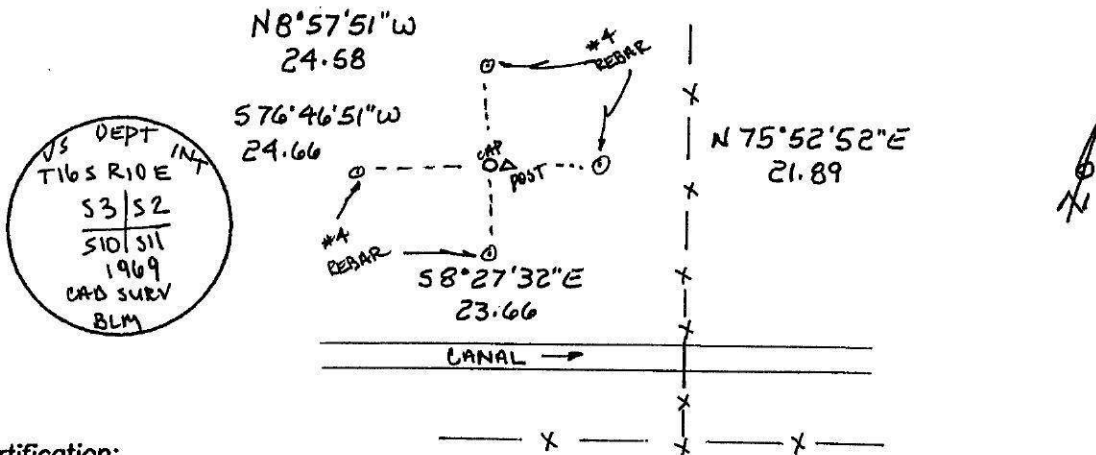
Quarter Corner  
 Other \_\_\_\_\_

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

1969 BLM BRASS CAP 8" ABOVE GROUND LEVEL WITH # 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: 3  
 Township: 16 S  
 Range: 10 E

