

PLSS GPS Observation Sheet

Project Name SL T16S R10E (Meridian Township Range)		Township T 1 6		1/2 (2)	N S	Range 1 0		1/2 (2)	E W	Section	Meridian (SL) US																				
Contacts Name Lee M. Swasey		Source Agency JOHANSEN & TUTTLE ENGINEERING						Date 12/06/05																							
Contacts Phone (435) 381-2523																															
Control Station																															
Name CP-WEST		COR		HARN		TRI		Type (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"		M		3"		M		Ave 4.482 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)		5		4		0		7		0		0		Description N 1/4 corner Sec. 2																	
Occupation time		PDOP Best				RMS Best																									
Number of Measurements 60		PDOP Worst 1.2				RMS Worst 18.1																									
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 / 3/4 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 1610540700

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-10-05

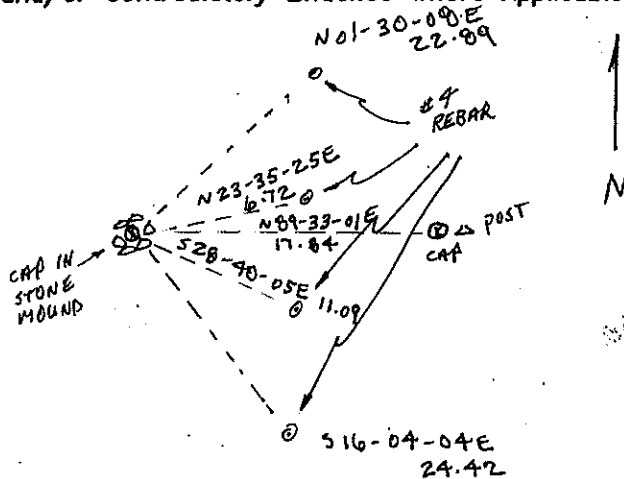
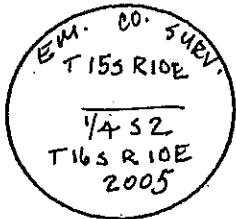
County Reference No. 1610540700

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

Your Description and Observation of Monument Found (Be Specific):
 MONUMENT NEVER SET. A 1969 BLM BRASS CAP CONTROLLING TOWNSHIP
 15 SOUTH SECTION 35 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 ALUMINUM EMERY COUNTY SURVEYS CAP 8" ABOVE
GROUND LEVEL. BUILT STONE MOUND AROUND CAP AND 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.



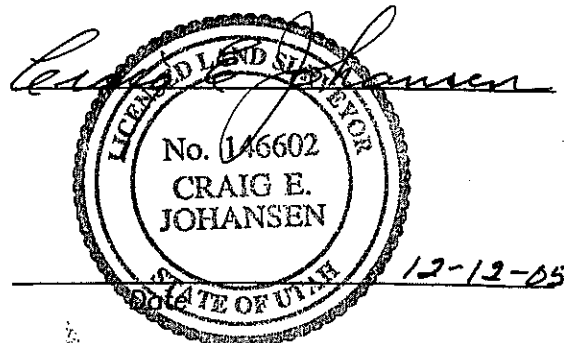
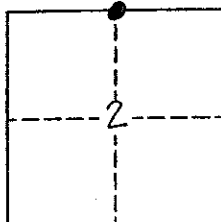
Certification:

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: 2
 Township: 16S
 Range: 10E



PLSS GPS Observation Sheet

Project Name SL T16S R10E <small>(Meridian Township Range)</small>		Township T 1 6		½ (2)	N S	Range 1 0		½ (2)	E W	Section		Meridian (SL) US																				
Contacts Name Lee M. Swasey		Source Agency JOHANSEN & TUTTLE ENGINEERING						Date 11/22/05																								
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"		M		3"		M		Ave		4.685 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)		5 4 0 6 0 0		Description S 1/4 corner Sec. 2																												
Occupation time		PDOP Best				RMS Best																										
Number of Measurements 60		PDOP Worst 1.7				RMS Worst 15.9																										
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 1610540600

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-22-05

County Reference No. 1610540600

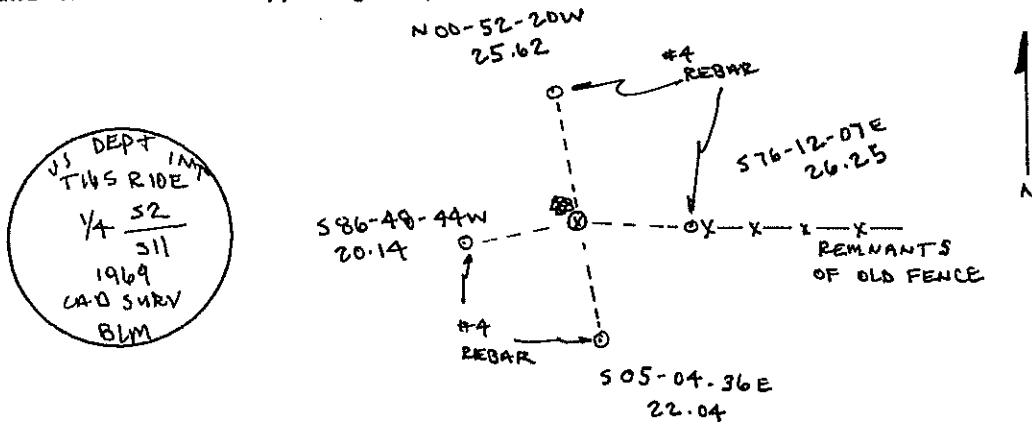
Type of Monument: Section Corner
 Bench Mark

Quarter Corner
 Other _____

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

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

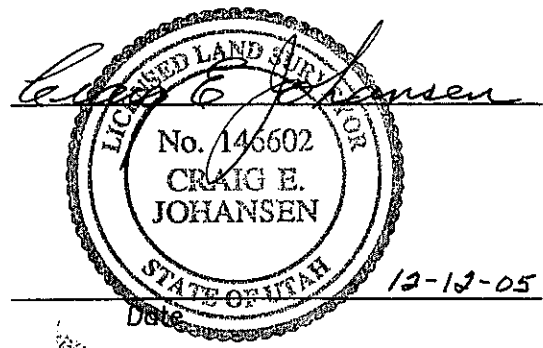
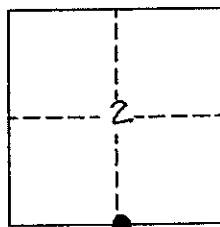
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Location Diagram:

Section: 2

Township: 16S

Range: 10E



PLSS GPS Observation Sheet

Project Name SL T16S R10E <small>(Meridian Township Range)</small>				Township		1/2 (2)	N S	Range		1/2 (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						12/06/05																				
Control Station																														
Name CP-WEST				Type						Accuracy																				
				COR	HARN	TRI	(Other) LOCAL SURVEY			Order																				
USGS Quad Name				Datum						State																				
ELMO UTAH				Nad27	Nad83	(Nad83 1994)		WGS84	Local	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"		M		3"		M		Ave 4.482 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)				6		0	0	6	4	0	Description W 1/4 corner Sec. 1																			
Occupation time				PDOP Best				RMS Best																						
Number of Measurements 60				PDOP Worst 1.8				RMS Worst 16.0																						
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 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 1610600640

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 12-10-05

County Reference No. 1610600640

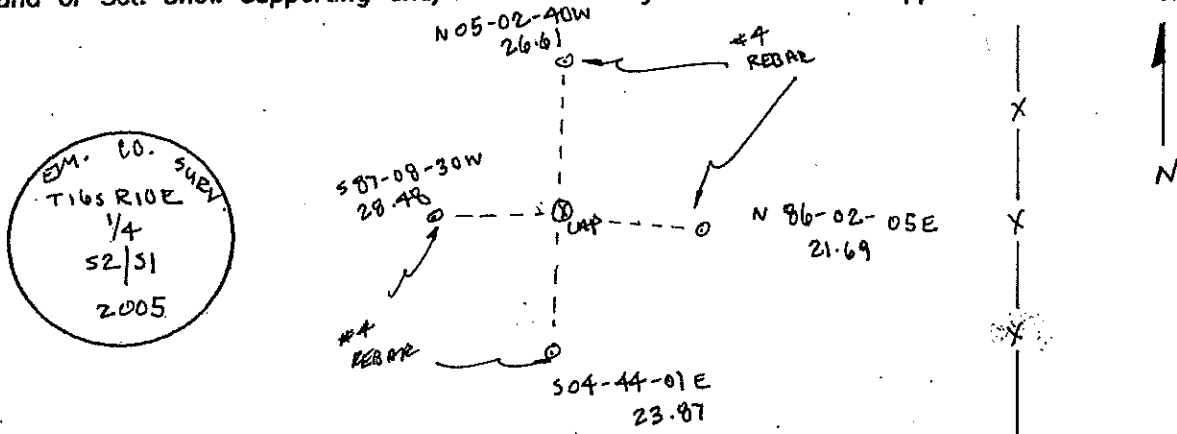
Type of Monument: _____ Section Corner
 _____ Bench Mark

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. 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

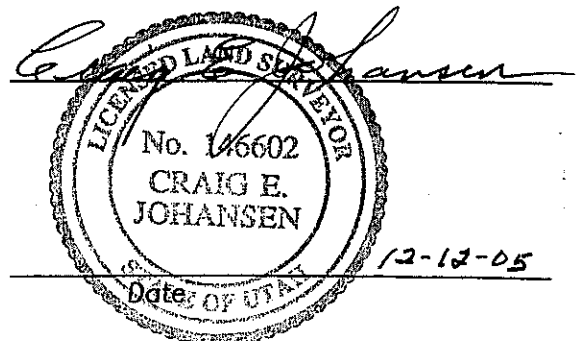
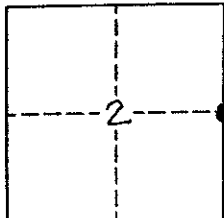
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Location Diagram:

Section: 2

Township: 16S

Range: 10E



PLSS GPS Observation Sheet

Project Name SL T16S R10E <small>(Meridian Township Range)</small>				Township T 1 6			½ N S (2) S 1 0		½ E W (2) E		Section			Meridian SL US																		
Contacts Name Lee M. Swasey				Source Agency JOHANSEN & TUTTLE ENGINEERING						Date 11/22/05																						
Contacts Phone (435) 381-2523																																
Control Station																																
Name ELM GPS 12				Type COR HARN TRI Other EMERY COUNTY						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	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 <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 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 4.685 Feet M																								
Session End				1" M 2" M 3" M				Ave M																								
Rover Receiver																																
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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)				6 0 0 6 0 0				Description SE corner Sec. 2																								
Occupation time				PDOP Best				RMS Best																								
Number of Measurements 60				PDOP Worst 2.7				RMS Worst 10.2																								
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 1610600600

EMERY COUNTY LAND SURVEY MONUMENT RECORD

Date of field work: 11-22-05

County Reference No. 1610600600

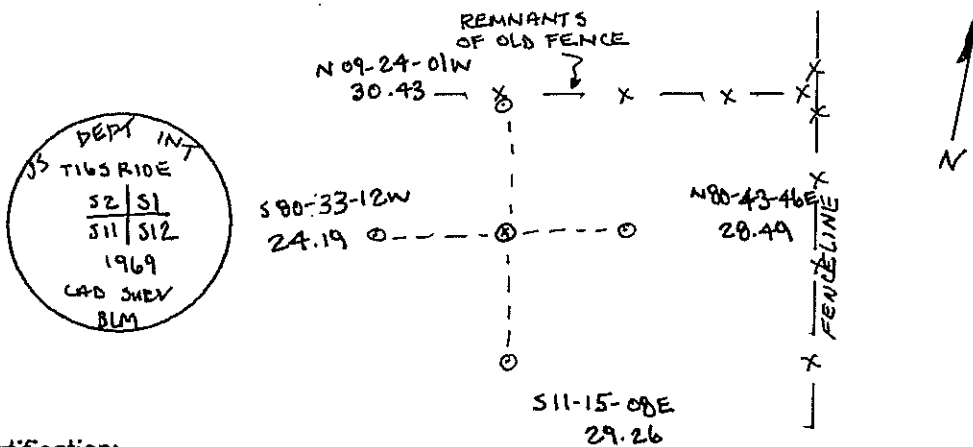
Type of Monument: Section Corner
 Bench Mark

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.

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Location Diagram:

Section: 2

Township: 16S

Range: 10E

