

Sensitive Area Determination Checklist  
SG Interests I, Ltd.

Person(s) conducting inspection	Catherine Dickert	08/26/2014
Site Information	existing well pad in irrigated pasture	
Location:	Falcon Seaboard 11-90-12 #3	1430
Type of Facility:	Gas well	
Environmental Conditions	mostly cloudy, light sprinkles	
Temperature	≈70°F	

Has the proposed, new or existing location been designated as a sensitive area?

Yes   X  

No       

**SURFACE WATER**

- 1) Are there any surface water features or SWSAs adjacent to or within ¼ mile of the proposed/new facility?

Yes   X  

No       

If yes, list type of surface water feature(s), i.e. rivers, creeks, streams, seeps, springs, wetlands:

The location will expand into irrigated pasture. Ditches will be rerouted as per landowner direction.

The field is irrigated by a series of ditches that taper off dispersing the irrigation water. The location is approximately 470' from Roberts Creek. The well pad will be cut down into the opposite side of the ridge, creating a barrier between the well pad and Roberts Creek. See the hydrology map for locations of the surface waters in the vicinity of the project.

- 2) Could a potential release from the facility reach surface water features?

Yes   X  

No       

If yes, describe the pathway a release from the facility would likely follow to determine if the potential to impact surface water is high or low. It is possible that an uncontrolled release from the well pad could flow into an irrigation ditch.

- 3) Is the potential to impact surface waters from a facility release high or low?

High   X  

Low       

The potential is high if the location is not built and maintained to mitigate this threat.

**GROUNDWATER**

- 1) Will the proposed/new or existing facility have any pits that will contain hydrocarbons and chlorides or other E&P wastes?

Yes       

No   X  

If yes, list the pit types(s):

- 2) Is the site of the proposed facility underlain by an unconfined aquifer or recharge zone?

Yes       

No   X  

- 3) Is the hydraulic conductivity of the underlying soil or geologic material  $\leq 1.0 \times 10^{-7}$  cm/sec?

Yes       

No   X   (the Ksat value for Fughes loam is described as moderately low to moderately high.)

- 4) Is the proposed facility located within 1/8 mile of domestic water well or ¼ mile of a public water supply well which would use the same aquifer?

Yes       

No   X  

Well permit #264800 is approximately 0.5 miles from the well head. The depth of this well is 10'. Well permit #265700 is just over 0.5 mile from the well head. It is also 10' deep. Both of these wells are to the northeast of the planned gas well. Another water well (permit #267736), about 8/10 mile to the southeast of the planned location, is 10' deep.

- 5) Is the proposed facility located within a 100-year floodplain?

Yes       

No   X   (See floodplain map.)

6) Is the depth to groundwater known?

Yes \_\_\_\_\_ (If yes, follow instructions provided in (a) of this section.)

No X (If no, follow instructions provided in (b) of this section.)

(a) If yes, could a potential release from the proposed facility reach groundwater?

Yes \_\_\_\_\_ If yes, explain:

No \_\_\_\_\_

(b) If no: (i) Evaluate surrounding soils, topography, and vegetation which may suggest the presence of shallow groundwater. The well is located above an irrigated pasture.

(ii) Gather information from surrounding well data in order to determine a depth to groundwater, i.e. State Engineer's Office. Wells within a mile of the planned gas well are shallow; 10 deep.

7) Is the potential to impact groundwater from the facility in the event of a release high or low?

High X

Low \_\_\_\_\_

**Additional Comments:** This location is classified as a sensitive area. Site-specific BMPs that will be employed at this location include maintenance of diversion ditches around the well pad to prevent sheet flow from washing over the pad and sedimentation barriers such as silt fence or straw bales to keep sediment from leaving the site. The pad will have a perimeter berm/ditch as well to keep fluid from leaving the site. All berms and ditches will be inspected regularly and maintained as needed. Equipment and tanks on the pad will be designed with secondary containment sufficient for the volume of fluid stored plus maximum precipitation accumulation. SG Interests has a spill prevention, countermeasure and containment plan of which regular facility inspections are a part. This site will be added to the spill plan as well as to SG Interests' field-wide stormwater plan.

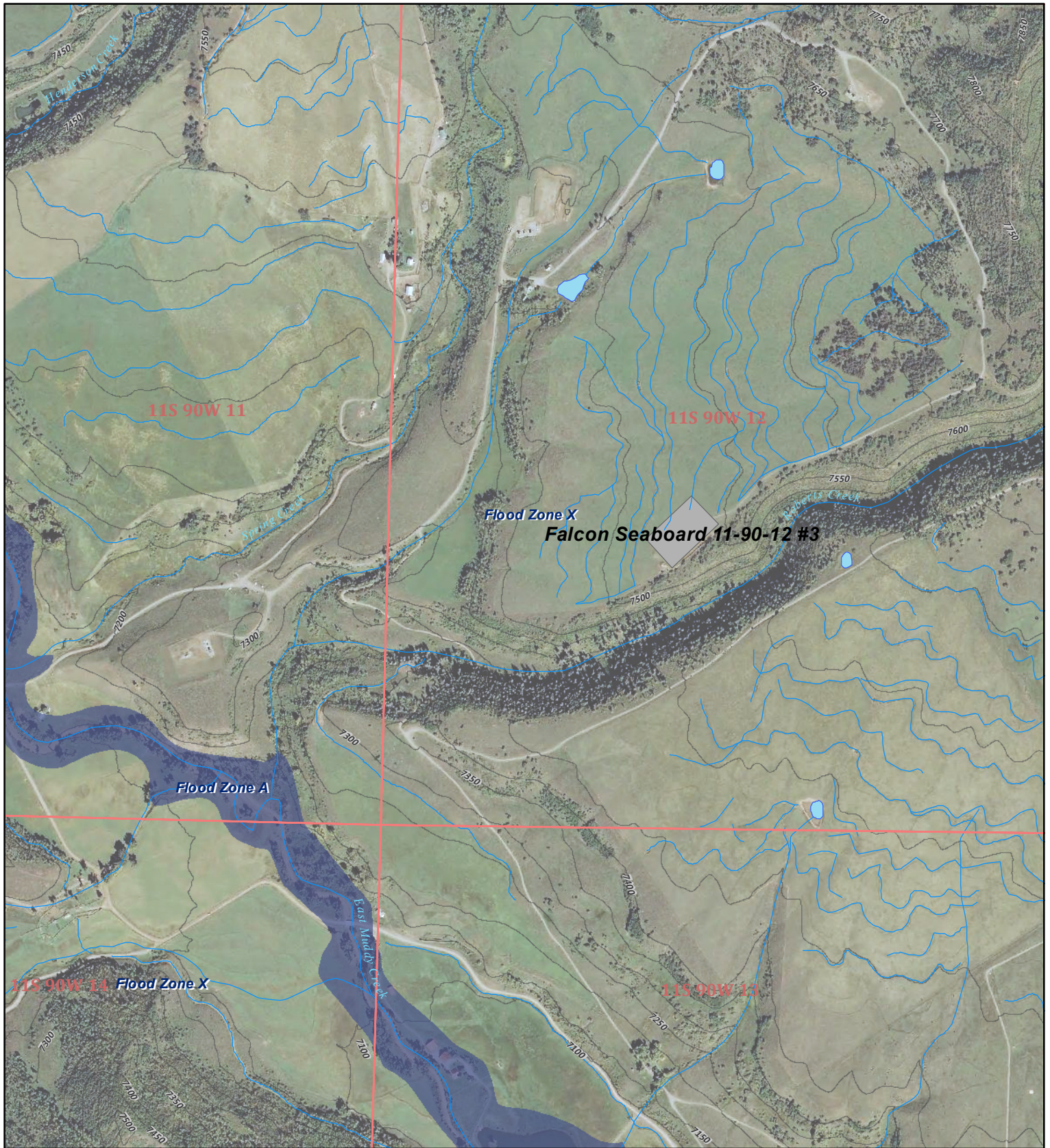
Signature








Date



01/14/2015





-  Well pad
-  Stream/ditch
-  Pond/Lake

- FEMA Flood Zone**
-  A
  -  X

-  50-foot contour
-  PLSS section line

**SG Interests I - 77330**  
**Falcon Seaboard 11-90-12 #3**

**FEMA Flood Zone Map**  
T11S R90W Section 12

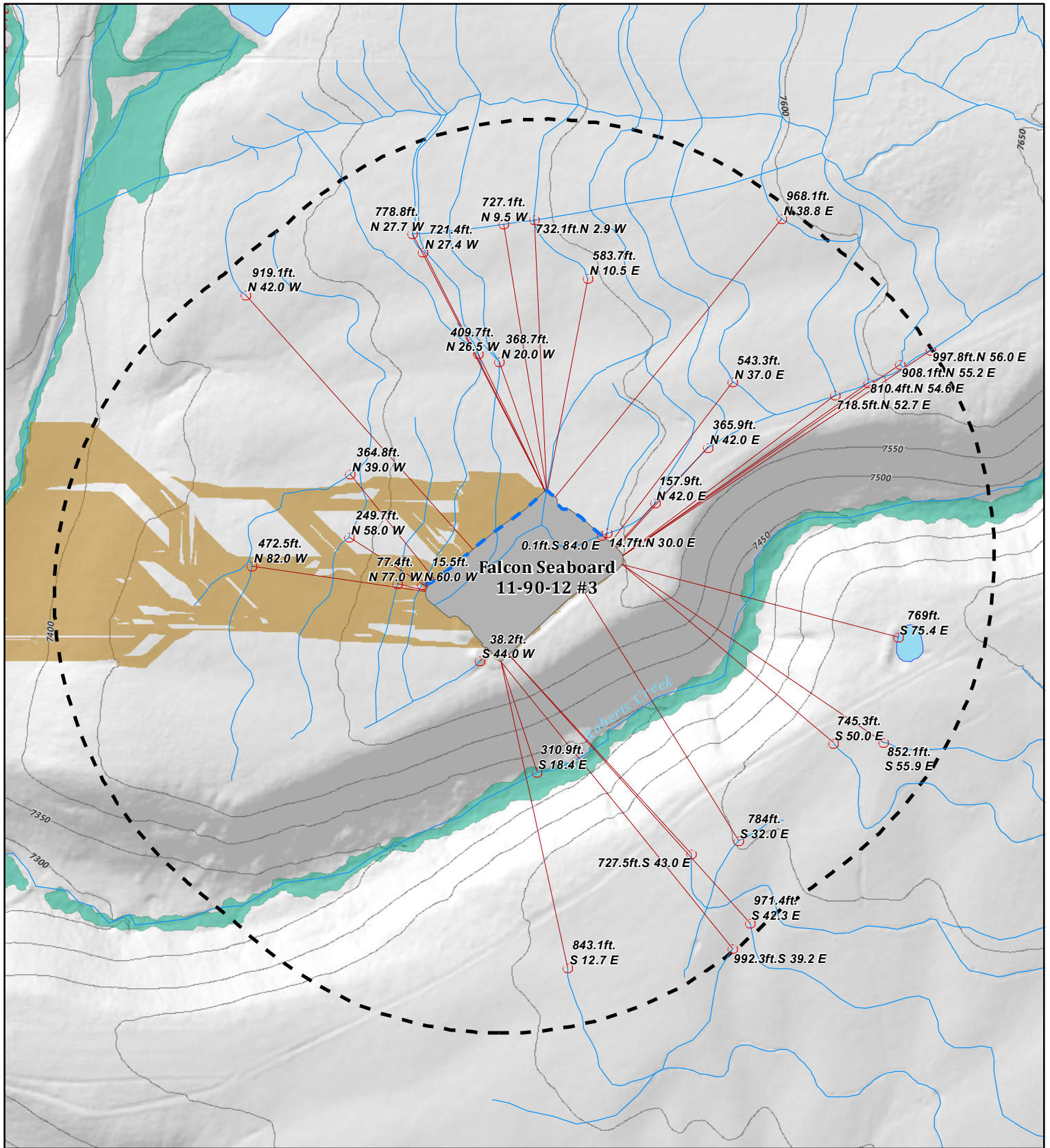
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Feet  
1 in = 833 feet



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Prepared for SG Interests, Inc.  
by TerraCognito GIS, Inc.  
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Location disturbance 1000 ft. from disturbance Down-gradient of disturbance  Horizontal distance & approx. bearing from edge of disturbance to surface water feature/wetland	Stream/ditch Pond/Lake Mapped wetland Planned modification	FEMA Flood Zone A (none near location) X (entire map extent) 50-ft. contour  DWR water well (none near location)	<b>SG Interests I - 77330</b> <b>Falcon Seaboard 11-90-12 #3</b>  <b>Hydrology Map</b> T11S R90W Section 12   1 in = 355 feet 
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