****** LIQUID SPILLS - VOLUME CALCULATIONS ******

Location of spill: Red Hills 17H **Date of Spill:** 6/1/2019

If the leak/spill is associated with production equipment, i.e. - wellhead, stuffing box,
flowline, tank battery, production vessel, transfer pump, or storage tank place an "X" here: [x]

Input Data:

	OIL:	WATER:
If spill volumes from measurement, i.e. metering, tank volumes, etc.are known enter the volumes here:	0.0000 BBL	0.0000 BBL

If "known" spill volumes are given, input data for the following "Area Calculations" is optional. The above will override the calculated volumes.

Total Area Calculations

Total Surface Area	width		length		wet soil depth	oil (%)
Rectangle Area #1	35 ft	X	23 ft	X	5 in	0%
Rectangle Area #2	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

Standing Liquid Calculations

Standing Liquid Area	width		length		liquid depth	oil (%)
Rectangle Area #1	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #2	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #3	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #4	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #5	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #6	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #7	0 ft	X	0 ft	X	0 in	0%
Rectangle Area #8	0 ft	X	0 ft	X	0 in	0%

okay

production system leak - DAILY PRODUCTION DATA REQUIRED

Average Daily Production: Oil 0 BBL Water 0 BBL

Did leak occur before the separator?: [ ] YES [ ] N/A *(place an "X")*

Amount of Free Liquid Recovered: 0 BBL okay

Percentage of Oil in Free Liquid Recovered: 0% (percentage)

Liquid holding factor *: 0.14 gal per gal

Use the following when the spill wets the grains of the soil.
* sand = .08 gallon liquid per gallon volume of soil.
* gravelly (caliche) loam = .14 gallon liquid per gallon volume of soil.
* sandy clay loam soil = .14 gallon liquid per gallon volume of soil.
* clay loam = .16 gallon liquid per gallon volume of soil.

Use the following when the liquid completely fills the pore space of the soil:
Occures when the spill soaked soil is contained by barriers, natural (or not).
* gravelly (caliche) loam = .25 gallon liquid per gallon volume of soil.
* sandy loam = .5 gallon liquid per gallon volume of soil.

Saturated Soil Volume Calculations:

	H2O	OIL
Total Solid/Liquid Volume:	805 sq. ft.	335 cu. ft. cu. ft.

Free Liquid Volume Calculations:

		H2O	OIL
Total Free Liquid Volume:	sq. ft.	.000 cu. ft.	.000 cu. ft.

Estimated Volumes Spilled

	H2O	OIL
Liquid in Soil:	8.4 BBL	0.0 BBL
Free Liquid:	0.0 BBL	0.0 BBL
Totals:	8.363 BBL	0.000 BBL
Total Liquid Spill Liquid:	8.363 BBL	0.000 BBL

Estimated Production Volumes Lost

	H2O	OIL
Estimated Production Spilled:	0.000000 BBL	0.000000 BBL

Estimated Surface Damage

Surface Area: 805 sq. ft.
Surface Area: .0185 acre

Recovered Volumes

Estimated oil recovered: 0.0 BBL check - okay
Estimated water recovered: 0.0 BBL check - okay

Estimated Weights, and Volumes

Saturated Soil =	37,567 lbs	335 cu.ft.	12 cu.yds.
Total Liquid =	8 BBL	351.25 gallon	2,922 lbs