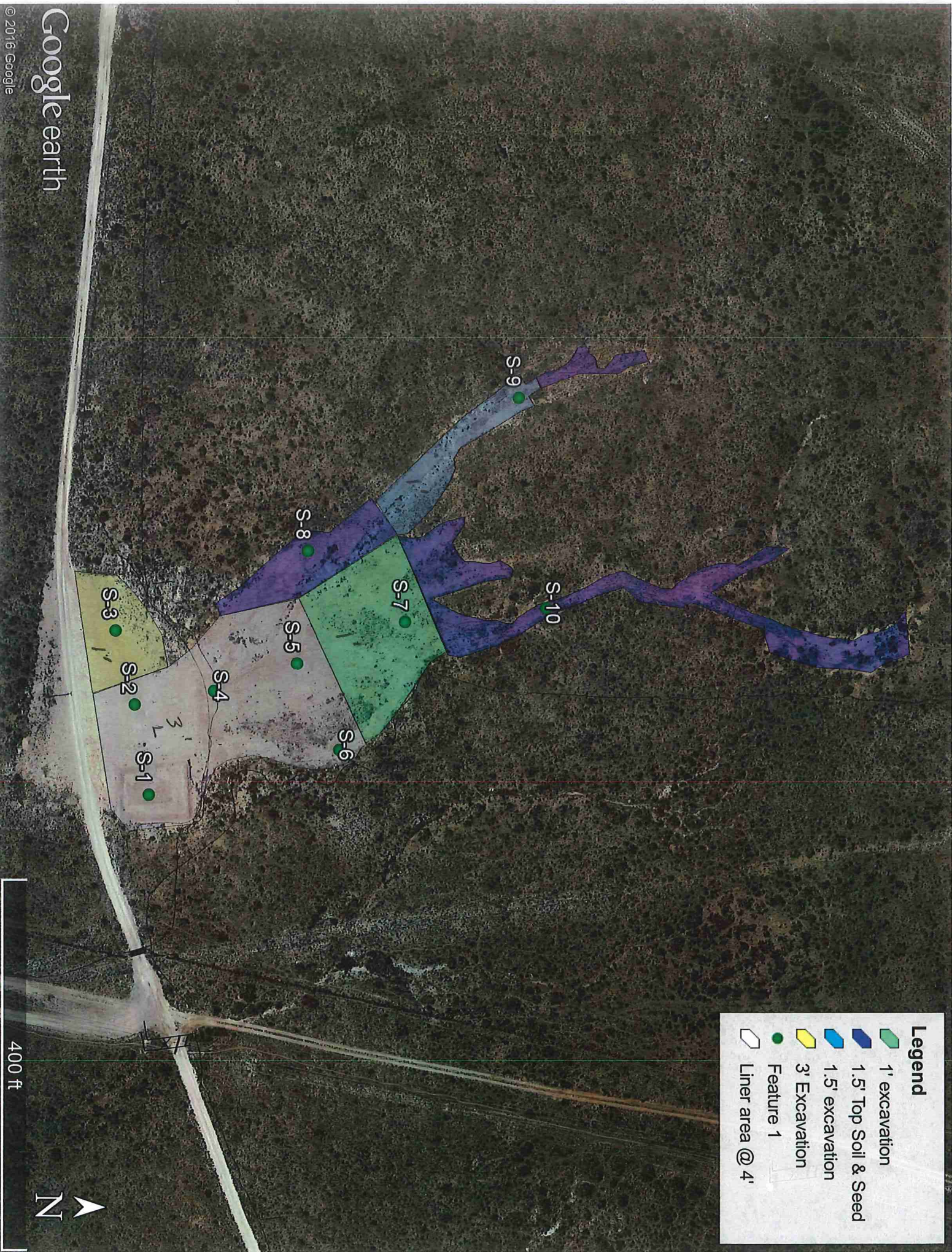


Legend

- 1' excavation
- 1.5' Top Soil & Seed
- 1.5' excavation
- 3' Excavation
- Feature 1
- Liner area @ 4'



Incident Description and Initial Remedial Actions

On March 3, 2013 the casing failed at the wellhead casing a release of 40 barrels of produced water. The flow path measured approximately 10 to 15-feet wide by 300-feet long off the northwest side of the pad continuing down the draw at that time. See initial C-141 in [Appendix III](#). Subsequently, surface water run-off during the past three years has spread the impacted area to the current aerial extent shown on the attached site plan.

A site assessment and soil sampling activities for the construction of a work plan was performed. Initial soil samples were collected utilizing a hand auger to a depth of 1-foot BGS where refusal was encountered.

On July 13, 2016 a backhoe was mobilized for further vertical delineation of the impacted area. However, due to the shallow rock layers encountered the vertical impacts could not be fully investigated. Following a meeting with the New Mexico Oil Conservation Division (NMOCD), on June 15, 2016, Talon personnel returned to the location to obtain additional samples at greater depths utilizing an air rotary drill rig as directed by the NMOCD.

Boreholes were advanced inside of the impacted area at sample locations S-1 and S-5 per NMOCD. The results of all the sampling events at this location are summarized in the data tables below.

Laboratory Results

See [Appendix IV](#) for complete report of laboratory results.

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	ND	38800	ND	832
S-1	0.5	ND	6000	ND	13.7
S-1	1	--	3960	--	--
S-1R	2	--	4120	--	--
S-2	0	--	3600	--	--
S-2	1	--	1840	--	--
S-2	3	--	2720	--	--
S-2	5	--	2960	--	--
S-2	7	--	2680	--	--
S-2	9	--	3120	--	--
S-2	11	--	2120	--	--
S-3	0	--	15600	--	--
S-3	1	--	816	--	--
S-3	3	--	1260	--	--
S-3	5	--	576	--	--
S-3	7	--	48	--	--

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-4	0	ND	20600	ND	27.2
S-4	0.5	ND	4800	ND	ND
S-4	1	--	4800	--	--
S-4R	3	--	6240	--	--
S-5	0	--	20000	--	--
S-5	0.5	--	6800	--	--
S-5	1	--	4240	--	--
S-5	3	--	3960	--	--
S-5	5	--	3520	--	--
S-5	3	--	3960	--	--
S-5	5	--	3520	--	--
S-5	7	--	3120	--	--
S-5	9	--	3440	--	--
S-5	11	--	3600	--	--
S-6	0	--	11200	--	--
S-6	0.5	--	6130	--	--
S-6	1	--	4160	--	--
S-6R	1.5	--	4480	--	--
S-7	0	--	3120	--	--
S-7R	1	--	1880	--	--
S-8	0	--	128	--	--
S-9	0	--	2880	--	--
S-9	0.25	--	1720	--	--
S-9	1	--	4240	--	--
S-9R	1.5	--	2720	--	--
S-10	0	--	208	--	--
S-10R	0.5	--	388	--	--

(--) Analyte Not Tested (R) Refusal/Top of Rock

(ND) Analyte Not Detected

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	5'	--	207	--	--
S-1	10'	--	2320	--	--
S-1	15'	--	1980	--	--
S-1	20'	--	649	--	--
S-5	15'	--	3440	--	--
S-5	25'	--	278	--	--
S-5	30'	--	305	--	--
S-5	35'	--	301	--	--
S-5	40'	--	126	--	--

(--) Analyte Not Tested

Proposed Remedial actions

- The impacted areas in the vicinity of sample locations S-1, S-2, S-4, S-5 and S-6 will be excavated to a depth of 4-feet deep or to the extent possible where refusal with an excavator is encountered at top of rock. A 20 mil liner will be laid within the excavated area at this location. Pictures will be taken at depths and areas will be documented where 4-foot depths cannot be achieved due to top of rock.
- The area around sample location S-3 will be scraped to a depth of 0.5-foot deep. The impacted area in the vicinity of sample location S-7 will be excavated to 1-foot deep and the area around S-9 will be excavated to the depth 1.5-feet deep where refusal was encountered.
- All of the excavated material will be hauled to Lea Land LLC, a NMOCD approved disposal facility.
- The backfilled area will be contoured to match the surrounding terrain and left in a “rough” condition to approximate natural surface deviations, control erosion, and promote revegetation.
- Erosion control berms, water bars and diversion berms will be constructed to prevent storm water washout.
- Immediately following preparation of the site, a Culti-Pack Seed Drill will be utilized to plant 2 acre of 50% of BLM #3 & #4 seed mixture for shallow/rocky environments following manufacture recommended application rates. The site will be monitored by Endurance Resources personnel to insure proper revegetation. Should revegetation not take place then further amendments will be applied.
- During Talon’s site assessment no obvious noxious or undesirable weeds such as African rue, Russian thistle, etc. were noted. All equipment to be used at this location will be washed prior to mobilization to prevent potential spread of noxious weeds to this site. Should noxious weeds develop during the revegetation process, BLM will be notified and a strategy for weed removal will be developed (herbicide, mechanical removal, etc.) depending on the plant type and extent of infestation.
- A final closure report documenting all remedial actions, analytical results, a final C-141 and seeding labels will be provided to the NMOCD District II Artesia Office and BLM.