

TECHNICAL REPORT
GEOLOGY AND MINERAL RESOURCES
BOUNTY POTASH PROJECT
BOX ELDER AND TOOELE COUNTIES, UTAH
USA



Pilot Valley Playa Looking Northeast. Field of View 10 miles NW-SE in Center

Prepared for

MESA EXPLORATION COMPANY
FEBRUARY 15, 2012

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1.0 SUMMARY

This technical report was prepared at the request of Mesa Exploration Corporation (“Mesa”) a Canadian public corporation, listed on the TSX-V exchange with the symbol MSA, in connection with its filings with British Columbia and Alberta Securities Commissions and the TSX Venture Exchange. Mesa is also listed on the OTCBB as MSAJF. The report was written in compliance with disclosure and reporting requirements set forth in the newly revised (July 30, 2011) Canadian Securities Administrators’ National Instrument 43-101, Companion Policy 43-101CP, and Form 43-101F1.

1.1 Introduction

The Bounty Potash Project is located in the southwestern corner of Box Elder County and the northwest corner of Tooele County, Utah County, Utah, 25 air miles (40 km) north-northeast of Wendover at the Utah/Nevada border. The distance to the property by road is approximately 30 miles (48 km). The center of the Pilot Valley salt pan is at a latitude/longitude of 41 35’56” North and 113 53’06” West.

1.2 Geology and Mineralization

The host of the potash mineralization is the upper 25 feet of a sequence of sediments deposited in Lake Bonneville as it evaporated and receded, which was completed perhaps 7000 years ago. These sediments are composed largely of thinly interbedded, very fine grained carbonate grains of silt to very fine sand size. Intercalated with these are thin intervals of very fine oolitic sands with a component of brine shrimp fecal pellets. There are also thin evaporite beds composed of gypsum and salt.

These details of the sedimentary package are important because they control the permeability of the sediments for the movement of the concentrated brines. Permeability in a vertical direction is quite limited due to thin silty interbeds. Vertical desiccation cracks allow limited vertical permeability. Horizontal permeability is significantly better along sandy horizons and evaporite beds. Thus the brines are continually moving (slowly) toward the central salt pan as water evaporates there. Evaporation has further concentrated the brines in the central part of the playa.

The brines themselves were derived largely from the evaporation of vast amounts of water from the ancient Lake Bonneville, leaving residual saline brine. Some of the brine may have been derived from evaporates deposited in pre-Lake Bonneville basins. Some has been contributed by weathering of surrounding rocks and the movement of dissolved minerals into the lakebed by rainfall.

1.3 Exploration and Mining History

Exploration of the Pilot Valley playa brines has been very limited. The first mention of the salt pan there was in the notes of Stansbury (1852) as he passed across the valley in 1849. Several USGS and Utah Department of Natural Resources papers describe the geology, lithology and

hydrology of the area, including the drilling of a number of shallow holes, largely auger drilling. These efforts were largely related to hydrologic studies and the data collected is only of limited use to this project. The only work directly relevant to the exploration of the Pilot Valley brines was done by Nackowski (1967) for Quintana Petroleum Company. Quintana drilled 42 auger holes from 12 to 16 feet deep on a 2-mile square grid. Brine from each hole was analyzed for Na, K, Li, Mg, Ca, SO₂ and Cl. Specific gravity and water table depth were noted. Sediment lithology was described in 1-foot increments. From this data a brine resource was calculated, the details of which are discussed in section 6.1 of this report

The property remained idle until Mesa Exploration Corporation realized its potential for potash production late in 2011. Mesa has recently acquired 89.1 square miles (23083 ha) of potash prospecting permit applications with the US Bureau of Land Management (BLM) and 14.1 square miles (3652 ha) of potash leases from the state of Utah. Interstitial to these holdings are approximately 22 square miles (5698 ha) of mineral rights held by BNSF Railroad and smaller parcels held by other private interests. Negotiations are in progress to acquire these mineral rights. The total area controlled at this point is 103.2 square miles (26729 ha), and another 22 square miles (5698 ha) are under negotiation.

1.4 Drilling and Sampling

Mesa has done no drilling or sampling at this time. The first known drill holes were hand auger holes, drilled under the supervision of Nolan (1927) of the USGS. Of his 406 shallow holes, 27 were drilled in Pilot Valley, but he did not discuss Pilot Valley separately. For Quintana Petroleum Company, Nakowski (1967) drilled 42 shallow auger holes in Pilot Valley specifically to test the potash resource. Lines (1979) drilled 14 hand auger holes as part of his hydrologic study. Mason et.al. (1995) reported fluid temperature and density measurements from 53 test holes, 79% of which were 10 feet deep or less. The deepest was 103 feet. Only Nackowski reported detailed stratigraphy and potash contents.

1.5 Metallurgical Testing

There has been no metallurgical testing done at Bounty Potash by Mesa or others to the author's knowledge. However, the brines and their host sediments of the potash deposits at Bounty Potash are directly analogous to those at the Bonneville Salt Flats, which have been in production for more than 75 years and are currently operated by Intrepid Potash. It would be reasonable to assume that the Bounty brines may be processed in the same way.

At Intrepid, the brines are collected in a vast network of ditches. The brine is pumped to very large ponds where the water is evaporated by the sun until the potash and salt precipitate on the bottom of the pond. The remaining water is pumped to other ponds where it is evaporated further to produce a magnesium chloride product. The mixture of salt and potash is scraped from the pond bottom and the potash is separated and concentrated by a flotation process.

1.6 Mineral Resource Estimate

There are no NI 43-101 compliant potash resources or reserves at the Bounty Potash Project.

However, there is an historic resource calculated by Quintana Petroleum in 1967 which is not NI 43-101 compliant, in part because details of the sampling and analytical work were not preserved.

During June and July 1966, Nackowski completed 42 shallow auger holes on a two-mile square grid as near as possible to section corners. In each hole, the brine was sampled and analyzed for Na, K, Li, Mg, Ca, SO₂ and Cl and the specific gravity of the brine was measured. The data was compiled and weighted average grades were calculated for KCl, NaCl, MgCl and LiCl. The brine supply, grade and tonnages were calculated using a polygonal modified contour method. Using an average depth of 10 feet, volumes and tonnages were calculated. The calculated resource is presented in Tables 6.1 and 6.2 of this report in detail. Using a specific yield of 14.8%, Nackowski (1967) calculated a resource of 586,100 tons of KCl and 10,654,320 tons of NaCl in an area of 65.34 square miles. These figures assumed no recharge from laterally moving brine. Nackowski's total resource figures without applying the 14.8% specific yield are: 174.33 billion gallons or 809.65 tons of brine, containing 5.14 million tons of KCl and 96.65 million tons of NaCl.

Readers are cautioned that this historical estimate is not NI 43-101 compliant and should not be relied upon. A Qualified Person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Consequently, their reliability and relevance should be regarded as suspect. The issuer is not treating the historical estimate as current mineral resources or mineral reserves as defined by NI 43-101. The reader is referred to Section 6 of this report for details of this resource.

1.7 Interpretation and Conclusions

The author has reviewed the Bounty Potash project data in detail, and has visited the site. He believes that the data presented by Mesa Exploration provide an accurate and reasonable representation of the Bounty Potash project.

From the work done to date it is reasonable to assume that there is a sufficiently substantial resource present in the Bounty Potash Project area to warrant a drilling program to better define the resource estimated by Nackowski in 1967. As shown by the drilling, sampling and mapping done by Quintana Petroleum, the US Geological Survey and the Utah Department of Natural Resources in the area, the geologic and hydrologic setting is directly analogous to that at the Intrepid Potash operation in the Bonneville Salt Flats 25 miles (40 km) to the south. The size of the drainage basin is somewhat smaller, but dissolved solid (KCl, NaCl, MgCl₂) contents of the brine are quite similar.

The mineralization at the Bounty Potash project is so very similar to that at the Intrepid project nearby that the deposit's geology and brine extraction and processing procedures can confidently be used as a model for the exploration and development of this project. Additional work will be required to define a modern, NI 43-101 compliant resource.

1.8 Recommendations

Mesa Exploration should continue compiling the data in hand and pursue additional data from government files or other sources to add to its understanding of the project. This will serve to guide the next phases of exploration and development work at the Bounty Potash project.

Data points from previous work should be marked in the field and identified if possible. Planned drill sites must be staked using a GPS receiver and access routes planned. Vehicle access to the playa will be difficult until the surface has dried sufficiently in the summer to be solid. A “Sonic” or “vibracore” style drilling rig should be considered for drilling and sampling the near-surface aquifer in the soft, water-saturated material. These should be capable of collecting relatively undisturbed samples of the target zone.

The completion of the drilling program, both confirming the Nackowski results and closing the drillhole spacing, should lead Mesa to the point where a new resource estimation can be completed in a NI-43-101 compliant manner. Assuming positive results, this will lead to preliminary engineering studies for the design of a system of drainage ditches, evaporation ponds and processing facilities. Additional drilling will probably be required to infill and expand the resource.

A significant amount of time and money must be allotted to environmental issues and the permitting process. Careful consideration of these will help to streamline the process of evaluating the resource and putting the resource into production.

The 2012 budget for the planned drilling program at the Bounty Potash Project is \$118,000.

2.0 INTRODUCTION AND TERMS OF REFERENCE

This Technical Report for the Bounty Potash Project has been prepared at the request of Mesa Exploration Corporation (Mesa).

This Report will satisfy Mesa’s obligation to file a technical report as public information in connection with the acquisition and continuing exploration of the Bounty Potash Project, as required under the policies of the various provincial Securities Commissions and the TSX Venture Exchange. This report is written in compliance with disclosure and reporting requirements set forth in the Canadian Securities Administrators’ National Instrument 43-101, Companion Policy 43-101CP and Form 43-101, newly revised in July 2011. Work on the property by Mesa before February 2012 had been limited to a thorough due diligence effort, data compilation and a land acquisition program which began in the fall of 2011.

The author reviewed pertinent prior reports and data relative to the regional and property geology, land status, history of the district and project, past exploration efforts and results, methodology, interpretations, and other data necessary to the understanding of the project, sufficient to produce this report. The author carried out such independent investigations of the data and of the property in the field, as has been deemed necessary in the professional opinion of the author, so that he might reasonably rely on this information. The property was visited in November 2011. The data acquisition and due diligence program is being carried out in a thorough and professional manner and the author has no reason to doubt the validity of results

of this program.

The author has worked on mineral exploration projects in Nevada, Utah and elsewhere for many years, including six years in eastern Nevada and is familiar with the regional and local geology.

The historic drilling, assay and geologic data required to produce this report were generated in several phases over the past 100 years, although the most recent data directly pertinent to the historical resource was generated in the late 1960's. The available historic data has passed into the possession of Mesa and additional data is being sought.

As mandated by NI 43-101 requirements, the observations, conclusions and recommendations of the author in this report are derived from comprehensive reviews of the Bounty Potash Project database and a site inspection on November 27, 2011. This site inspection was designed to confirm geologic relationships and property access as well as to understand the logistics of the proposed exploration program.

The author believes that the data presented to him by Mesa Exploration are a reasonable and accurate representation of the Bounty Potash Project.

Units of measure, conversion factors and currency used in this report are as follows:

Linear Measure

1 inch	= 2.54 centimeters = 254 millimeters
1 foot	= 0.3048 meter
1 yard	= 0.9144 meter
1 mile	= 1.6 kilometers

Area Measure

1 acre	= 0.4047 hectare
1 square mile	= 640 acres, or 259 hectares

Capacity Measure (liquid)

1 US gallon	= 4 quart or 3.785 liters
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Weight

1 short ton	= 2000 pounds = 0.907 tonne
1 pound = 16 oz	= 0.454 kg = 14.5833 troy ounces

Analytical Values

1%	Percent	Grams per Metric Tonne	Troy Ounces per Short Ton
1%	1%	10,000	291.667
1 gr/tonne	0.0001%	1	0.0291667
1 oz troy/tn	0.003429%	34.2857	1
100 ppb			0.0029
100 ppm			2.917

Commonly used abbreviations and acronyms

AA	atomic absorption spectrometry
Ag	silver
Au	gold
CIM	Canadian Institute of Mining, Metallurgical and Petroleum
core	diamond drilling method, producing a cylinder of rock
FA-AA	fire assay with an atomic absorption finish
g	grams
g/t Ag	grams of silver per metric tonne, equivalent to ppm
g/t Au	grams of gold per metric tonne, equivalent to ppm
g/t Au-eq	grams per metric ton expressed in gold-equivalent.
ha	hectares
m	meters
mm	millimeters
km	kilometers
ppm	parts per million
RC	reverse circulation drilling method
tpd	tonnes per day

All monetary figures used in this report are US Dollars.

3.0 RELIANCE ON OTHER EXPERTS

The author's principal task was to review and compile the historic data made available by Mesa Exploration. This report has relied strongly on reviews by experienced professionals in the following areas:

Land Status	Foster Wilson, CEO of Mesa Exploration, government letters
Geology, Resources	Reports by Nackowski (Quintana), 1967, published reports by the US Geological Survey and the Utah Geologic and Mineral Survey, others.

Planned Program Foster Wilson, CEO of Mesa Exploration, personal contact

After his review, it is the opinion of the author that the data provided to him by Mesa Exploration Corporation were collected in accordance with standard industry practices, and there is no reason to doubt their validity. Confirming documents from the Bureau of Land Management and the State of Utah regarding the Potash leases and the state lands bidding have been reviewed by the author which indicate that Mesa controls these mineral rights

Conclusions regarding the Bounty Potash Project and the recommendations presented in this report are those of the author, based on a review of the data and extensive personal experience as a geologist in the mining industry, particularly in eastern Nevada and Utah, and do not necessarily reflect those of Mesa Exploration Corporation.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Bounty Potash Project is located in Box Elder and Tooele Counties, Utah, approximately 25 air miles (40 km) north-northeast of the town of Wendover on the Nevada/Utah border. It is reached by driving northeast from Reno on Interstate 80 for 395 miles (632 km), or West on I-80 from Salt Lake City 125 miles (200 km) to Exit 4, 4 miles east of Wendover. Drive north for 1.2 miles (1.9 km) and bear left at a fork in the paved road. After an additional 3.2 miles (5 km) there is a Utah State Highway Department building and a gravel pit. From this point there is a good view northward into Pilot Valley. Continuing northwestward, the pavement ends at the Nevada border, but the well maintained gravel road passes back into Utah after a few miles. The total distance from I-80 to the point where there is a clear view of the Pilot Valley salt pan from the west side is 25 miles (40 km).

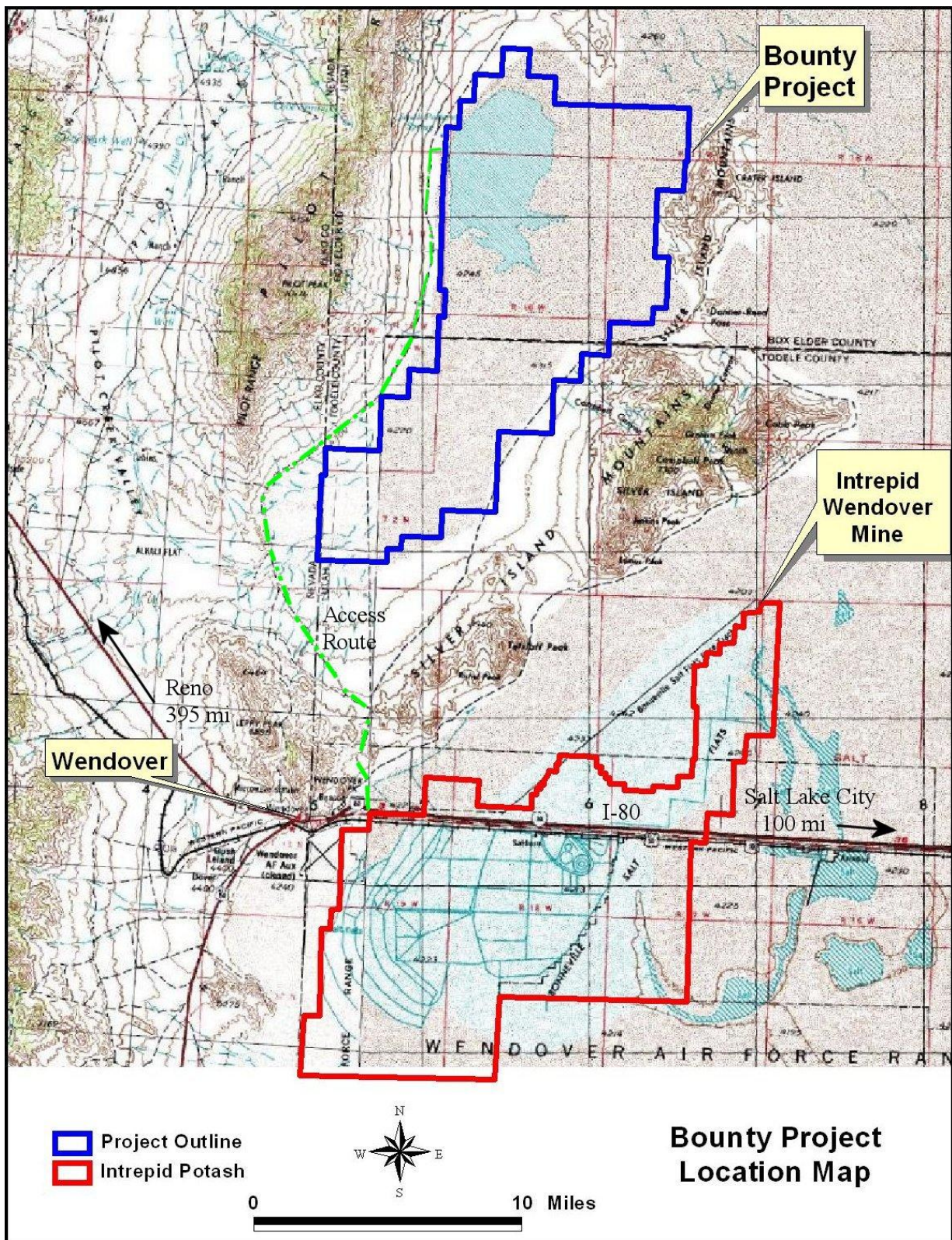


Figure 4.1 Bounty Potash Project Location Map.

4.2 Land Ownership

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The Bounty Potash Project land holdings consist of 89.1 square miles (23083 ha) of potash prospecting permit applications with the US Bureau of Land Management (BLM) and 14.1 square miles (3652 ha) of potash leases from the state of Utah. Interstitial to these holdings are approximately 22 square miles (5698 ha) of mineral rights held by BNSF Railroad and smaller parcels held by other private interests. Negotiations are in progress to acquire these mineral rights. The total area controlled at this point is 103.2 (26729 ha) square miles, and another 22 square miles (5698 ha) are under negotiation.

The BLM potash prospecting permit applications were simply applied for and approval was granted on January 20, 2012. The Utah state potash leases were acquired by competitive bid. Mesa was granted these leases on January 30, 2012. Negotiations are in progress to acquire control of the potash rights on the BNSF and other private parcels.

Table 4.2 Bounty Project BLM Potash Application Data

SERIAL							MESA
#	DIVISION	SECTION	TOWNSHIP	RANGE	COUNTY	ACREAGE	#
88800	ALL	20	4N	18W	BOX ELDER	2560	1
	ALL	21	4N	18W	BOX ELDER		
	ALL	22	4N	18W	BOX ELDER		
	ALL	23	4N	18W	BOX ELDER		
88801	ALL	4	4N	18W	BOX ELDER	2324.25	6
	ALL	6	4N	18W	BOX ELDER		
	ALL	8	4N	18W	BOX ELDER		
	S2	15	4N	18W	BOX ELDER		
88802	ALL	10	4N	18W	BOX ELDER	2560	5
	ALL	12	4N	18W	BOX ELDER		
	ALL	13	4N	18W	BOX ELDER		
	ALL	14	4N	18W	BOX ELDER		
88803	ALL	24	4N	18W	BOX ELDER	2560	4
	ALL	25	4N	18W	BOX ELDER		
	ALL	26	4N	18W	BOX ELDER		
	ALL	27	4N	18W	BOX ELDER		
88804	ALL	28	4N	18W	BOX ELDER	2560	3
	ALL	29	4N	18W	BOX ELDER		
	ALL	33	4N	18W	BOX ELDER		
	ALL	34	4N	18W	BOX ELDER		
88805	ALL	18	4N	18W	BOX ELDER	2372.05	2
	ALL	30	4N	18W	BOX ELDER		
	ALL	31	4N	18W	BOX ELDER		
	ALL	35	4N	18W	BOX ELDER		
88818	ALL	28	5N	17W	BOX ELDER	2455.04	7

	ALL	30	5N	17W	BOX ELDER		
	ALL	4	4N	17W	BOX ELDER		
	W2	28	4N	17W	BOX ELDER		
	NW4	33	4N	17W	BOX ELDER		
88843	ALL	26	5N	18W	BOX ELDER	1280	15
	ALL	28	5N	18W	BOX ELDER		
88844	E2	30	5N	18W	BOX ELDER	2240	16
	ALL	20	5N	18W	BOX ELDER		
	ALL	22	5N	18W	BOX ELDER		
	ALL	34	5N	18W	BOX ELDER		
88845	ALL	30	4N	17W	BOX ELDER	1888.36	17
	ALL	31	4N	17W	BOX ELDER		
	NW4	33	4N	17W	BOX ELDER		
	W2	28	4N	17W	BOX ELDER		
	SW4	21	4N	17W	BOX ELDER		
88846	ALL	8	4N	17W	BOX ELDER	2560	18
	ALL	17	4N	17W	BOX ELDER		
	ALL	20	4N	17W	BOX ELDER		
	ALL	29	4N	17W	BOX ELDER		
88847	ALL	6	4N	17W	BOX ELDER	2230.7	19
	ALL	18	4N	17W	BOX ELDER		
	ALL	19	4N	17W	BOX ELDER		
	S2	7	4N	17W	BOX ELDER		
88848	ALL	7	3N	18W	BOX ELDER	2549	20
	ALL	20	3N	18W	TOOELE		
	ALL	30	3N	18W	TOOELE		
	ALL	31	3N	18W	TOOELE		
88849	ALL	28	3N	18W	TOOELE	2560	21
	ALL	29	3N	18W	TOOELE		
	ALL	33	3N	18W	TOOELE		
	ALL	34	3N	18W	TOOELE		
88850	ALL	21	3N	18W	TOOELE	2560	22
	ALL	22	3N	18W	TOOELE		
	ALL	23	3N	18W	TOOELE		
	ALL	27	3N	18W	TOOELE		
88851	ALL	8	3N	18W	BOX ELDER	2499	23
					TOOELE/BOX		
	ALL	17	3N	18W	ELDER		
					TOOELE/BOX		
	ALL	18	3N	18W	ELDER		
	ALL	19	3N	18W	TOOELE		
88852	ALL	9	3N	18W	BOX ELDER	2448	24
	ALL	10	3N	18W	BOX ELDER		

	ALL	11	3N	18W	BOX ELDER		
	ALL	12	3N	18W	BOX ELDER		
	ALL	13	3N	18W	TOOELE/BOX ELDER		
	ALL	14	3N	18W	TOOELE/BOX ELDER		
	ALL	15	3N	18W	TOOELE/BOX ELDER		
88842	ALL	13	3N	19W	TOOELE	2560	14
	ALL	23	3N	19W	TOOELE		
	ALL	24	3N	19W	TOOELE		
	ALL	25	3N	19W	TOOELE		
88814	ALL	26	3N	19W	TOOELE	2560	13
	ALL	33	3N	19W	TOOELE		
	ALL	34	3N	19W	TOOELE		
	ALL	35	3N	19W	TOOELE		
88815	NW4	26	2N	19W	TOOELE	2436	8
	ALL	27	2N	19W	TOOELE		
	ALL	28	2N	19W	TOOELE		
	ALL	29	2N	19W	TOOELE		
	ALL	18	2N	18W	TOOELE		
88816	ALL	17	2N	19W	TOOELE	2007	9
	ALL	20	2N	19W	TOOELE		
	ALL	8	2N	18W	TOOELE		
	ALL	17	2N	18W	TOOELE		
88817	ALL	5	2N	18W	TOOELE	2344	10
	ALL	6	2N	18W	TOOELE		
	ALL	7	2N	18W	TOOELE		
88819	ALL	21	2N	19W	TOOELE	2560	11
	ALL	22	2N	19W	TOOELE		
	ALL	23	2N	19W	TOOELE		
	ALL	24	2N	19W	TOOELE		
88820	ALL	8	2N	19W	TOOELE	2365	12
	ALL	9	2N	19W	TOOELE		
	ALL	10	2N	19W	TOOELE		
	ALL	11	2N	19W	TOOELE		
	ALL	12	2N	19W	TOOELE		
	ALL	13	2N	19W	TOOELE		
	ALL	14	2N	19W	TOOELE		
	ALL	15	2N	19W	TOOELE		

Table 4.3 Bounty Project Utah State Potash Lease Data

ML #	DIVISION	SECTION	TOWNSHIP	RANGE	COUNTY	ACREAGE
52120	ALL	16	2N	19W	TOOELE	640
52121	ALL	16	3N	18W	TOOELE/BOX ELDER	1280
	ALL	32	3N	18W	TOOELE/BOX ELDER	
52122	ALL	36	3N	19W	TOOELE	640
52123	ALL	32	4N	17W	BOX ELDER	640
52124	ALL	2	N4	18W	BOX ELDER	2614
	ALL	16	N4	18W	BOX ELDER	
	ALL	32	N4	18W	BOX ELDER	
	ALL	36	N4	18W	BOX ELDER	
52125	ALL	16	5N	17W	BOX ELDER	1280
	ALL	32	5N	17W	BOX ELDER	
52126	ALL	16	5N	18W	BOX ELDER	1920
	ALL	32	5N	18W	BOX ELDER	
	ALL	36	5N	18W	BOX ELDER	

4.3 Terms of Agreements

At this point, there are no agreements in place, as the details are currently being negotiated with private land owners.

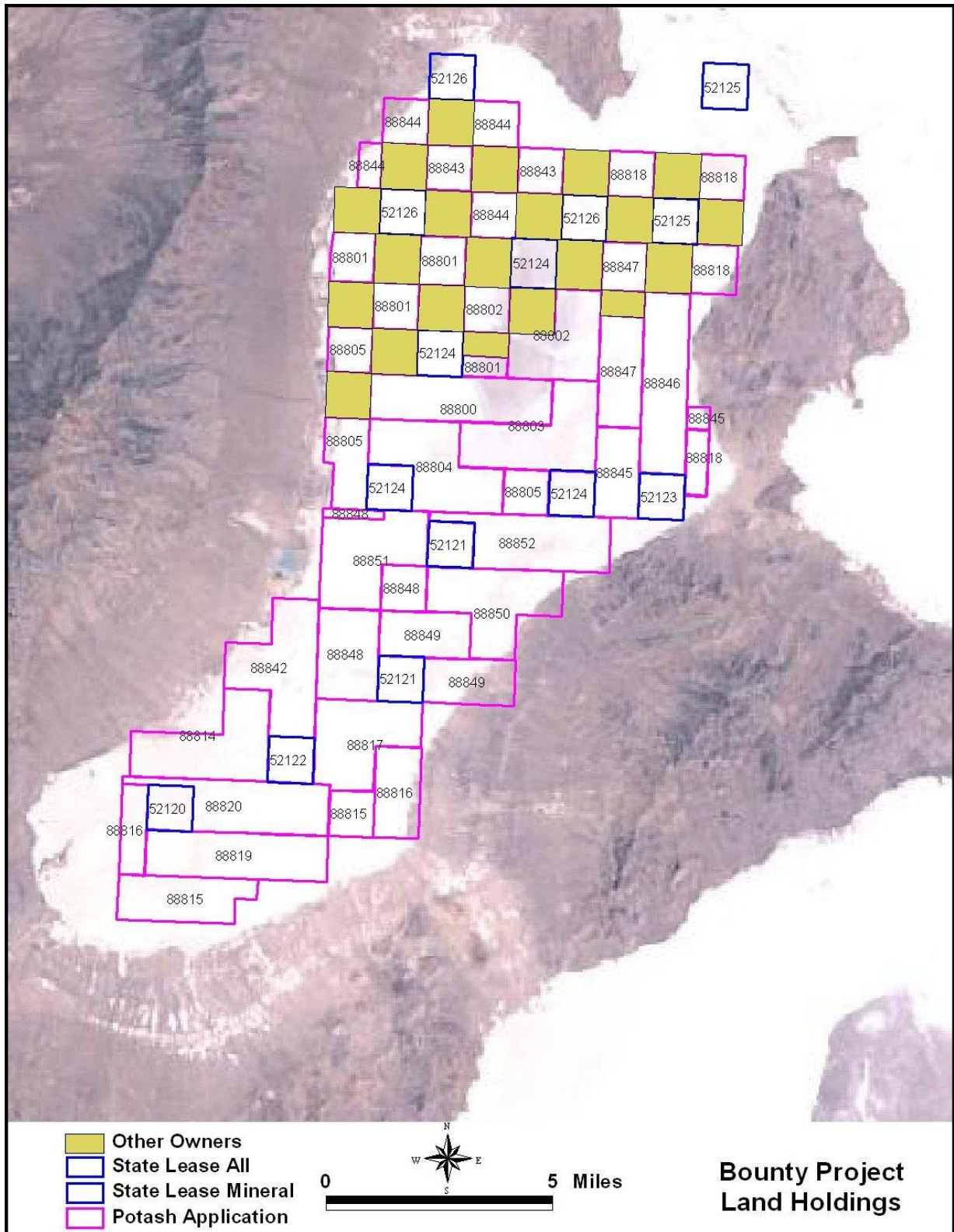


Figure 4.2 Bounty Potash Project Land Status Map

5.0 ACCESS; CLIMATE; LOCAL RESOURCES; INFRASTRUCTURE; AND

PHYSIOGRAPHY

The Bounty Potash Project is 25 miles (40 km) north of Interstate 80, from a point 4 miles (6.4 km) east of the Nevada/Utah border. The first 6 miles (9.6 km) is on a paved road. The remainder is on a maintained gravel road on the northwest side of Pilot Valley. The driving time from Reno, Nevada, is approximately 7 hours. From Salt Lake City, Utah, it is 3 hours.

The Bounty Potash property is located on the flat salt pan in the northern half and the remainder of the playa in the southern part of the Pilot Valley, between the Pilot Range to the northwest and the Silver Island Mountains to the southeast. Immediately south and east of the Silver Island Mountains is the much larger Bonneville Salt Flats. Both of these are the result of the evaporation of the giant Pleistocene Lake Bonneville, of which the Great Salt Lake is a remnant. The Pilot Valley salt pan underlying the property is very flat at an elevation of approximately 4240 feet. Topographic relief in the adjacent ranges is moderate on the lower slopes to steep on upper slopes and elevations reach 10,716 feet at Pilot Peak and 7563 feet at Graham Peak in the Silver Island Mountains. Alluvial fans separate the mountains from the salt pan. At the edges of the salt pan there is a thin covering of windblown sand, particularly in the southwest end of the valley. In the central salt pan, the surface is a hard salt crust much of the year. During times of winter and summer precipitation, the salt is covered briefly by a thin mirror of water.

5.1 Climate

Climatic data have been collected at the Wendover weather station since 1912 (Lines, 1979). Precipitation averaged 4.78 in/yr (12.14 cm/yr). The yearly maximum was 10.13 (26.16cm) in 1941 and the minimum was 1.62 inches (4.11 cm) in 1992 (Mason et.al., 1995). There were five wetter-than-normal and drier-than-normal periods during this period, ranging in length from 12 to 14 years.

Air temperatures have been recorded since 1921. The average annual temperature was 52.4 degrees F. This has been as high as 56.3 deg F in 1934 and as low as 48 deg F in 1994. Typically, high average annual temperatures occur during periods of less-than-normal precipitation and low average annual temperatures occur during periods of higher-than-normal precipitation. During a study done in 1974-75 mean monthly temperatures on the Salt Flats were 0.5-1.5 degrees C (0.9-2.7 F) higher than in Pilot Valley. During most days the maximum temperature in Pilot Valley exceeded that on the Bonneville Salt Flats, but greater night time cooling consistently lowered the Pilot Valley Temperatures below those on the Salt Flats. Air temperatures in the sun commonly exceeded 110 degrees F (44 deg C) on July and August afternoons in both areas.

Annual wind velocity (Lines, 1979) averaged 4.3 mi/hr (6.9 km/hr) in Pilot Valley. Wind velocities were greatest during spring and summer months. Monthly wind velocities ranged from a low of 2.1 mi/hr (3.4 km/hr) in December to a high of 6.3 mi/hr (10.1 km/hr) in June. Much of the day was generally relatively calm with a few hours of strong winds in mid to late afternoon. Gusts associated with summer thunderstorms exceeded 50 mi/hr (80 km/hr).

5.2 Vegetation

The salt flats themselves are barren of vegetation due to high salinity, but a variety of salt-tolerant plants grow around the margins and on the lower slopes of adjacent alluvial fans. There is an orderly zonation of vegetation related to salinity and depth of groundwater. The dominant plants along the fringes of the playas are phreatophytes with relatively shallow roots. The most salt-tolerant is iodinebush. This is found on the fringes of the playa and where shallow drainages carry stormwater onto the playa. Second is saltgrass, which grows largely on the lower west side of the playa where depth to water is less than 8 feet. The next less salt-tolerant plant is greasewood which is very common close to the playa and on the lower slopes of alluvial fans. Rabbitbrush commonly is associated with greasewood, but generally occurs only a bit higher on the alluvial fans.

5.3 Infrastructure

The northwestern edge of the project is 25 miles (40km) by road from Interstate 80 and the first 5 miles (8 km) of these are paved. North of the Utah Highway Department building and gravel pit on the access road, there is no resident population for many miles except the small TL Bar Ranch, situated where some freshwater springs erupt at the base of the alluvial fan. It is approximately 25 miles (40 km) by road further north to the Central Pacific railroad at Lucin – a place name only. It is 12 miles (19.2 km) south plus another 15 miles (24 km) north to Pilot Creek Valley on the west side of Pilot Peak where there is a small ranching area with no services. To the east is the empty, unpopulated and nearly road-less Great Salt Lake desert.

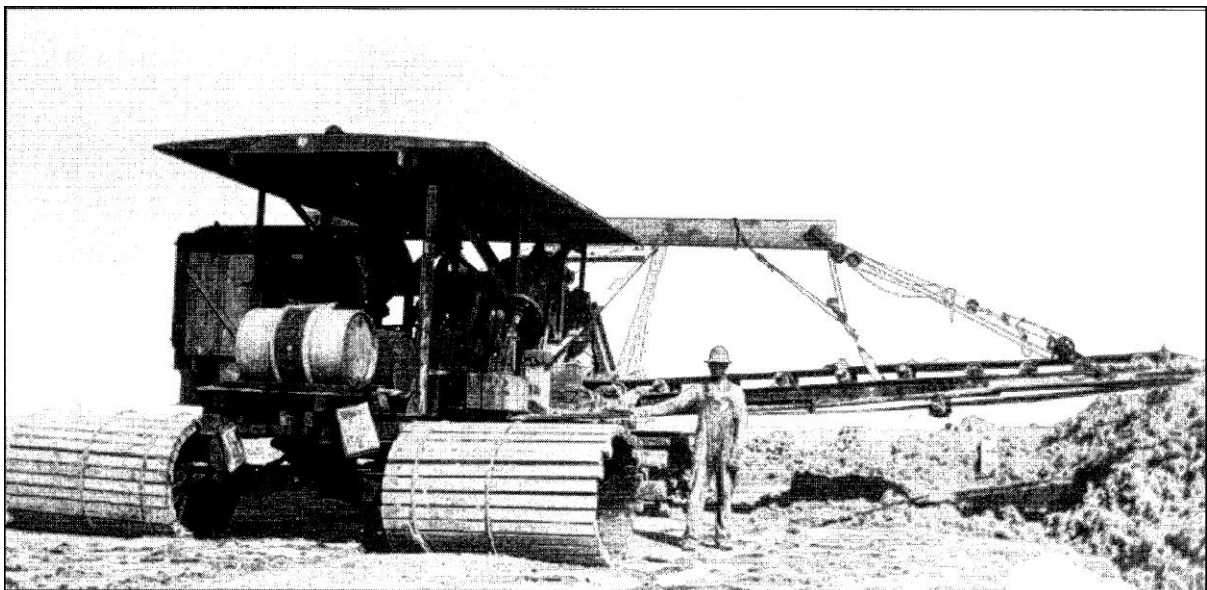
The railroad to the north could possibly be used for shipping of supplies and products, but there are no facilities there. The logical route for access and supplies is from the south - Interstate 80 and the railroad which parallels it. Intrepid Potash and its predecessors have been using a loading point there, 4 miles (7 km) east of Wendover, for decades. Lodging, restaurants, basic services and potentially a small workforce are available in Wendover. Mining supplies and equipment can readily be transported west from Salt Lake City by I-80 or the railroad. In Nevada, Elko is also a major source of mining equipment and supplies.

6.0 HISTORY

The history of salt and potash production in the Wendover area is well documented by Nolan (1927), Lallman and Wadsworth (1976), Gwynn (1996, 2011), and others. The first mention of salt crusts in NW Utah was by Stansbury (1852) in his description of crossing the Pilot Valley playa in October 1849. While crossing the playa he marveled at the vast expanse of salt, but there was no mention of potash. When the Western Pacific Railroad was completed across the salt flats in 1906, the existence of the Bonneville salt deposits, then known as the Salduro Salt Marsh, gained national attention and the first claims were staked. The first to attempt to exploit the salt deposits was the Montello Salt Company. After several unprofitable years, the claims were leased to the Capell Salt Company. They produced common salt for a short time. In 1916 they were absorbed by the Solvay Process Company. Prompted by Germany cutting off potash supplies during World War I, they profitably produced potash from the Salduro Salt Marsh brines by solar evaporation starting in 1916. In late 1918 the operation was acquired by Utah-Salduro Potash Company and by 1920 they were the largest potash

producer in the USA. This operation ceased production in 1921 due to price drops after the war.

Between 1921 and 1936 several attempts were made to produce salt and potash with little success. In 1936 the Bonneville Potash Corporation built a new plant which recovered potassium chloride by flotation from solar-precipitated salts, and this plant was in continuous operation for many years, surviving several ownership changes. The land package grew over time to 57,500 acres (23,270 ha) of fee land. Additional leases totaling 30,900 acres (12,500 ha) were also acquired. In 1964 the property was acquired by Kaiser Aluminum & Chemical Corporation who operated it for many years. The property was later acquired by Reilly Wendover, who in turn sold it to Intrepid Minerals in 2004. Intrepid is operating the project today, producing potash, magnesium chloride and common salt. The brine deposits at Salduro/Bonneville Salt Flats have been producing potash and other salts continuously for 75 years, using a process very similar to that employed in the late 1930's, and have many decades of future production.



Trenching machine building solar-evaporation-pond dikes (1921-1925, Chloride Products, Inc.).

Figure 6.0 Early Potash Mining Scene

The salt and brine deposits in Pilot Valley are very much analogous to those exploited in the Salduro/Bonneville deposits, although somewhat smaller in area. Nolan (1927) noted that the Pilot Valley hard salt pan covered approximately 25 square miles. There has been no commercial production from this area. Nolan drilled several auger holes in this area and many more in the Bonneville Salt Flats to examine the stratigraphy and to collect and analyze the brines. He found them to be very similar in both areas.

In the mid 1960's Quintana Petroleum Corporation contracted M. P. Nackowski to carry out a study of the brines in the Pilot Valley playa, which he referred to as the Northwest Bonneville Area (Nackowski, 1967). Quintana drilled 42 auger holes from 12 to 16 feet deep on a 2-mile square grid. Brine from each hole was analyzed for Na, K, Li, Mg, Ca, SO₂ and Cl. Specific

gravity and water table depth were noted. Sediment lithology was described in 1-foot increments. From this data a brine resource was calculated, the details of which are discussed in section 6.1 below.

The USGS and the Utah Division of Natural Resources have done several studies over the past 96 years on the geology and hydrology of the Bonneville salt flat sediments and associated brines, beginning with Gale (1916) and Nolan (1927). Many of these included data from the Pilot Valley playa. The most relevant ones were Lines (1979), Mason et.al. (1995), and Stephens & Hood (1973).

6.1 Historical Resource Estimates

The only potassium brine resource estimate in Pilot Valley of which Mesa and the author are aware was that carried out by Nackowski (1967) for Quintana Petroleum Corporation. This estimate was produced many years prior to the implementation of the NI 43-101 legislation and details of sampling, sample analysis and how the estimates were calculated are not entirely complete.

Readers are cautioned that the historical estimates are not NI 43-101 compliant and should not be relied upon. A Qualified Person has not done sufficient work to classify the historical estimate as current mineral resources or mineral reserves. Consequently, their reliability and relevance should be regarded as suspect until proven otherwise. The issuer is not treating the historical estimate as current mineral resources or mineral reserves as defined by NI 43-101.

During June and July 1966, Nackowski completed 42 auger holes in the Pilot Valley playa to depths between 12 and 16 feet on a two-mile square grid as near as possible to section corners. In each hole, the brine was sampled and analyzed for Na, K, Li, Mg, Ca, SO₂ and Cl. The specific gravity of the brine was measured and the water table depth was recorded in each hole. The lithology of the sediments encountered was described for each one-foot interval.

Holes were drilled by a gasoline powered 6 inch diameter auger suspended from an A-frame mounted on a snow cat. A sample from each one-foot interval was sealed in a plastic bag. A one-quart composite brine sample was collected from each hole.

The sediment and water samples were analyzed. The data was compiled and weighted average grades were calculated for KCl, NaCl, MgCl and LiCl. From Table 6.1, it is clear that the dissolved salt content decreases away from the center (Zone A). The brine supply, grade and tonnages were calculated using a polygonal modified contour method. The area was divided into concentric strips by iso-potash content contours (Fig.6-1). These strips are designated as blocks A through G. Weighted average grades for the brine were calculated for each strip. Using a depth of 10 feet, volumes and tonnages were calculated. The figures in Table 6.2 represent 14.8 percent of the total brine. The specific yield of 14.8% was calculated by subtracting the average water content of sediments above the water table from that below the water table and dividing by the water content below the water table.

Table 6.1 Brine Grade Table (Nackowski, 1967)

Area Block	Size sq. mi.	KCl %	NaCl %	MgCl ₂ %	LiCl %
A	13.32	1.342	20.84	1.144	0.0345
B	16.31	1.181	20.82	0.963	0.0323
C	1.89	0.906	17.92	0.862	0.0252
Resource Sub-total 0.75% KCl Cutoff	46.52	1.127	19.78	0.978	0.0304
D	18.28	0.659	13.75	0.504	0.0182
Resource Sub-total 0.50% KCl Cutoff	64.8	0.995	18.07	0.844	0.0269
E	28.54	0.387	8.18	0.298	0.0116
F	25.05	0.23	5.10	0.201	0.0074
G	21.23	0.211	3.86	0.191	0.006
Resource Total 0.10% KCl Cutoff	139.62	0.614	11.56	0.518	0.0172

Table 6.2 Historical Resources (Nackowski, 1967)

Area Block	Size sq. mi.	Gallons Brine Milions	Tons Brine Millions	KCl Tons	NaCl Tons
A	13.32	2,442.00	12.01	161,190	2,503,120
B	16.31	3,010.30	14.68	173,420	3,057,170
C	1.89	3,263.40	15.6	141,300	2,794,840
Resource Sub-total 0.75% KCl Cutoff	46.52	8,715.74	42.29	475,910	8,355,130
D	18.28	3,412.80	16.72	110,190	2,299,190
Resource					

Sub-total	65.34	12,128.54	59.01	586,100	10,654,320
0.50% KCl					
Cutoff					
E	28.54	5,223.60	24.25	93,850	1,983,800
F	25.05	4,716.28	20.52	47,190	1,046,330
G	21.23	3,708.75	16.05	33,860	619,430
Resource					
Total	139.62	25,777.17	119.83	761,000	14,303,880
0.10% KCl					
Cutoff					

Note: Specific yield of 14.8% of brine supply from 10 foot vertical interval of saturated sediment.

Nackowski's 1967 total resource figures without applying the 14.8% specific yield are:

**174.33 billion gallons or 809.65 tons of brine containing
5.14 million tons of KCl and 96.65 million tons of NaCl.**

At a cut-off grade of 0.5% KCl, and assuming an average annual production of 25,000 tons of potassium chloride, and assuming no replenishment of the resource from depth or laterally, Nackowski calculated a mine life of 16 years and a total production of 400,000 tons of KCl.

There is obviously replenishment of the Salduro/Bonneville/Intrepid resource 20 miles to the south, since it has been operating for 75 years, so it would be safe to assume at least some replenishment at Pilot Valley. The author would assume that the Nackowski resource is a minimum figure, which demonstrates that there is a significant resource (currently ill-defined) present in Pilot Valley. Current commodity prices may allow a lower cut-off grade and brine may be recovered from depths greater than 10 feet – both of which could substantially increase the potash resource potentially present.

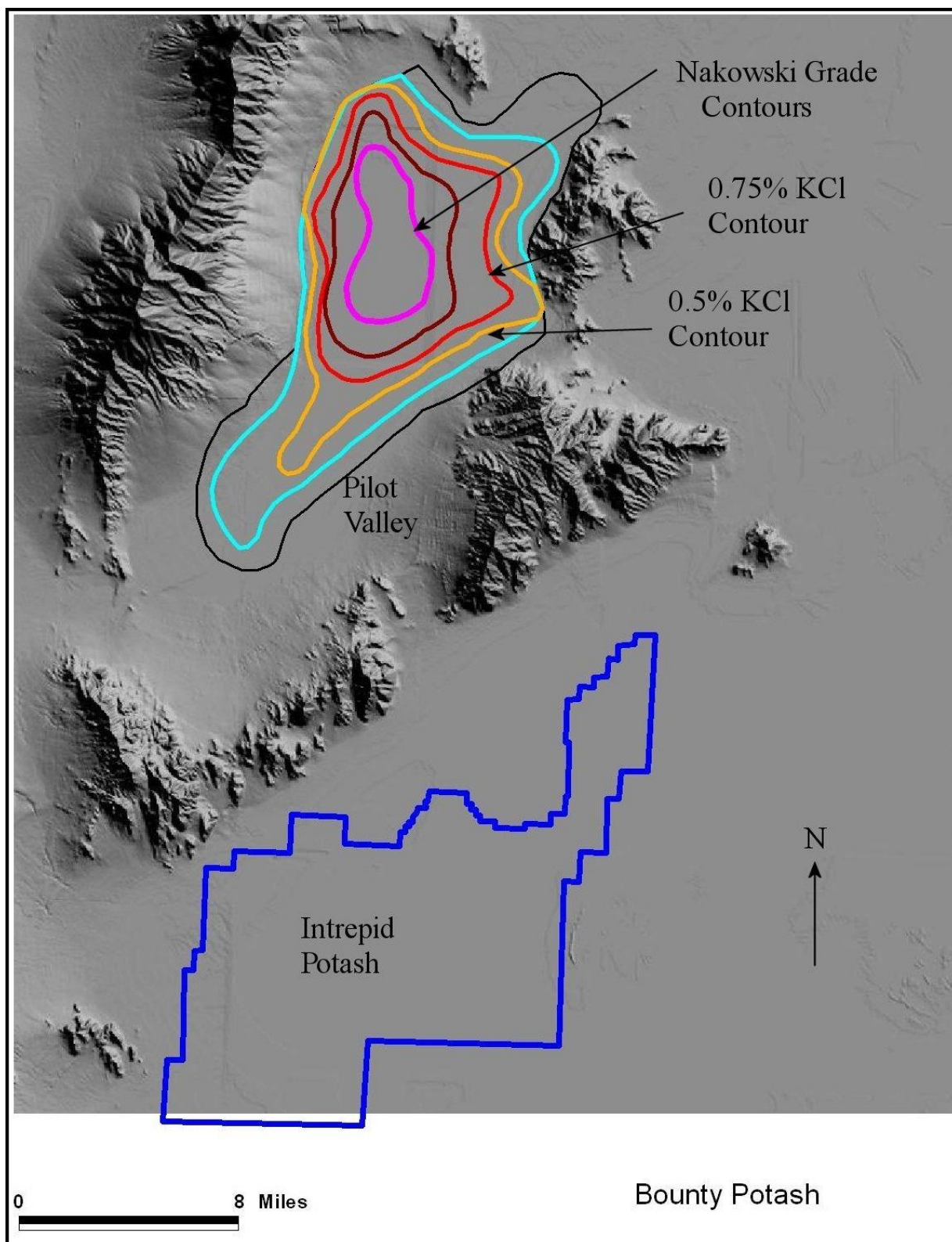


Figure 6.1 Pilot Valley Resource Area (after Nackowski, 1967)

7.0 GEOLOGIC SETTING AND MINERALIZATION

7.1 Regional Geology

The Basin and Range province as a whole and the Great Salt Lake Desert area as well are characterized by a series of isolated nearly parallel northerly trending mountain ranges separated by basins. This alternating series of basins and mountain ranges is the surface expression of intense extension and block faulting that started in Miocene time and has continued to the present in some areas (Lines, 1979). These mountain ranges are bordered on one or more sides by faults that can have several thousand feet of displacement. The basins are downthrown blocks, or grabens, which are filled with detrital material eroded from the adjacent mountains and often with large amounts of evaporite material (Feth, 1959). Much of the basin fill in the Great Salt Lake Desert was deposited in Pleistocene Lake Bonneville and in smaller lake basins that predate it. The basin and range extension and block faulting has been superimposed on earlier folding and faulting that occurred on a regional scale during the Nevadan orogeny (Late Jurassic and Early Cretaceous) and the Laramide orogeny (Late Cretaceous through Eocene time).

The mountain ranges in the vicinity of Pilot Valley and Wendover are composed mainly of limestone, dolomite, shale and quartzite of Paleozoic age. Because of block faulting and basin fill, these rocks form both the adjacent ranges and intervening valley bottoms, often thousands of feet below the current surface. Two oil wells, drilled 10 to 15 miles (16 to 24 km) east of Wendover near the highway, penetrated nearly 3000 feet (915m) of valley fill before encountering Paleozoic bedrock.

7.2 District Geology

According to gravity surveys noted in Lines (1979), the Bonneville Salt Flats and the Pilot Valley are underlain by fault grabens. In Pilot Valley the gravity data suggest that this basin fill covering the Paleozoic rocks is about 5300 feet thick in the deepest part of the graben. The lower part of the fill in these grabens is extrusive volcanics and related sediments of late Tertiary age. The middle part of this fill is composed mainly of poorly consolidated fine grained calcareous sediments and evaporite rocks of pre-Lake Bonneville age. The upper portion of the basin fill was deposited in Lake Bonneville as the lake evaporated and receded. These sediments are carbonate grain muds and silts with interbeds of fine oolitic sand and thin gypsum and salt evaporite horizons. It is largely within the upper units that the sodium and potassium enriched brines are developed. Also, eight ancient shoreline terraces developed during the receding of Lake Bonneville are displayed on the lower slopes of the Silver Island Mountains.

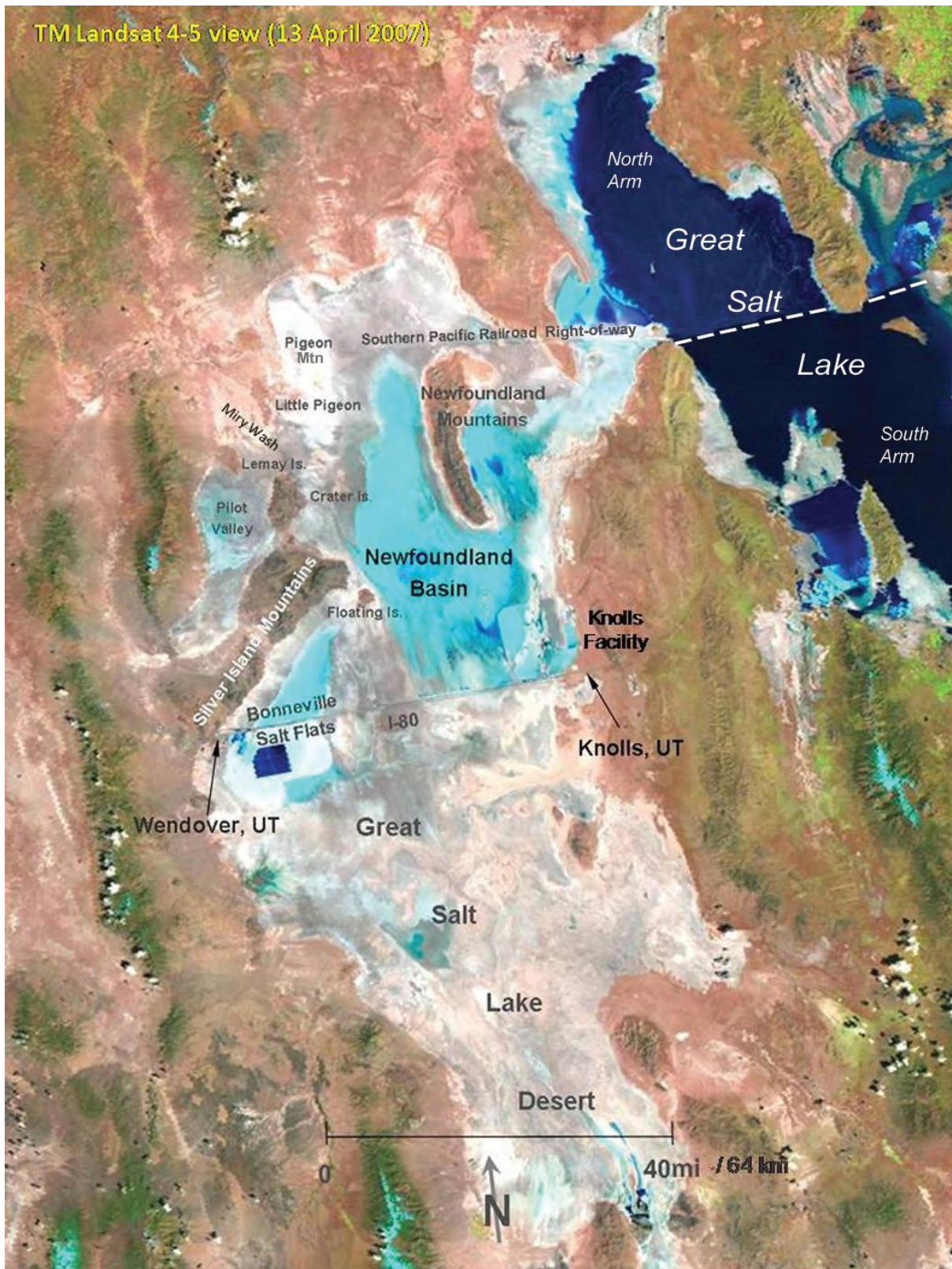


Figure 7.1 Great Salt Lake Desert Including Pilot Valley

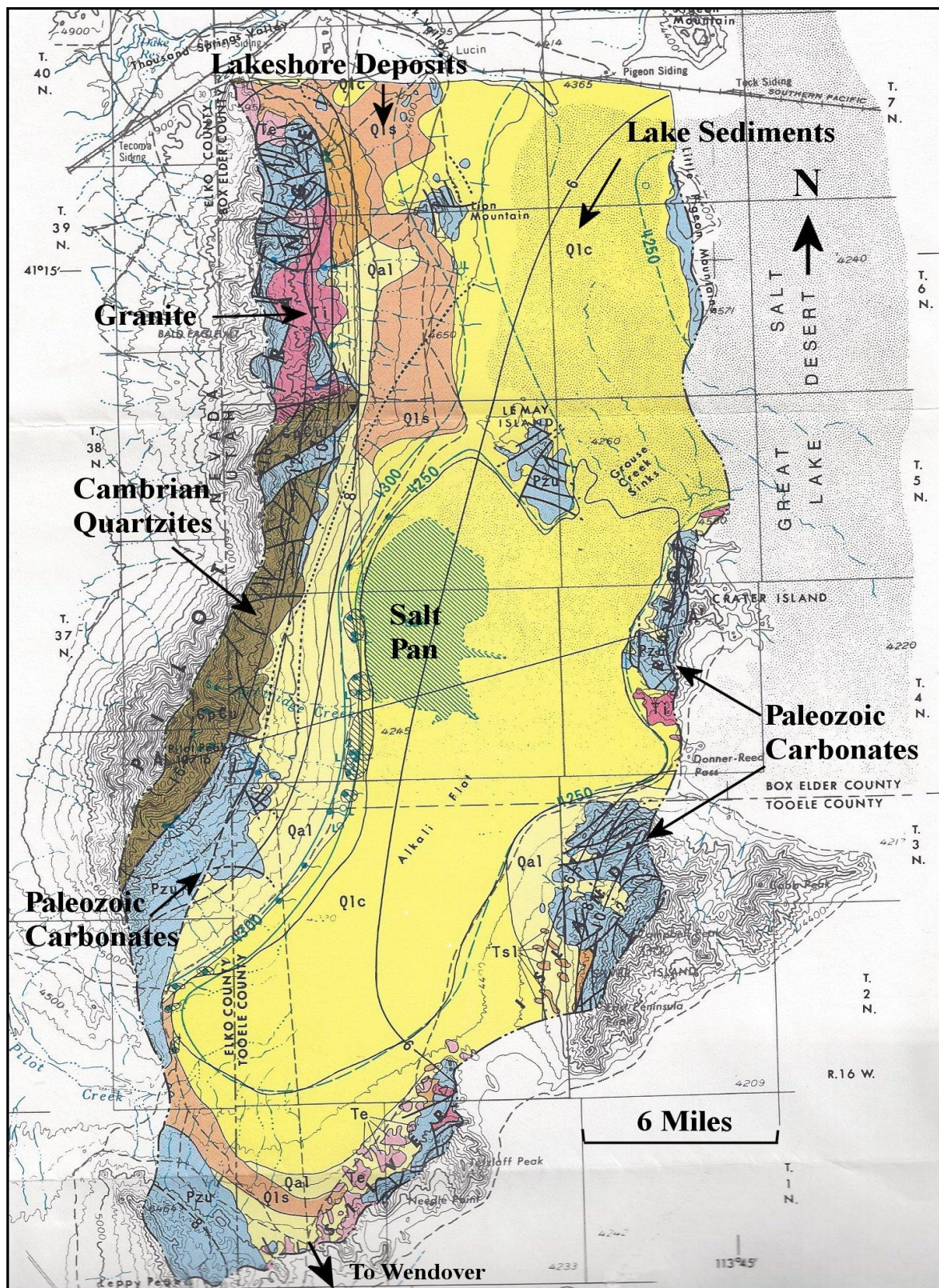


Figure 7.2. Pilot Valley Area Geology (from Stephens & Hood, 1973)
 7.3 Bounty Project Geology

The geology of the Lake sediments in Pilot Valley is well known only from shallow holes (10 – 16 ft) drilled by Quintana Petroleum in 1966 and reported by Nackowski in 1967. A typical log is shown in Figure 7.3. Mason, et.al. (1995) reported water sampling data from a few deeper holes in the playa, however there were no lithologic data reported. Of these the deepest was 103 feet, one had a depth of 80 feet, 5 others were in the 21-40 foot range, 5 were in the 11-20 foot range and the remainder were 10 feet or less. There were no analyses for dissolved solids. There are no other known deeper wells or logs.

In general, the upper one to two feet is a hard salt crust in the middle of the playa, decreasing to a feather edge laterally, and absent around its margins. This is underlain by a relatively thick sequence of rather monotonous thinly bedded grey silt-size carbonate grains, and some clay. There are a few other thin salt and gypsum layers. Many layers are reported to contain very fine oolitic sand and brine shrimp fecal pellets. Depth to the water table varies from 1 foot near the center of the salt pan to several feet near the margins.

Lines (1979) describes the three major aquifers in the western Great Salt Lake Desert, shown schematically in Figure 7.3.1 below, based on deeper drilling 15 miles (24 km) south of Pilot Valley. While there is little direct evidence at this time, one may assume that the general stratigraphy of Pilot Valley is similar, as it is a cove-like remnant of Lake Bonneville. At the basin margin there is an alluvial fan aquifer composed largely of sand and gravel, which grades into a deeper basin-fill aquifer of interfingering gravel, sand and lake sediment silts. These are overlain by a thicker zone of very fine grained carbonate bearing lacustrine deposits with occasional evaporite layers, which is not very permeable.

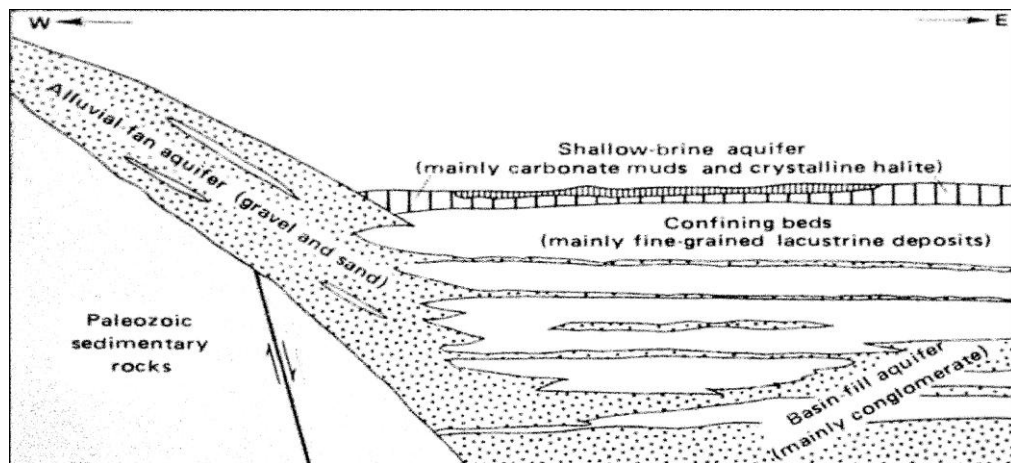


Figure 7.3.1 Schematic Cross Section (from Lines, 1979)

This is overlain by the shallow brine aquifer composed of carbonate muds and silts (nearly all silt-size carbonate grains with very little clay) and crystalline halite beds. A few thin gypsum layers were noted. Stephens & Hood (1973) concluded that this upper aquifer is from a minimum of 10 feet to a maximum of 25 feet thick in Pilot Valley and in the Bonneville Salt Flats. This is the primary source of the brine developed in the area currently being exploited

Hole No. NWB-21		Date Drilled: 7/2/66	
Location:		Sampler:	
Depth Feet	Lithologic Description	Sediment Spec. Grav.	Moisture (Wt. Per- cent Water)
0-1	Salt and sand, light to medium gray, crystalline		25.5
1-2	Sandy silt, medium gray		25.0
	Water Table		
2-3	Salt, gray, crystalline		19.1
3-4	Silt, medium gray, plastic		33.4
4-5	Silt, medium gray, plastic	1.81	33.9
5-6	Silt, medium gray, plastic, gray clay at bottom		31.1
6-7	Silty clay, medium to dark gray, plastic		31.5
7-8	Sandy silt, medium gray limonite stain		21.4
8-9	Sandy silt, medium gray, plastic		27.6
9-10	Silt, medium gray	1.92	26.3
10-11	Silt, medium gray		28.1
11-12	Silt, thin bedded, medium to dark brown		37.0
12-13	Silt, medium to dark gray, brown bedded		30.4
13-14	Silt, light to medium gray, thin bedded		31.0
14-15	Silt, light to medium gray, thin bedded	1.80	33.6

Figure 7.3.2 Typical Pilot Valley Drill Log (from Nackowski, 1967)

by Intrepid Minerals south of I-80 and the target of Mesa Exploration in Pilot Valley. Lateral permeability in the shallow brine aquifer depends on bedding plane discontinuities such as thin oolitic or sandy horizons. Vertical permeability also depends on abundant vertical contraction joints in otherwise impermeable clay layers. The potash, salt and magnesium chloride bearing brines occur as interstitial and fracture filling fluids in equilibrium with the fine grained saline sediments.

7.4 Mineralization

Mineralization in the Bounty Potash project is simply dissolved solids in the brine occupying fractures and pore spaces in the unconsolidated fine grained carbonate grain sediments, salt and gypsum in the upper 25 feet or less of the Pilot Valley playa. These sediments were deposited in the ancient Lake Bonneville as it evaporated and receded. Most of the minerals dissolved in the brine are the residuum of this evaporation and some were derived from erosion of the surrounding bedrock and rainwater influx. There may have been contributions from evaporite deposits in pre-Lake Bonneville basins.

Permeability of the fine grained sediments in the upper 25 feet of the playa beds is rather poor in a vertical sense because of the inter-bedded nature of the very fine grained, rather impermeable and less fine grained more permeable sediments. Sub-vertical dessication cracks improve the vertical permeability. The horizontal permeability is better due to thin beds of very fine grained oolitic sand layers with included brine shrimp fecal pellets. Thin beds of evaporitic salt and gypsum are also more permeable. Thus there is a much stronger lateral flow of brines toward the center of the playa, and the contribution of brine from deeper sources is rather limited.

Mesa has done no direct evaluation of the mineralization to date. The work by Ncakowski (1967) was the only program focused on the grade and distribution of the brine (see Section 6.1 of this report). The concentration of dissolved solids decreases away from the center of the playa (See Figure 6.1). Due to evaporation at the central salt pan, there is a general brine flow gradient toward the center and the brine becomes increasingly enriched as water evaporates. His work says that, using a 0.75% KCl cutoff, the average grade of the brine over an area of 46.5 square miles (12712 ha) is 1.127% KCl, 19.78% NaCl, 0.978% MgCl₂, and 0.304% LiCl.

Using a 0.5% KCl cutoff, the average grade of the brine over an area of 64.8 square miles (17,715 ha) is 0.995% KCl, 18.07% NaCl, 0.844% MgCl₂ and 0.0269% LiCl.

If the entire 139.6 square mile (36,156 ha) sampled area is included, the average grades are 0.614% KCl, 11.56% NaCl, 0.518% MgCl₂, and 0.0172% LiCl.

Mesa Exploration plans to do additional drilling to confirm these figures in 2012.

8.0 DEPOSIT TYPES

8.1 Closed Basin Potash-bearing Brine Deposits (condensed from Orris, 2011)

On a global basis these deposits are of highly variable size in terms of the amount of contained potash and may contain from a few thousand to millions of metric tons of potash. These deposits may be regionally significant producers of potash and offer the potential for the production of other commodities in addition to potash, such as magnesium, lithium and boron. Potash production from the Great Salt Lake and at Wendover, Utah, is from this deposit type. Potash bearing brine may be alkaline or enriched in chloride, sulfate or calcium depending on the local geology. These brines form in salt lakes and salars or playas in closed basins in arid

environments, where high rates of near-surface evaporation concentrated the brine. The duration of this process can extend from hundreds of years to tens of thousands of years. Lake Bonneville existed between 28,000 and 7,000 years ago during a cooler and wetter climate. The potash bearing brines at Great Salt Lake and near Wendover, Utah, are the concentrated remnants of this lake. Such brines are commonly found in structurally controlled basins that formed in volcanoclastic terranes.

In addition to the potash bearing brines, most of these basins have some surface or near-surface evaporites and salts. Host rocks of the brines may include gypsum or halite and lacustrine sediments. The areas near Wendover have both gypsum and salt beds. The presence of an evaporate bearing salt lake, salar or playa may indicate surface or near-surface brines, but the brine may underlie a much larger area that is determined by the extent of a pre-existing lake and the porosity and permeability of the host sediments. Sub-basins may exist within a larger basin. The Bonneville Salt Flats and the Pilot Valley playa are both sub-basins of the Great Salt Lake Desert.

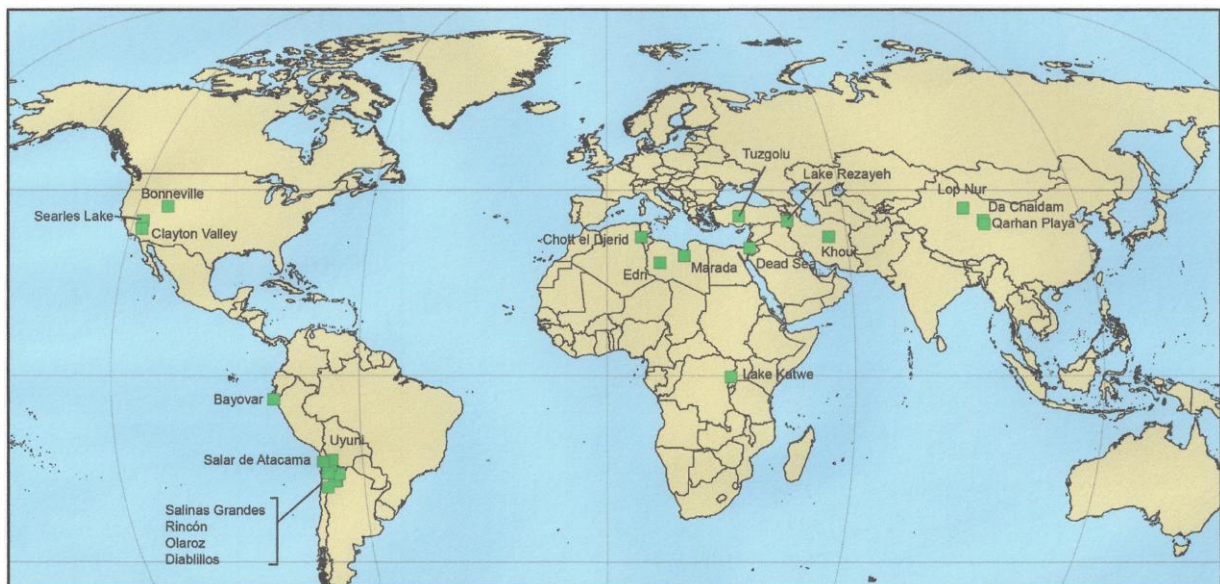


Figure 8.1 World Closed Basin Potash Deposits (Orris, 2011)

9.0 EXPLORATION

This section will briefly summarize the significant historic exploration on the property, and discusses the proposed Mesa Exploration program.

9.1 Prior Mapping and Sampling

The rocks surrounding the Pilot Valley playa have been mapped most recently by Stephens & Hood (1973) – see Figure 7.2. The lithology of the surrounding rocks is predominantly limestone and dolomite with lesser amounts of quartzite and minor igneous rocks. The lithology is significant only in that erosion of these rocks contributes dissolved Ca, Mg and CO₂ to the run-off water entering the playa. The water then evaporates, leaving these behind.

The earliest discussion of salts and brines in Pilot Valley was by Nolan (1927). In his study of potash bearing brines in the western Great Salt Lake Desert, he supervised the drilling and sampling of 405 hand auger holes distributed over a very large area, 27 of which were in the Pilot Valley playa. Maximum depth was 14 feet and many were less than 10 feet due to drilling difficulties. His report did not specifically discuss the lithology and chemistry of the Pilot Valley playa.

The work most relevant to this report was the work done by Nackowski for Quintana Petroleum in 1969. He completed 42 auger holes in the Pilot Valley playa to depths between 12 and 16 feet on a two-mile square grid as near as possible to section corners. In each hole, the brine was sampled and analyzed for Na, K, Li, Mg, Ca, SO₂ and Cl. The specific gravity of the brine was measured and the water table depth was recorded in each hole. The lithology of the sediments encountered was described for each one-foot interval. This was the basis for his historical resource estimate, discussed in Section 6.1

Lines (1979) and Mason et.al. (1995) studied the surface vegetation, young sediments and hydrology of the Pilot Valley playa in some detail. Lines drilled 14 hand augered holes in the playa ranging in depth from 1 to 19 feet (0.3 to 5.8m). Holes were cased with 2.5 inch (6.35 cm) perforated plastic pipe. Sediment and water samples were collected from each hole. Mason et.al. reported depth, temperature and fluid density data from 53 shallow auger holes in the Pilot Valley playa, some of which were existing and some of which were new. Of these the deepest was 103 feet (31.4m), one had a depth of 80 feet (21m), 5 others were in the 21-40 foot (6.4 to 12.2m) range, 5 were in the 11-20 foot range and the remainder were 10 feet (3m) or less. There were no published lithologic data or analyses for dissolved solids, unfortunately.

9.2 Work by Mesa Exploration

The work by Mesa Exploration has been limited to literature research, acquisition of the mineral rights to the area and the pursuit of additional data from government and private sources. General geology, land status and access routes have been field checked. Mesa has done no sampling. Mesa must complete the permitting process with the US Bureau of Land Management before doing any drilling

Mesa is designing an exploration program of forty auger holes drilled to the base of the shallow aquifer. Drilling will infill and verify historic sampling and map brine aquifer depth, thickness, lithology and potash content. Additionally four reverse circulation drill holes will be drilled to 500 feet (152.4m) to test for deeper brine typically found in the region. Historic assay, specific gravity and lithology data have been acquired and have been digitized.

10.0 DRILLING

10.1 Historic Drilling Summary

The first known drill holes were hand auger holes, drilled under the supervision of Nolan (1927) of the USGS. Of his 406 shallow holes, 27 were drilled in Pilot Valley. Nolan discussed the drilling results as a whole; he did not discuss Pilot Valley separately. For

Quintana Petroleum Company, Nackowski (1969) drilled 42 shallow auger holes in Pilot Valley specifically to test the potash resource. Lines (1979) drilled 14 hand auger holes as part of his hydrologic study, but reported little lithologic information. Mason et.al. (1995) reported fluid temperature and density measurements from 53 test holes, 79% of which were 10 feet (3m) deep or less. The deepest was 103 feet (31.4m). Only Nackowski reported detailed stratigraphy and potash contents.

Table 10.1 Summary of Historic Bounty Potash Project Drilling

Operator	Date	Program	Footage
Nolan	1927	27 auger holes	10 ft avg
Nackowski	1969	42 auger holes	14 ft avg
Lines	1979	14 auger holes	1 – 19 ft
Mason, et.al.	1995	42 auger holes	10 ft or less
		5 auger holes	21 – 40 ft
		1 hole	103 ft
Total Historic Drilling		131 holes	1700 ft (approx)

10.2 Mesa Exploration Drilling

Mesa Exploration has done no drilling at this time. Systematic infill drilling of the Nackowski drilling program is planned after the permitting process is completed.

11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

11.1 Historic Sampling Procedures

Details of the previous drilling done in Pilot Valley are not as well documented as one would like. Nolan reported that “the boring was done almost entirely with a 5-inch standard auger, equipped with a patent device that simplified emptying. The outfit included extension joints that permitted depths of 14 feet to be reached. In a few holes, caving sand prevented further boring and in a great number, the weight of several feet of brine caused the fine clay to slip through as the auger was pulled up. No casing of holes was attempted.”

Nackowski was more specific regarding his drilling. “The holes were drilled with a portable gasoline powered post hole auger, which was suspended by a cable from an 18-foot “A” frame mounted on a snow cat. Threaded coupled 2-inch diameter pipe, each 2 feet long was used as sectional drill pipe. Holes were drilled in one-foot increments, and relatively undisturbed sediment samples were removed at each one-foot interval from the auger spiral.” “The sediment was described lithologically at the test site by the Geological Engineer as it was removed from the sample. A sample from each run was sealed in a plastic bag for laboratory

analysis, and the lithologic description was recorded by the field secretary. From each hole a composite brine sample for chemical analysis was recovered in a one-quart bottle which was adequately labeled and securely capped.”

Lines (1979) completed 14 holes in the Pilot Valley playa using a hand auger. He stated that “the wells range in depth from 1 to 19 feet because some wells were designed to penetrate only the salt crust, and others were designed to tap only the carbonate muds that underlie the salt crust. All the wells were cased with 2-inch plastic pipe, which was perforated with either a hacksaw or drill. Wells were pumped or bailed to obtain samples for brine density tests.”

Mason, et.al. (1995) did not fully describe the drilling methods. They said that “core samples were collected from boreholes using a split-barrel sampler while drilling with a hollow-stem auger or a barrel sampler attached to a hand auger for near-surface cores.” “Brine samples were collected from selected shallow wells using a hand-operated, inertial lift pump. Any standing water in a well casing was removed before a sample was collected. Brine samples were collected from deep wells using a point-source bailer.”

11.2 Sample Preparation and Analytical Procedures - Historical

The sample preparation and analytical procedures used during historical sampling of the Pilot Valley brines and sediments are also poorly described. In his work Nolan (1927) stated that “field tests for chloride, potassium and sulphate were made at the end of each day... Chloride was determined volumetrically by titration with a standard solution of silver nitrate. Potassium was determined by measuring the volume of the precipitate obtained with sodium cobaltic nitrite solution and sulphate was estimated by a volume measurement of precipitated barium sulphate. The determinations of chloride were satisfactory as to accuracy, but the results for potassium, and sulphate, as later checked in the laboratory, were of qualitative value only. Samples were sent to the chemical laboratory of the Geologic Survey and the results of the accurate analyses made...are used in this report.”

Regarding analytical work for his samples, Nackowski (1969) states only that “a brine sample from each hole was analyzed for Na, K, Li, Mg, Ca, sulfate and Cl and the brine specific gravity was measured.”

Lines (1979) did not describe sample preparation or analytical procedures from the 14 auger holes that he drilled. He only stated that analyses were performed by the USGS lab and by Chemical Corp of San Leandro, California.

Mason, et.al., (1995) stated that “Temperature, specific gravity, and pH were measured in the field. Samples were analyzed in the laboratory for inorganic constituents, and for some samples, stable hydrogen and oxygen isotopes and/or tritium values also were determined. The pore fluid extracted in the laboratory from cores was analyzed for inorganic constituents and stable hydrogen and oxygen isotopes.”

Some of the unpublished data from the USGS work, particularly that of Mason, et.al., and possibly that of other workers, may be available from the USGS upon request.

12.0 DATA VERIFICATION

Unfortunately there is very little data that one could verify. Mesa has done no mapping drilling or sampling at this time. The available data comes largely from reports published by the US Geological Survey or the Utah Department of Natural Resources, so one must assume that it is relatively trustworthy. The most directly useful data is that collected by Nackowski for Quintana Petroleum in 1967. There is no way of directly verifying that data, as all the samples have long since been discarded and the original holes are no longer accessible. Some of the holes drilled by Mason, et.al., in the 1990's could possibly be accessible, but the author saw no evidence of them on his property visit.

The first phase of work that Mesa Exploration intends to perform is to drill at least 40 auger holes in the Pilot Valley near-surface aquifer, both as twins of some of the Quintana/Nackowski holes and to infill the older drillhole pattern to one with holes on 1 mile (1.6 km) centers. This will serve as confirmation of the Quintana/Nackowski resource. A Quality Assurance/Quality Control program will be in place during this drilling program to assure correct sampling and analytical procedures.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Ore Description

The "ore" at the Bounty Potash Project will be nearly identical to that at Intrepid Potash's Wendover operation, 25 miles (40 km) to the south. In place, the brines contain dissolved potassium, sodium, magnesium, lithium, boron, carbonate, sulfate and other materials. Potassium, sodium and magnesium are the commercially important species.

13.2 Metallurgy

No metallurgical testing or process engineering studies have been done by Mesa Exploration at this early stage of the project. However, it is logical to assume that future processing will be very similar to that which is used at the nearby Intrepid Potash facility, since the deposits at the two projects are very strongly analogous.

14.0 MINERAL RESOURCE ESTIMATE

Mesa Exploration Corporation has not calculated a mineral resource for the Bounty Potash Project. The available historic estimates are listed in Tables 6.1 and 6.2. In general the author believes that the historical resource calculated by Nackowski in 1967 is a reasonable estimate based on the data available at the time. However, this estimate cannot currently be verified, as insufficient data regarding the key assumptions, parameters, sample analysis techniques, and methods used to calculate the resource are currently available to allow it to be NI 43-101 compliant. Mesa plans additional verification drilling and modeling to be able to calculate an NI 43-101 compliant resource in 2012.

15.0 MINERAL RESERVE ESTIMATE

No reserves were calculated in this study, nor are any historic reserves available.

16.0 MINING METHODS

While Mesa Exploration has done no current studies regarding mining methods, it is highly probable that the methods used will be very similar to those used at the Intrepid Potash facility nearby.

The following description is condensed from Intrepid's website. The Wendover Facility has been actively used for potash production from naturally occurring brines for over 75 years. Brine from a shallow potash containing aquifer is collected in over 100 lineal miles (160 km) of open ditches throughout the 88,000 acres (137.5 sq mi or 35,612 ha) of land controlled by Intrepid. In addition to the brine that is collected in the shallow aquifer, there is a deep potash containing aquifer 1,000 feet (305m) below ground."

17.0 RECOVERY METHODS

The recovery methods to be used at the Bounty Potash project will be very similar to those used at the Intrepid processing facility, as presented on their website. Since acquiring the Wendover Facility in 2004, Intrepid has made a number of process improvements including applying best practices to increase volumes and efficiencies. They pump the brine collected in the ditch system into an 8,000 acre (3238 ha) solar evaporation pond to evaporate water and precipitate salts. Over five billion gallons (8.9 billion liters) of brine are pumped into the solar pond system each year. As the brine becomes saturated with potash, it is transferred through a series of smaller evaporation ponds into harvest ponds. When the ripened brine finally reaches the harvest ponds, the ore (a combination of salt and potash) precipitates onto the pond floor. The remaining brine in the harvest ponds is removed and the ore is harvested and transported by elevating scrapers to the mill for processing. In the mill, the potash is separated from the salt by flotation. The material is then dried, compacted, and screened into standard product or compacted into a granular grade of white potash. To produce Metal Recovery Salt (MRS), which is a combination of potash and salt, the ore from the harvest ponds is sent directly to the dryer to be dried and screened. The final products are conveyed and stored in bulk storage warehouses. From the warehouses, potash and MRS are loaded directly into railcars or trucks for shipment.

The left over brine, rich in magnesium chloride, is removed from the harvest ponds and transferred into additional evaporation ponds to concentrate further. Then, the brine is transferred into storage ditches and lined ponds. From storage, the magnesium chloride brine, which is used as a winter highway de-icing product and also a dust control and soil stabilization agent, is loaded into trucks or railcars for shipment.

The Wendover facility produces 95,000 tons (86,182 metric tons) of muriate of potash and 200,000 tons of magnesium chloride annually. Approximately 12,000 tons (11,500 metric tons) of common salt are also produced.

18.0 PROJECT INFRASTRUCTURE

It is too early in the life of the project to have done any planning for new mining infrastructure. Current road access is by county-maintained gravel roads; no significant improvement will be necessary. There is sufficient suitable space available for any anticipated surface facilities. While no detailed planning has been done to date, no significant infrastructure problems are anticipated.

19. MARKET STUDIES AND CONTRACTS

The potash, magnesium chloride and salt markets are currently strong. At the current level of maturity of the project, no market studies have been made, nor contracts pursued.

20. ENVIRONMENTAL STUDIES, PERMITTING, SOCIAL OR COMMUNITY IMPACT

Mesa Exploration has done no studies at this early stage regarding environmental, social or community impact. The US Geological Survey and the Utah Department of Natural Resources have done several studies of the geology, hydrology and ecology of the western Great Salt Lake Desert over the past few decades. Much of this work has been focused on the Bonneville Salt Flats area and the Intrepid Wendover Potash Project, but some of it has also including the Pilot Valley area. Thus the US Bureau of Land Management and the State of Utah are very familiar with the permitting and environmental aspects of a potash operation such as that envisioned by Mesa Exploration. Of course, as the permitting process leading to production begins, additional environmental studies will be required

At this early stage, there are no plans or designs for waste and tailings disposal, site monitoring or water management during operations.

Regarding permitting, the US Bureau of Land Management permitting procedure with potash exploration applications is as follows:

- | | | |
|-----------------|--|-------------|
| 1st | Accept the applications and find them "Open for Prospecting". | Done |
| 2 nd | Calculate "Cost Recovery" and invoice Mesa.
This covers their costs of an environmental review, time to process the applications and evaluate the proposed program. | In Progress |
| 3 rd | BLM approves the work program and issues permit to drill | Pending |

It is possible, but very unlikely, that some un-foreseen environmental problem, endangered species or important archaeological feature will be discovered. This could potentially delay the exploration program. Such obstacles can nearly always be overcome through cooperation with the regulatory agency, for example by detouring a proposed road to avoid an archeological site. The Bounty Potash Project is 25 miles (40 km) by road from Wendover, the nearest town. The

only other people within 30 miles (48 km) are on a few widely scattered ranches, thus there will be little physical impact on the local community. There will be very little visual impact caused by the Bounty Potash operation as the area is out of sight of all but the few people who might visit this remote area. The economic impact may be significant. The operation envisioned by Mesa will employ dozens of people, some of whom will come from Wendover. A mine also generates a significant amount of cash influx to the community from payroll and local purchases. The populace is very familiar with such operations due to the presence of the Intrepid Potash operation nearby for decades. Thus the concept of opening another potash operation should be a positive thing to most of the people in the community. There have been no agreements or negotiations with the local community at this time.

Mine closure and remediation is a complex issue that has not been considered in any detail by Mesa at this early stage of the project. Planning for these is an integral part of the mine design and permitting process. It will be addressed as planning and permitting proceed. There are no inordinately restrictive mine closure regulations in place.

21.0 CAPITAL AND OPERATING COSTS

Capital and operating costs have not been considered, as the Bounty Potash Project is still in the exploration stage.

22.0 ECONOMIC ANALYSIS

There has been no economic analysis at this early stage of the Bounty Potash Project.

23.0 ADJACENT PROPERTIES

Intrepid Minerals and prior owners have been producing potash from an area immediately south of Interstate highway 80, approximately 25 miles (40 km) south of the Bounty Project, for the past 76 years. That deposit is strongly analogous to that at Bounty Potash in terms of geologic setting and brine grades. Mesa expects to produce potash by essentially the same procedures as those used by Intrepid. Details of the Intrepid Potash operation are discussed in Sections 16 & 17 of this report.

There are no other operating mines or near-production properties within 50 miles (80 km) of the Bounty Potash Project.

24.0 OTHER RELEVANT DATA AND INFORMATION

The author is unaware of additional information concerning the Bounty Potash Project that is pertinent to this technical report.

25.0 INTERPRETATIONS AND CONCLUSIONS

The author has reviewed the Bounty Potash project data in detail, and has visited the site. He believes that the data presented by Mesa Exploration provide an accurate and reasonable

representation of the Bounty Potash project.

From his review of the available data, it is apparent to the author that there is a substantial potash resource present in Pilot Valley. As shown by the drilling, sampling and mapping done by Quintana Petroleum, the US Geological Survey and the Utah Department of Natural Resources in the area, the geologic and hydrologic setting is directly analogous to that at the Intrepid Potash operation in the Bonneville Salt Flats 25 miles (40 km) to the south. The size of the drainage basin is somewhat smaller, but dissolved solid (KCl, NaCl, MgCl₂) contents of the brine are quite similar.

From the work done to date it is reasonable to assume that there is a sufficiently substantial resource present in the Bounty Potash Project area to warrant an exploration program to better define the resource estimated by Nackowski in 1967. This historic estimate is not NI 43-101 compliant due to insufficient recorded details of the sampling, analytical and resource calculation procedures employed at the time, so it must be considered as historic data only and cannot be considered a current resource estimate.

It is Mesa Exploration's intent to carry out a verification and infill drilling program in 2012 to confirm and perhaps amplify this historic resource.

The mineralization at the Bounty Potash project is so very similar to that at the Intrepid project nearby that the geology and brine extraction and processing procedures at that deposit can confidently be used as a model for the exploration and development of this project. Extensive work will be required to define a modern, NI 43-101 compliant resource, in terms of drilling, brine sampling, hydrologic studies, resource estimation and later process plant design.

It is fortunate that the Intrepid Potash project is nearby, for the reasons note above and because the agencies in charge of permitting such a project are very familiar with any environmental concerns that could impact the project, thus streamlining the permitting process. The people living nearby are also quite familiar with such a project and no significant local antipathy toward the project is expected.

26.0 RECOMMENDATIONS

Mesa Exploration should continue compiling the data in hand and pursue additional data from government files or other sources to add to its understanding of the project. This will serve to guide the next phases of exploration and development work at the Bounty Potash project.

The next step in field work after completion of the permitting process will be to discuss the program with local land owners to involve them in the project in a positive way. Data points such as wells, springs and drill holes from previous work should be marked in the field and identified if possible. Planned drill sites must be staked using a GPS receiver and access routes planned. Vehicle access to the playa will be difficult until the surface has dried sufficiently in the summer to be solid.

The drilling itself should be rather straightforward, although some creativity may be required

to deal with the soft sample material. A “Sonic” or “vibracore” style drilling rig should be considered for drilling and sampling the near-surface aquifer in the soft, water-saturated material. These should be capable of collecting relatively undisturbed samples of the near-surface brine aquifer.

Samples of both water and sediments should be carefully collected and preserved. This was a challenge in the previous drilling, as was completing the holes in caving soft sediments.

The completion of the drilling program, both confirming the Nackowski results and closing the drillhole spacing, should lead Mesa to the point where a new resource estimation can be completed in a NI-43-101 compliant manner. Assuming positive results, this will lead to preliminary engineering studies for the design of a system of drainage ditches, evaporation ponds and processing facilities. Additional drilling will probably be required to further infill and expand the resource.

A significant amount of time and money must be allotted to environmental issues and the permitting process. Careful consideration of these will help to streamline the process of evaluating the resource and putting the resource into production.

26.1 Bounty Potash Project Budget – 2012

The planned program and budget for 2012 is as follows:

Table 26.1 Bounty Potash Project Budget 2012

Work	Holes	Depth	Total	Cost
Auger drilling	40	25	1000	\$50,000
Mobilization				1000
Analytical				2000
Deep Brine Wells	4	500	2000	\$40,000
Mobilization				5,000
Well Logging service				<u>20,000</u>
			Total Cost	\$118,000

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28.0 CERTIFICATE OF AUTHOR

I, Dana C. Durgin, do hereby certify that:

1. I am Principal Geologist of: Delve Consultants, 2881 Fargo Way, Sparks, Nevada, USA 89434
2. I graduated with a degree in Geology from Dartmouth College in 1970. In addition, I obtained a MastersDegree in Geology from the University of Washington in 1972.
3. I am a member of the American Institute of Professional Geologists (CPG #10364), a Registered Professional Geologist in Wyoming (PG-2886), and a member of the Geological Society of Nevada.
4. I have worked as a geologist for a total of 38 years since my graduation from university. My career has focused on the exploration and exploitation of mineral deposits. I have worked extensively in Nevada and Utah including assignments as both an exploration and mine geologist in eastern Nevada. I have completed several NI 43-101 Technical Reports for projects in Mexico and the USA.
5. I have read the definition of “qualified person” in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I authored this Technical Report, and as a “Qualified Person”, reviewed the available data. I am responsible for the preparation of the technical report titled “Technical Report, Geology and Mineral Resources, Bounty Potash Project, Box Elder and Tooele Counties, USA” – dated February 15, 2012 - for Mesa Exploration Corporation, based upon my critical review of current and historical technical information.
7. I visited the Bounty Potash site on November 27, 2011. I have had no prior involvement with the property that is the subject of this report.
9. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
10. I am independent of the issuer and have no financial or material interests in the property or with Mesa Exploration Corporation.
11. I have read National Instrument 43-101 and Form 43-101F1, updated July 30, 2011, and the Technical Report has been prepared in compliance with that instrument and form.
12. I consent to the use and public filing of this Technical Report prepared for Mesa Exploration Corporation, and to the filing of extracts from or a summary of the Technical Report in the written disclosure of Mesa Exploration Corporation as required, and confirm that it fairly represents the data of the Bounty Potash project.

Dated this 15th day of February 2012.

Dana C. Durgin

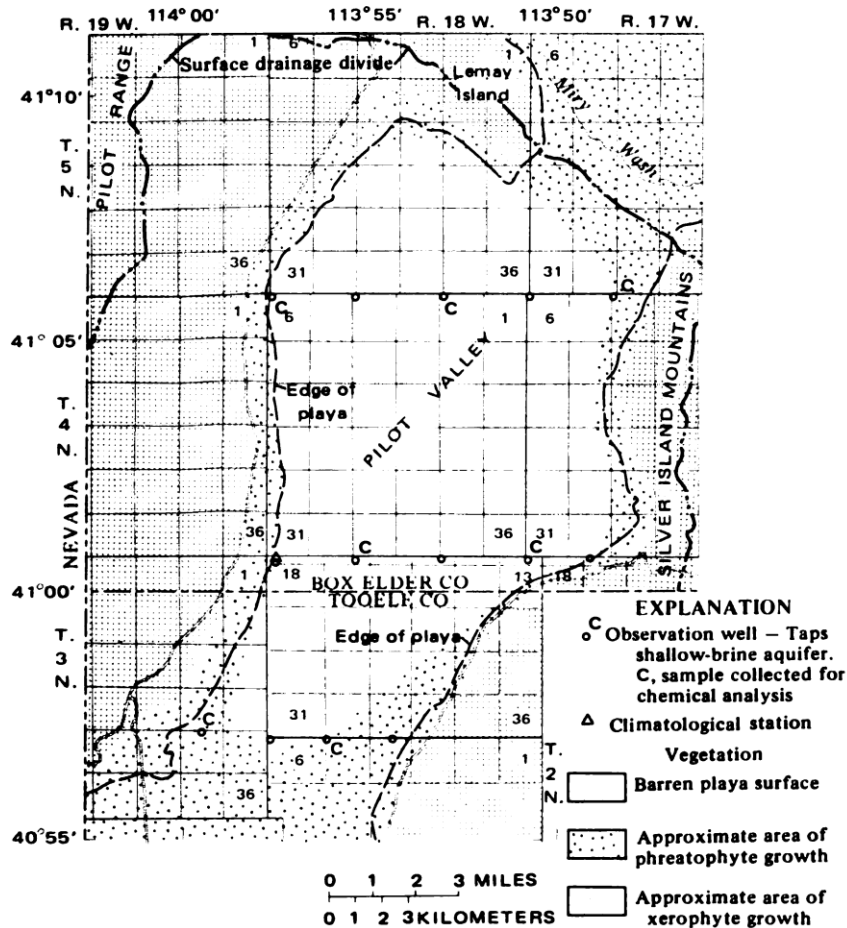


FIGURE 3.—The data-collection network and extent of different types of vegetation in Pilot Valley

determine rates of salt accumulation on the surface during the summer and to estimate rates of ground-water evaporation from the barren surface.

The extent of the Bonneville and Pilot Valley salt crusts and their different geomorphic features were mapped in the fall of 1975 and the fall of 1976. Throughout the study, photographs were taken to document geomorphic features of the salt crusts and changes that took place. Where possible, photographs were taken to document environmental factors that were acting to change the surface.