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GEOLOGICAL EVALUATION OF THE LBM CLAIMS WHITE PINE COUNTY, NEVADA

V. F. Hollister

for

DYNASTY RESOURCES INC.

November 20, 1983

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SUMMARY:

The LBM claims in White Pine County, Nevada, show similar characteristics to the gold-bearing environments on adjacent and nearby properties. Gold-bearing material in a barite, pyrite and calcite-rich siliceous replacement exposed in zone one provides an immediate drill target. Other areas with anomalous gold and indicator minerals need varying amounts of geologic and geochemical work prior to trenching or drilling. Six areas, including zone one, have been delineated by previous work and a budget of $318,000 (Can.) is proposed that will permit step by step evaluation of each area.

Stratigraphic position, faulting and intrusions are all instrumental in the control of gold mineralization on the LBM claims. Each of the six targets contains at least one of these aspects of ore control.

INTRODUCTION:

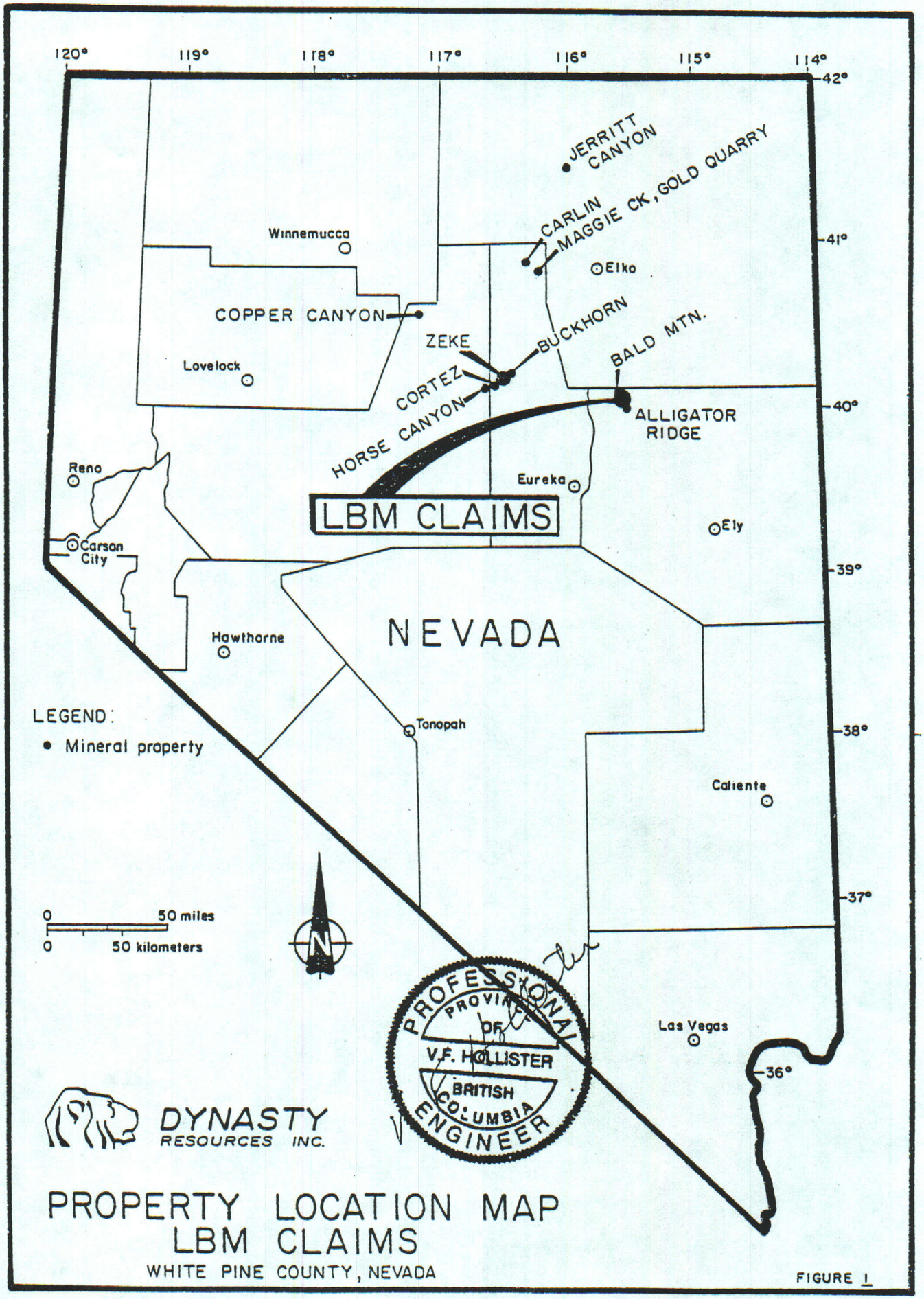
The LBM claims were investigated in the field on October 22, 1983. The investigations included a brief inspection of the claim records available and open in the White Pine County Courthouse, Ely, Nevada. Figure 2 shows the relationship the Dynasty claims have to adjacent ground.

The investigation also reviewed past geochemical and geologic studies supplied to Dynasty. These are summarized in a private report by Loghry (1982) and are generalized in the geologic map (Figure 3).

Figure 1 shows the general location of the LBM claims in White Pine County, Nevada. These are located in Sections 21, 22, 27, 28, 33 and 34 of Township 24 N., Range 57 E., approximately 45 miles northeast of Eureka, Nevada. The claims are reached from Eureka by paved roads to the mine access road to the Bald Mountain mine of Placer Amex and then by a gravel road up Water Canyon. The claims lie on Little Bald Mountain, a spur of Bald Mountain, between elevations of 7,400 to 9,000 feet in moutainous topography typical of the Ruby Mountains. Snow and runoff conditions limit the field season to the period May through October.

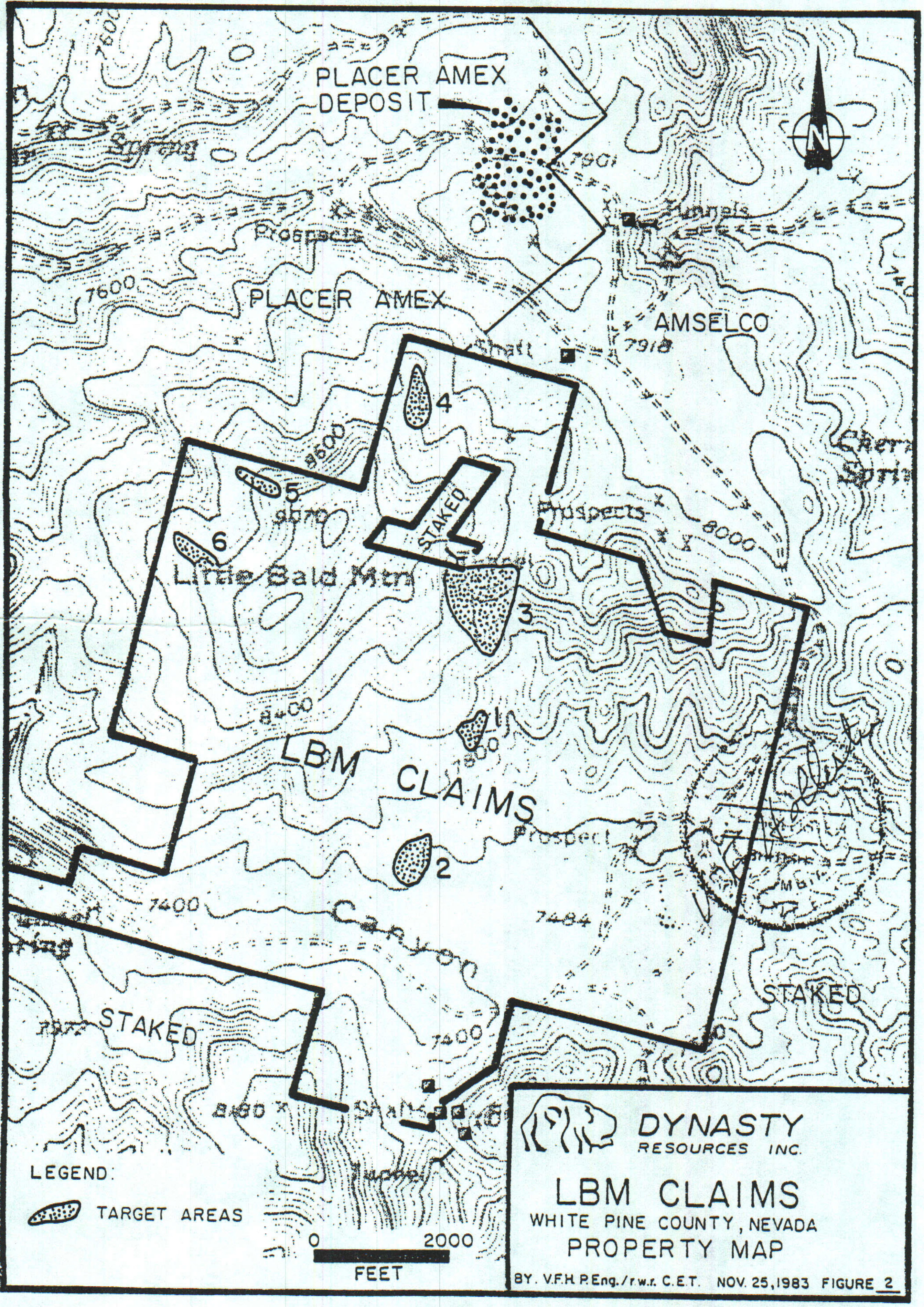
Currently the Bald Mountain gold deposit is under development immediately adjacent to and north of the LBM claims. The Alligator Ridge gold mine lies 12 miles south of Little Bald Mountain. Other gold and tungsten occurrences near the LBM claims are held by a variety of large companies, including Amselco, which has extensively drilled an area to the immediate northeast of LBM.

From June 19 through September 21, 1981, Adit Resources and Knaebel Mining conducted reconnaissance geologic mapping and geochemical sampling of the claims. This was followed in 1983 by extended geochemical surveys, trenching and sampling by Alaska Nevada Mines and Dynasty. This work indicated six areas of possible interest which, together with pertinent geological data, are summarized in Figure 3.



PROPERTY LOCATION MAP
LBM CLAIMS
WHITE PINE COUNTY, NEVADA

FIGURE 1


PLACER AMEX
DEPOSIT
Spring
7901
Tunnels
Prospects
7600
PLACER AMEX
AMSELCO
Shaft
7918
4
8600
5
STAKED
Prospects
6
8000
Little Bald Mtn
3
8400
1
LBM
CLAIMS
Prospect
2
7400
Canyon
7484
STAKED
STAKED
7400
LEGEND:
TARGET AREAS
0
2000
FEET
DYNASTY
RESOURCES INC.
LBM CLAIMS
WHITE PINE COUNTY, NEVADA
PROPERTY MAP
BY. V.F.H. P.Eng./r.w.r. C.E.T. NOV. 25, 1983 FIGURE 2

PROPERTY INVESTIGATIONS:

The LBM property, comprising claims LBM 1-101 inclusive, were investigated in the White Pine County, Nevada, Courthouse in Ely, Nevada. All claims were found to be in good standing, and all are registered in the White Pine County records, book 24, pages 55-112, book 27, pages 427-435, book 38, pages 452-465, and book 65, pages 171-190. As of October 20, 1983, the County Recorder had not yet filed the 1983 assessment work, although it had been completed and submitted to the Recorder's office. The Recorder had the assessment work affidavits in their office, pending filing. The legal requirements for filing have been satisfied and the claims are in good standing.

Because of the delay in the County Courthouse paperwork, it is possible that the BLM office in Reno may not yet have entered the LBM 1983 claim assessment work in their own files. The BLM office was therefore not checked.

Nevada law requires that assessment work be recorded within sixty days of completion of the work. This requirement was satisfied for the LBM claims.

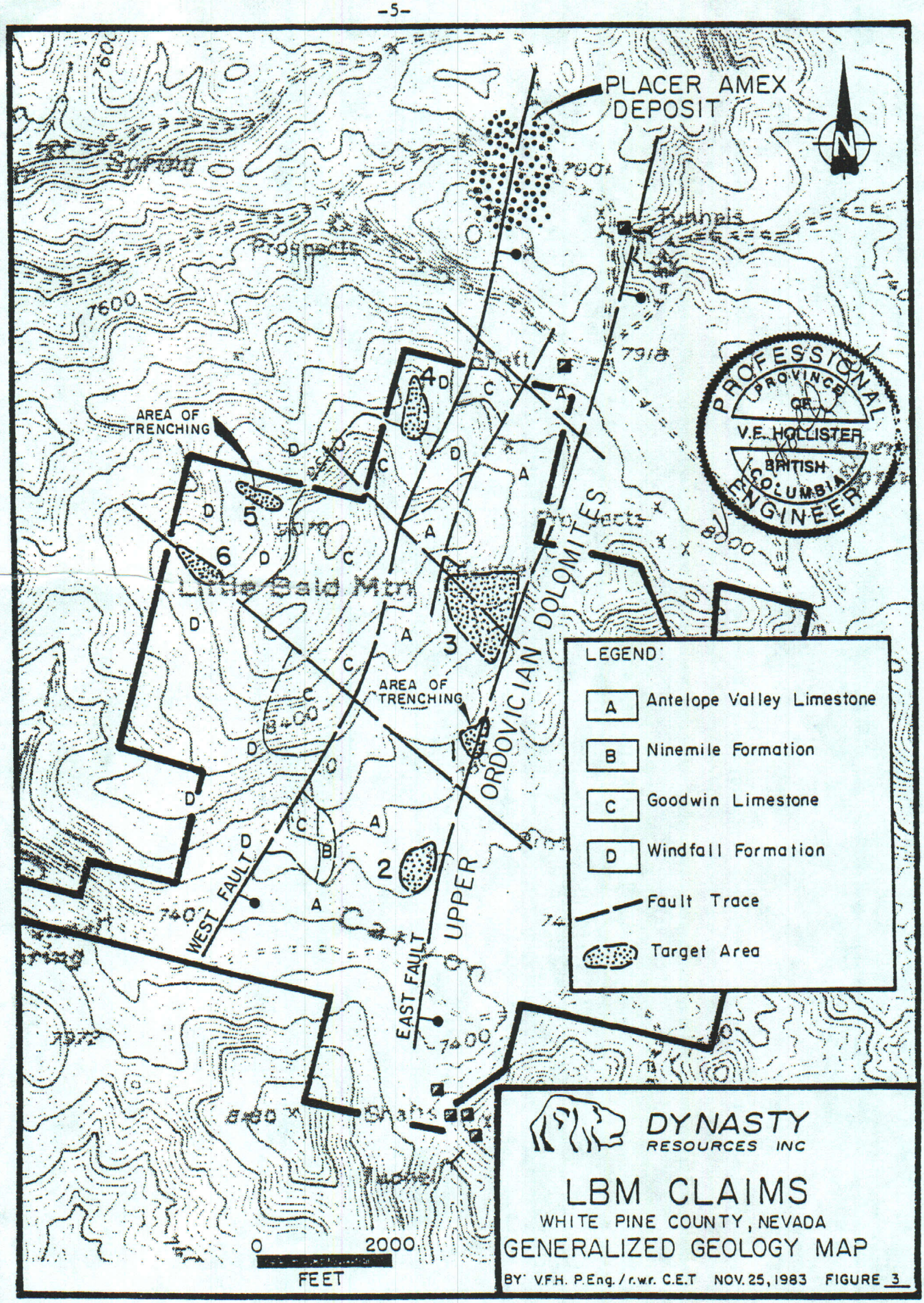
No conflict was found to exist between the LBM claims and adjacent claim blocks in the field. The LBM claims were noted to be properly posted, and they are easily seen from the roads. It is unlikely that the claims will be challenged by any state or federal agency. Figure 2 shows the general location of the claims.

GEOLOGICAL SETTING:

The LBM claims on Little Bald Mountain are underlain by a variety of Cambrian, Ordovician and Devonian sedimentary rocks that are intruded by a Tertiary (Miocene?) quartz monzonite porphyry stock and its satellitic dikes and sills. The stock is altered and locally mineralized, and selected beds in the sedimentary rocks are favourable for Carlin or replacement type epithermal mineralization. For these reasons, a comprehensive summary statement of the lithology of the bedrock under the claims is needed.

Cambrian

Cambrian rocks present within and near the LBM claims include the Hamburg Dolomite, the Dunderberg Shale and the Windfall Formation, a mixture of fine clastic and calcareous clastic rocks. The Windfall Formation is the host for significant epithermal mineralization in the district. It is the approximate time equivalent of the Lower Deadwood that hosts epithermal gold mineralization in the Black Hills of South Dakota.


PLACER AMEX DEPOSIT
N
AREA OF TRENCHING
AREA OF TRENCHING
Little Bald Mtn
ORDOVICIAN DOLOMITES
WEST FAULT
EAST FAULT
UPPER
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
V.E. HOLLISTER
LEGEND:
A Antelope Valley Limestone
B Ninemile Formation
C Goodwin Limestone
D Windfall Formation
Fault Trace
Target Area
0 2000
FEET
DYNASTY RESOURCES INC
LBM CLAIMS
WHITE PINE COUNTY, NEVADA
GENERALIZED GEOLOGY MAP
BY: V.F.H. P.Eng. / r.w.r. C.E.T NOV. 25, 1983 FIGURE 3

Ordovician

Ordovician rocks present within and near the LBM claims include the Goodwin Limestone, Ninemile Formation, Antelope Valley Limestone, Eureka Quartzite, Laketown Dolomite and Fish Haven Dolomite. The latter are locally combined into an Upper Ordovician Unit. Devonian Limestone overlies the Ordovician section but may not occur within the claim group. The Ninemile and Antelope Valley Formations are penecontemporaneous with the Upper Deadwood of the Black Hills that also hosts replacement eipthermal gold mineralization. Within the LBM claims, the Ninemile and Antelope Valley are also hosts for gold mineralization.

Intrusive Rocks

Quartz monzonite porphyry occurs as a distinct stock and as dikes and sills cutting the Paleozoic rocks. The igneous rocks are uniformly altered so that the original mineralogy is obscured. Alteration ranges from argillization in dikes and sills to sericitization in the stock. Gold and tungsten mineralization are found spatially associated with these intrusives, although only locally is the mineralization of ore grade. The largest reported area of commercial mineralization in intrusive rocks is close to the northern boundary of the LBM claims.

STRUCTURE

The Paleozoic rocks trend northerly and dip variably to the east. They are cut by a number of northerly trending faults and also by less prominent westerly trending breaks. The faults are rarely exposed, but they do seem to have an influence on mineralization. Strata controlled mineralization occurs near the faults, particularly the East Fault. Therefore fault intersections should be reviewed prospectively.

MINERALIZATION AND ALTERATION ON THE LBM CLAIMS:

Alteration and mineralization in the past have been divided into five distinct zones, of which three appear to be most significant. A possible sixth zone may occur associated with a non-outcropping dike. Zones one, two and three occur in the Ordovician Upper Antelope Valley Limestone near intrusive contacts and near the East Fault. Zones four, five and six are in altered Cambrian upper Windfall Formation.

Zone One

Zone one is located on claim LBM #6 and consists of gold mineralization indicated by a soil geochemical survey and uncovered in three trenches of a five-trench program carried out in 1983. The best mineralization averaged 0.14 ounces gold for 170 feet. Gold mineralization was checked

in LBM Sample No. 1 taken in the best trench, trench "D". It is an uncontrolled grab sample of the uppermost part of the trench and it assayed as follows:

Sample No.	Au (oz./t)	Hg (ppb)	As (ppm)	Sb (ppm)
1	0.567	5,000	1,000	460

The sample confirms the presence of gold in highly anomalous amounts. The gold occurs with jasper, carbon, barite, calcite, pyrite, adularia and jarosite in a strongly sheared and veined horizon in the Antelope Valley Limestone. The trenching is not adequate to determine ore controls or ore guides to the mineralization. Although small altered quartz monzonite bosses occur nearby and the East Fault projects into the mineralized area, a stratigraphic control cannot be ruled out. Additional trench exposure will be helpful, but ultimately the exposure will have to be drilled if it is to be evaluated.

Zone Two

Zone two lies within claim LBM #42 about two thousand feet south of zone one along the projection of the non-outcropping East Fault at the intersection of an apparent east-west fault. Float of an altered and mineralized intrusive cutting Antelope Valley Limestone occurs close to the projected position of the East Fault. The target in zone two can possibly be enhanced by detailed soil geochemical surveys and an EM investigation that could more certainly locate projected faults. Trenching, however, is required as no outcrop is presently exposed in zone two. Drilling of targets developed by geochemistry, geophysics and trenching will lead to their evaluation.

Zone Three

Zone three on claim LBM #12 covers a broad mercury anomaly with scattered gold values in poorly outcropping Antelope Valley Limestone about two thousand feet north of zone one. The mercury anomaly appears to have a bedding control, although faults cut the anomaly, and the East Fault seems to serve as the eastern limit of mercury values. More detailed sampling may give better definition to the zone, but trenching is needed to provide adequate bedrock exposures. Drilling is required if anomalies developed by the geochemical detail and trenching are to be evaluated.

Zone Four

Zone four is an erratic area of limonite staining, weak silicification and poorly defined geochemical anomalies at and near the contact between the Cambrian Windfall Formation and the Ordovician Goodwin Limestone. It lies within the LBM #35 claim. Most alteration occurs in the Windfall, but outcrop is so sparse that its limits remain unknown. Past geochemical work has established erratic gold and mercury anomalies. One previously established geochemically anomalous sample site was resampled. Sample LBM No. 2 is a selected collection of rock chip float, and Sample LBM No. 3 is a soilsample from the same site. These assayed as follows:

Sample No.	Au (ppb)	Hg (ppb)	As (ppm)	Sb (ppm)
LBM 2	470	4,100	1,000	195
LBM 3	50	180	1,000	13

Further geochemical soil sampling is needed if the presence of significant gold mineralization is to be established in zone four. Geochemically anomalous areas may be trenched and drilled if they are of sufficient importance.

Zone Five

Zone five is an area of iron oxide staining, weak silicification, kaolinization and minor brecciation in upper Windfall Formation rocks below their contact with the Goodwin Limestone. The area altered is poorly exposed, and it occurs within claims LBM 29 and 30. The area of alteration has been partly trenched, and the best sample returned over 300 ppb gold. Further soil sampling may detect a more extensive anomaly. If so, the area should be checked by trenching.

Zone Six

Zone six is an area of float of mineralized quartz monzonite and altered Windfall. Outcrop is insufficient to establish contacts or relative amounts of mineralization. The area should be adequately covered by a geochemical soil grid and, if attractive anomalies are found, they should be trenched.

Other Areas

Further reconnaissance geochemical and geologic work may turn up additional areas of interest not now definable but requiring a contingent budget.

PROPOSED BUDGET

Exploration of the LBM claims will require a two-phase program for a total $318,000 (Can.) as set out in Table 1. The Phase I portion of the budget would bring all potential target areas to a definition stage, while allowing drilling to take place on the established zone one area concurrently.

The Phase II drilling would be consequent on target definition on zones two through six; however, it would be prudent to carry out some drill probes of these zones with additional delineation. All physical work proposed is eligible for assessment filing if recorded within sixty days of the termination of the exploration program.

Table 1

Exploration Budget for the LBM Claims

Phase I	
Geochemical surveys	$ 13,000
Technical labor and salaries	35,000
Trenching and road preparation	13,000
Drilling - 6,000 feet at $12.50	75,000
Assays	13,000
Camp and transportation	20,000
Contingency - approximately 10%	17,000
Phase I Total	186,000
Phase II	
Technical labor and salaries	$ 30,000
Trenching and road preparation	10,000
Drilling - 5,000 feet at $12.50	62,500
Assays	7,500
Camp and transportation	10,000
Contingency - approximately 10%	12,000
Phase II Total	132,000
TOTAL PHASE I and PHASE II	318,000

CONCLUSIONS AND RECOMMENDATIONS:

The LBM claims are located adjacent to a producing gold mine and contain some of the same rock types found in the mine area on Bald Mountain. Furthermore, an outcrop of gold-bearing jasper occurs in zone one, which should be evaluated by drilling. Other possible zones of mineralization are indicated by previous geologic and geochemical work. These zones are of sufficient size to warrant detailed geochemical and geologic investigations. Trenching and drilling of these zones is justified if preliminary results are encouraging.

Respectfully submitted,

V. F. Hollister

V. F. Hollister, P.Eng.

References for the LBM Claims

Loghry, J.D., 1982, Preliminary exploration on the LBM claims, Little Bald Mountain, Bald Mountain District, White Pine County, Nevada; a joint venture of Adit Resources Corporation and Knaebel Mining Ventures: Private Report, 22 pp.

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NEWS RELEASE

June 13, 1985

Following compliance with regulatory requirements, Northern Dynasty Explorations Ltd. ("Northern Dynasty") has now completed its acquisition from Adit Resources Corporation of Tucson, Arizona of additional interests in certain properties. As a result, Northern Dynasty now holds, through its wholly-owned U.S. subsidiary New Dynasty Mines (U.S.), Inc. ("New Dynasty"), working interests in the following Nevada properties, as follows:

Little Bald Mountain (L.B.M.)	- 85.25%
Zeke	- 82.00%

Northern Dynasty and New Dynasty have now signed a letter of intent dated June 12, 1985 with Ennex International plc, Westfield Minerals Limited and Whim Creek Consolidated (the "WX Syndicate"), to be followed by a formal agreement at an early date whereby, subject to regulatory approval and board approval of the parties, WX Syndicate will:

(a) subscribe for 100,000 treasury shares of Northern Dynasty at $2.00 each,

(b) acquire a one-half interest in New Dynasty's position in the L.B.M. and Zeke properties in consideration of reimbursement of New Dynasty's 1985 costs on these properties, plus ongoing costs, to a total of (U.S.) $1,467,000.

In addition, Westfield will acquire, by expenditure of $500,000 by December 31, 1986, a 50% working interest in the Ontario Gold Joint Venture in which the present working interests are:

Northern Dynasty	- 60%
Newfields Minerals Inc.	- 25%
Dunlop Explorations	- 15%

Northern Dynasty will act as manager and operator of the various projects.

The Little Bald Mountain (L.B.M.) heap-leach production program is on schedule and within budget. All necessary U.S. State and Federal permits are in hand and leach-pad and plant construction will be complete by mid-June. Open pit mining and stockpiling at the crusher site is in progress and heap construction will be sufficiently advanced to commence leaching by the end of June. Forty to fifty thousand tons of material, grading in excess of 0.2 ounces per ton gold, is scheduled for treatment in 1985.

June 13, 1985

The proposed agreements, while preserving a significant proportion of the cash flow from the L.B.M. mine, also achieve a major reimbursement to Northern Dynasty's treasury. This will allow maximum flexibility for new acquisitions and investments, as well as funding for future expansion and development of the L.B.M. mine project.

J. Glenn Simpson, Ph.D., P.Eng.
President

The Vancouver Stock Exchange has neither approved nor disapproved the information contained herein. This News Release was prepared by J. Glenn Simpson, President, who accepts responsibility for its contents.

Northern Dynasty drill results suggest heap leach potential

VANCOUVER – **Northern Dynasty Explorations**, which is headed by the former vice-president exploration for Cyprus Anvil Mining, Glenn Simpson, appears to have its teeth into a potential gold heap leach situation in Nevada. Closely-spaced rotary drilling in one zone on its Little Bald Mountain property has outlined "economic gold mineralization from surface to in excess of 350 ft. within the oxidized zone of a silty carbonate sequence," he states.

Apparently there are two mineralized, stratigraphic, horizons from surface to 300 ft. which are connected by at least two vertically dipping, good grade jasperoid feeder zones. The main feeder zone is 70-100 ft. wide and extends for at least 500 ft. down the footwall of a major fault structure. High grade intercepts in these jasperoid feeders all "terminate in ore grade material," he reports.

A number of 100 ft. sections graded in excess of 0.2 oz. gold and several 50 ft. sections ran over 0.3 oz. Drilling now attempting to define optimum pit design and these feeder zones are being tested to depth. He anticipates the drilling will provide sufficient data for a feasibility study and if comparable to other deposits in the region, gold content could range from 100,000 to 200,000 oz.

The deepest hole to date was still in oxide at 500 ft. and above the water table.

The company should have $1.2 million left in its treasury by year end for mine development, he tells The Northern Miner.

The Northern Miner
October 11, 1984

Northern Dynasty pours first gold at Bold Mountain

VANCOUVER — The first dore bullion has been poured at **Northern Dynasty Explorations'** Little Bald Mountain property in Nevada.

The bar is estimated to contain about 850 oz. gold valued at approximately $275,000.

Production is targeted at 6,000 oz. for 1985 with mining continuing to mid-August and leaching into November.

Company president, J. Glenn Simpson, confirms that all aspects of the project are proceeding as planned, noting over 35,000 tons of crushed material has been loaded on leach pads by the end of July. This is 70% of the scheduled tonnage for the year and he says the recoverable grade will be around 0.15 oz. gold per ton.

A drilling program is scheduled this month to confirm additional reserves on the No. 1 zone and to explore the No. 2 and No. 3 zones which haven't been drilled to date.

A program of geochemical work and geophysics has been completed in the Pickle Crow district of northwestern Ontario and has confirmed gold-bearing stratigraphic targets over significant strike lengths, the compnay points out. The claims are part of the Ontario Gold joint venture which includes Northern Dynasty (60%), **Newfields Minerals** (25%) and **Dunlop Exploration** (15%). A grid system will be established on the claims and targets established for a winter drill program.

Mr. Simpson states that regulatory approval has been received for the farmout of half of Northern Dynasty's interest in the Bald Mountain property and other Nevada holdings to the WX Syndicate. The syndicate includes **Westfield Minerals, Whim Creek Consolidated** and **Ennex International.**

Northern Dynasty has also sold a 50% interest in the Ontario Gold joint venture to Westfield Minerals. Funds from these deals will be used to 'vigorously pursue acquisition of a controlling interest in a major U.S. heap leach gold project,' he says.

Northern Dynasty shares trade on the Vancouver Stock Exchange, closing out last week at $2.00 a share.

The Northern Miner
August 15, 1985

Northern Dynasty gold property could be producing next year

VANCOUVER — **Northern Dynasty Explorations** expects to be able to make a production decision for its Little Bald Mountain property in Nevada in early 1985, according to Vice-President D. S. Jennings.

The 1984 drill program focused only on one area and outlined a strong structurally controlled gold deposit of high grade jasperoid bodies which averaged greater than 0.15 oz. gold per ton. These are surrounded by lower grade, disseminated, mineralization and the oxidized deposit is open to a depth of 500 ft.

The company believes the zone is amenable to heap leaching and production could be started by mid-1985. There is also the possibility that underground reserves could be successfully heap leached after a few years of surface operation, says Mr. Jennings.

He adds that the company is proceeding with a feasibility analysis, metallurgical work and mine modelling, adding a reverse circulation drill program will add significantly to deposit reserves in the new year.

Mr. Jennings says the main jasperoid body has been extended more than 200 ft. below previous drill testing by hole L61 which terminated at 515 ft. The last 55 ft. graded 0.045 oz. gold and the hole averaged 0.146 oz. from 270-460 ft. significantly increasing potential reserves in this body, he states.

At the company's Zeke property adjacent to Cominco's Buckhorn heap leach operation in Nevada, Northern Dynasty has confirmed geological reserves of two million tons grading 0.056 oz. gold and 0.224 oz. silver in an intensely pyritic, clay-altered shear zone. A number of other exploration targets have yet to be evaluated and a second parallel shear zone also exists which has good potential. A joint venture partner is being sought as considerable exploration work remains to be done.

The Little Bald Mountain property (65% owned) is considered to have the best production and cash flow potential so Northern Dynasty will channel most of its working capital into that project. At present the company's working capital is $1.4 million.

Northern Dynasty to develop Nevada heap leach property

VANCOUVER — The State of Nevada will have yet another gold mining operation following a decision by **Northern Dynasty Explorations** to put its 65%-owned Little Bald Mountain property into production. The heap leach project, 45 miles northeast of Eureka, should produce some 6,100 oz. gold this year in an abbreviated season.

By heap leach standards, the project is very high grade, averaging 0.2 oz. gold per ton, approximately 80% of which is recoverable, according to Glenn Simpson, president. He says the company opted for this recovery method over conventional means because the capital investment is much less, which offsets the lower recovery rates for heap leaching.

Preproduction and capital costs are estimated to be $US800,000 and financial projections indicate payback sometime in 1985. Based on a gold price of $290, first year revenues are estimated at $1.8 million and the lower limit on sales prices has been secured by the purchase of a put option on the New York Commodities Exchange for the bulk of 1985 production, he confirms.

The company has completed most of its permitting and no undue delays are anticipated for the remaining permits. Plant construction should begin early in May and the leach period will be from July to October, assuming normal weather conditions prevail.

The project will be financed by equity and Northern Dynasty currently has about $1.2 million in working capital, most of which will go to the production effort, Dr. Simpson says.

Last year a drill program outlined a structurally controlled gold deposit containing more than one million tons of geological reserves grading 0.15 oz. gold per ton. These are oxide reserves and the zone is still open to depth. At present, there are three yards of open pit reserves and deeper portions of the zone may eventually be mined underground by a low-cost, vertical crater retreat method. Access to the underground would be through a short decline and trackless haulage equipment would be used to transport material to surface leach pads.

The company has looked at a larger pit design but the strip ratio would be too high so it has opted for a smaller but high grade feed. A 5-year mine plan is in place and the ore horizon extends below the pit limits as they exist today. Mineralization has been outlined to a depth of 500 ft. and Dr. Simpson explains to The Northern Miner that Carlin-type deposits often extend to depths of 600-700 ft. or more.

The gold deposit is essentially a jasperoid zone surrounded by lower grade disseminated mineralization; three such feeder zones have been identified so far on the property. If sufficient time is available the company may drill later this year, assuming it doesn't conflict with mine development and gold extraction.

Two more zones have been noted on the same fault trend with similar geochemical characteristics, albeit not as strong as the main zone. Plant construction is unitized, so any increase in production would only require the addition of another module to the facility. Its capacity will be 60 gallons per minute of pregnant leach solution and 40,000 tons of ore are scheduled to be stockpiled on leach pads this season and 80,000 tons next year. The material will have to be crushed to 3/4 inch to ensure adequate recoveries.

Taken from:

GEOLOGICAL SOCIETY OF NEVADA

1985 Meeting and Fall Field Trip Road Log

- Special Publication No. 3 -

Alligator Ridge Mine, Little Bald Mountain Mine, Buckhorn Mine

September 27 - 29, 1985

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