August 5, 2011

Via E-mail: jdmckenzie@co.slo.ca.us and hand delivered

Mr. John McKenzie
Department of Planning and Building
San Luis Obispo County
976 Osos Street, Room 200
San Luis Obispo, CA 93408-2040

Re: Comments on Draft Environmental Impact Report for the Excelaron/Mankins Conditional Use Permit (SCH No. 2009021025/DRC2009–00002/ ED09-039)

Dear Mr. McKenzie,

Thank you for the opportunity to comment on the draft Environmental Impact Report (DEIR) for the above referenced project. The Huasna Valley Association submits these comments on behalf of the many South County residents who have expressed concern and submitted testimony during the past three years to the SLO County Planning Department regarding the proposed project and its potential significant impacts on the resources of the area.

The project evaluated in the DEIR includes development to establish oil production of up to twelve oil wells over four phases. The project is located 12 miles southeast of the City of Arroyo Grande, in the South County Inland and Huasna-Lopez planning areas.

The evidence in the record indicates that the project applicant, Excelaron LLC, has on many occasions misrepresented the scope and technical aspects of this project to the County and associated agencies in an attempt to gain entitlements in a piecemeal fashion. These misrepresentations have significantly hampered the County and the responsible and trustee agencies' environmental review of the project and have rendered the DEIR inadequate.

A finite and complete project description is indispensable to an informative, legally adequate EIR. County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d. 185, 190. An inadequate and incomplete project description frustrates CEQA's purpose of public disclosure and informed decision-making and results in an EIR that fails to disclose all of the project's impacts. Santiago County Water District v. County of Orange (1981) 118 Cal.App.3d. 818, 829. As one court put it, "an accurate project description is necessary for intelligent evaluation of the potential environmental effects of a proposed activity." San Joaquin Raptor Rescue Center v. County of Merced (2007) 27 Cal.App. 4th 713, 730.

Excelaron's project description is inadequate and misleading because the drilling and extraction methods, as proposed, can only access a small fraction of Excelaron's leased mineral rights, which is contradictory to their project objective of extracting petroleum resources. It can only be concluded that Excelaron will need to use other extraction methods, drill additional wells, directionally drill long horizontal wells, or frequently re-drill the permitted 12 wells in order to access their leased mineral rights. Moreover, information provided to prospective investors by Excelaron's parent companies United Hunter Oil and Australian Oil Company shows plans for a much larger project than is represented in the project description and discusses methods they say they won't use in the project description (Appendix A & B).

Based on this evidence and analysis, we expect that the applicant will later attempt to revise the project description to add methods of extraction and expand the geographic range of the project to make the project economically viable. We therefore believe the project description is disingenuous and incompatible with the project objectives.

Unless the EIR is revised to include all potential methods of extraction and areas of exploration, the County must impose strict conditions to make it impossible to expand the project for at least 10-20 years beyond the life of the proposed permit.

Project as proposed can only access a small fraction of Excelaron's mineral rights

While the EIR states the scope and extent of the above ground aspect of the proposed project, it is not clear as to the scope and extent of the underground aspect of the proposed project. On page 2-1 the project description states that Excelaron is proposing a phased project to explore, test, and possibly produce oil on a single parcel totaling 260 acres. This 260-acre number is repeated on pages 2-5 and 4.8-1, but on pages 4.10-1, 4.12-1, and 4.14-1 it states that the project site is on one 160-acre parcel. On page 2-5 it states, "Excelaron has leased approximately 1,500 net mineral acres in the Huasna Valley area, including the 260-acre parcel where development is proposed. The actual development footprint would be approximately 2.2 acres." Missing from the EIR is the fact that United Hunter Oil, Excelaron's 65% owner, has also leased 9,051 acres of mineral rights on the Porter Ranch, which is adjacent to the proposed project site.

In a press release on the CNW Canadian newswire dated December 20, 2011, United Hunter Oil, Excelaron's 65% owner, stated that their "current development plan targets a proposed project area of 160 acres in size and contains the existing wells and is designed to have the least surface impact; vertical and directions wells will be drilled from central locations. An upside to this project is that the potential structure might be 600 acres in size." (Appendix C)

While the drill pad sites for this project may only cover 2.2 acres, the below ground portion of this project will cover anywhere from 160 acres to 10,551 acres depending on which numbers are used and how successfully the initial wells produce.

Despite any speculative nature of the initial phase of this project, the conditional use permit, if granted, will entitle the permit holder to produce oil from 12 wells for an undisclosed lifetime. Given modern directional drilling technology it is quite possible for Excelaron to access thousands of acres of mineral rights by directionally re-drilling their 12 well sites multiple times over whatever life the project may have. Such drilling operations are not considered in the EIR, but represent a piecemeal approach to oil production by Excelaron, which would add to the on-going significant Class I impacts of the project.

In addition, a new well directionally re-drilled from an existing hole would appear to be an unregulated practice by San Luis Obispo County according to the San Luis Obispo County Code, Title 22, Land Use Ordinance 22.34.030.B regarding Production Oil Well Permits. The California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) does oversee re-drills of existing wells, but requires only an over-the-counter permit.

It thus appears that Excelaron would be able to redrill any of its 12 well bores as many times as it needs to continue economical operation of its facility and exercise its leased mineral right holdings. Such drilling operations are not considered in the EIR, but represent a piecemeal approach to oil production by Excelaron, which would add to the on-going significant impacts of the project associated with the operation of drilling rigs, including noise, light, emissions, traffic, odor, and visual impacts.

Section 2.2.3 of the DEIR states that the hot water flood EORM (Enhanced Oil Recovery Method) proposed by Excelaron is only effective to a depth of 2,000 feet and a radius up to 150 feet from the wellbore. On page 2-12 it states that the initial four wells will be vertically drilled. A simple geometric argument demonstrates that a vertically drilled well with an effective recovery radius of 150 feet from the wellbore can only access 1.6 acres of sub-surface mineral rights (Diagram 1):

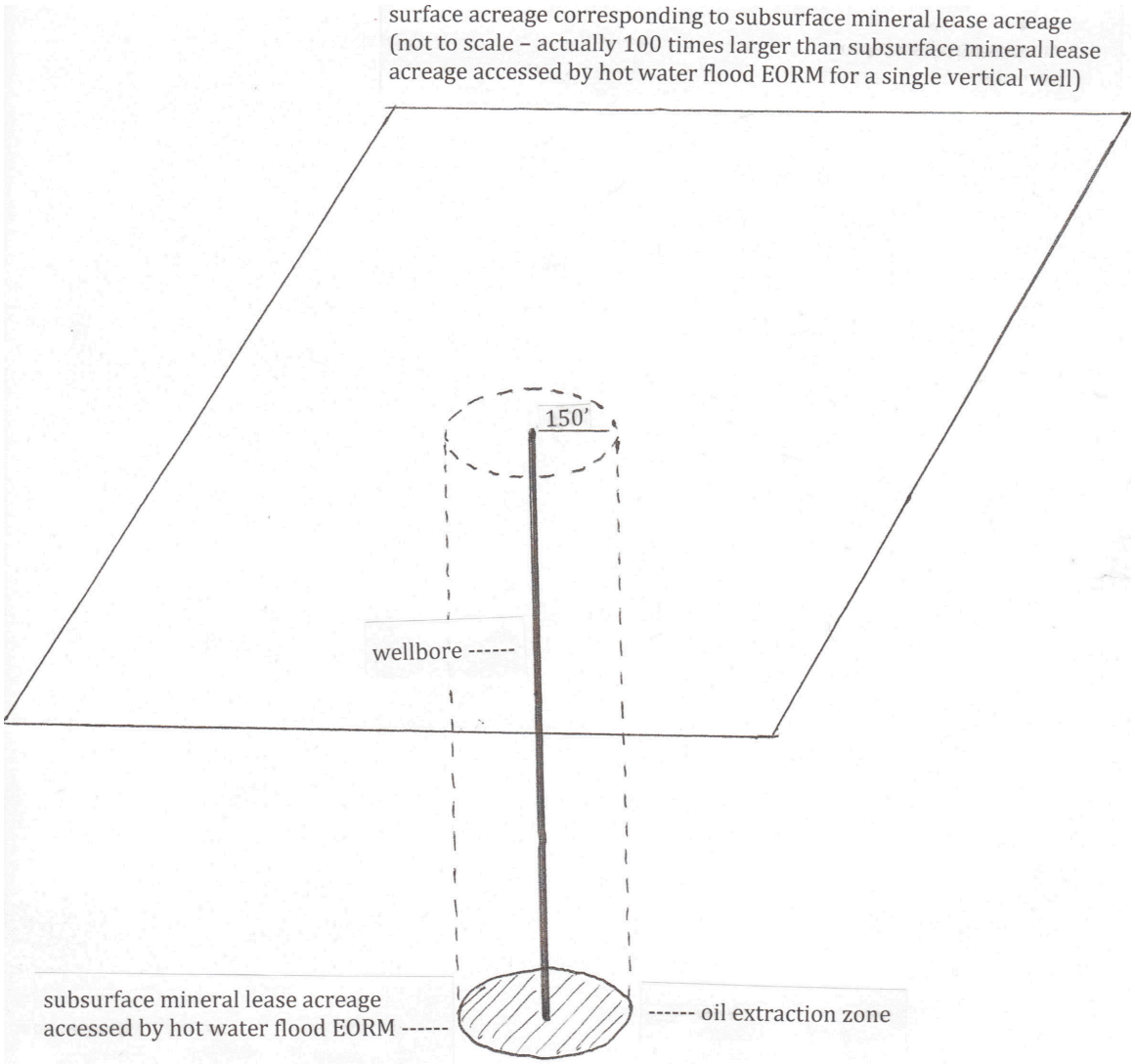

Diagram 1: A simple geometric argument demonstrates that a vertically drilled well with an effective recovery radius of 150 feet from the wellbore can only access 1.6 acres of sub-surface mineral rights

horizontal cross sectional area = π * (radius)^2 = 3.14 * (150 feet)^2
= 70,650 ft^2 = 1.6 acres

The proposed twelve wells, if all vertically drilled, could only access approximately 19 acres of sub-surface mineral rights. This is in contrast with the stated project objective of extracting oil from at least 160 acres of sub-surface mineral rights and possibly a much larger area. To achieve the stated project objective, many more wells would be needed, or the proposed twelve wells would need to be drilled horizontally for thousands of feet (Diagram 2).

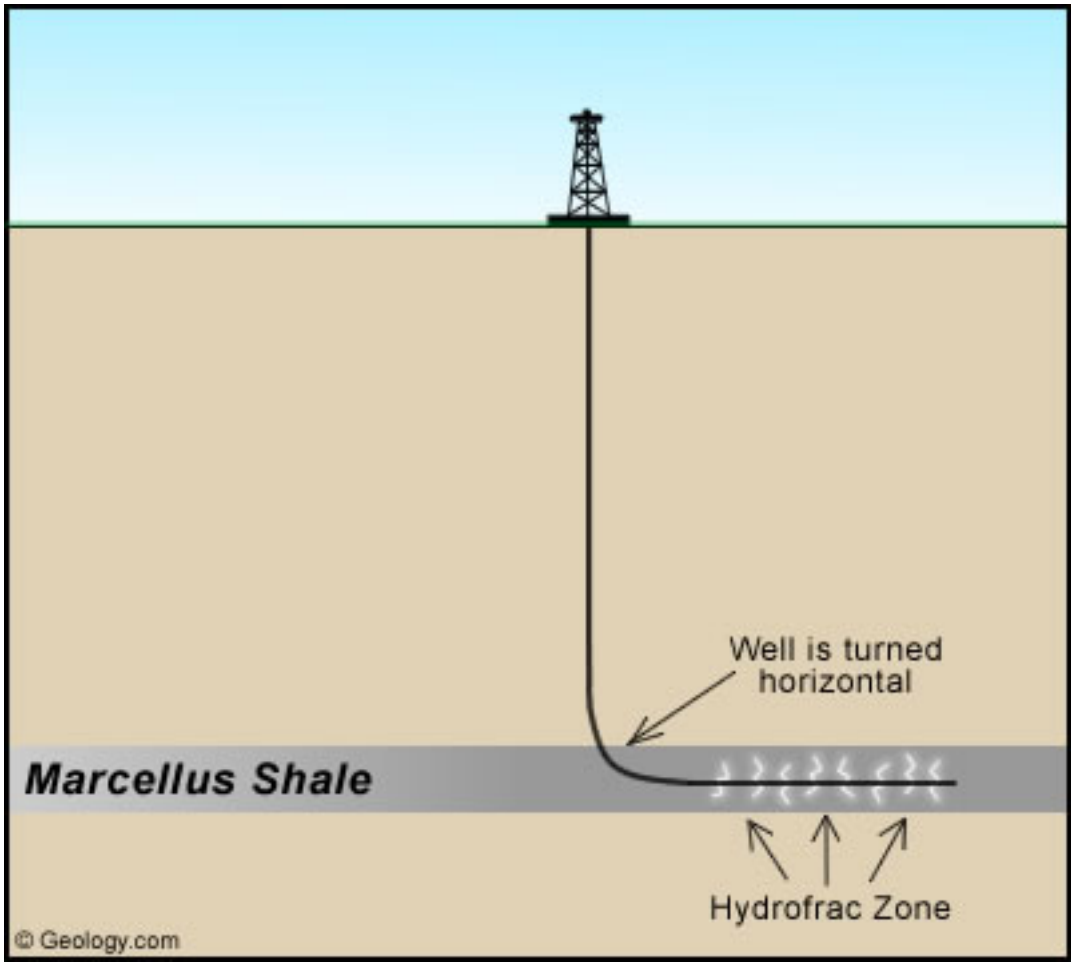

Diagram 2: In this illustration a well has been drilled vertically but deviated to horizontal below the surface. This type of drilling can extend the reach of a well for a mile or more in any direction. It is therefore possible to drill a well on one property and drain oil or gas from adjacent lands. How the gas and royalties will be shared is sometimes determined by state regulations and sometimes by private agreements. Regulations governing the sharing of oil and gas production vary from one state to another (and for different drilling situations within a single state). It is critical to either know the regulations or get reliable advice before entering into any oil and gas transaction. (Geology.com)

The project description, therefore, must be revised consistent with the stated project objective to access and extract oil from the entire 160 acres of sub-surface mineral rights or even the greater area over which Exceleron's parent companies have acquired mineral rights.

We note that the EIR appears to acknowledge that more than 12 wells would be drilled when it admits on page 2-32 that "For the purposes of the EIR it has been assumed that two wells will be drilled each year for 45 years during the future field development phase." Using the above geometrical argument, 90 vertical wells using the hot water EORM could access 144 acres of sub-surface mineral rights, which is much closer to the stated objective of accessing oil over a 160 acre holding.

Such development is consistent with the Division of Oil and Gas assessment of potential field development for the Huasna Oilfield. In 1980 Mr. John Zuelberti, Division of Oil and Gas, in regards to potential well spacing in the Huasna Oilfield stated, "Present acreage held by Lorena, according to the applicant, is approximately 160 acres; thus it is reasonable to assume that if the field developed at 2.5 acre spacing, without adding further acreage, that 64 wells might be drilled. (Lorena EIR ED78-121, 1980).

In February, 2009, Mogul Energy, a 40% partner in Excelaron at the time, posted a diagram on their website in which 6 horizontal wells would produce oil from 15 vertical hot water injection wells (Diagram 3 and Appendix D). At a public informational meeting hosted by Excelaron on July, 13, 2011, United Hunter Oil CEO, Art Hallerman, acknowledged the Mogul plans. "He even acknowledged that he's fixed up the veritable engineering mess that Mogul Energy left before he took over." (C. Rigley, "We'll Get Back to You," New Times SLO, July 21, 2011) Although this diagram may have represented a "veritable engineering mess," it nevertheless represents a plan that was much larger and different in its description from the plan being represented to the county at the time.

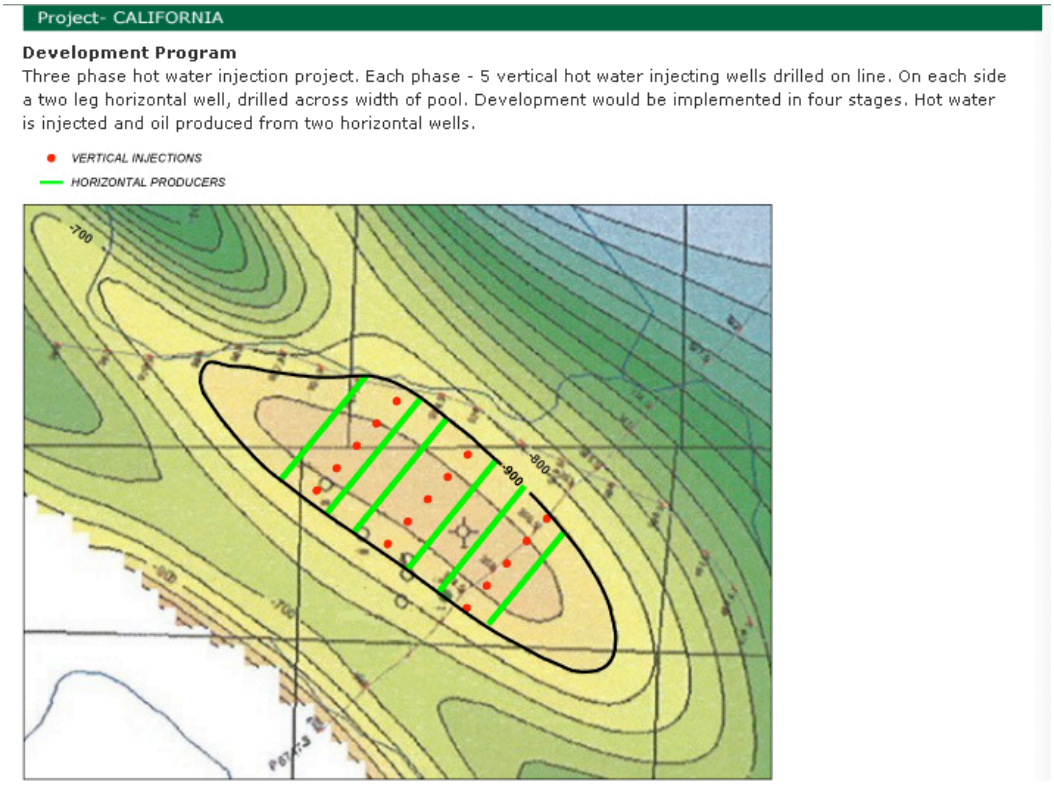

Diagram 3: Mogul Energy's development plan for the Huasna Oilfield, posted on their website in 2009 shows 6 horizontal wells producing oil from 15 vertical hot water injection wells.

Excelaron has claimed repeatedly and publicly claimed that it intends to use "new technologies" to produce oil from the Huasna Oilfield, which has historically produced small quantities of very thick tar (8-10º API). It can therefore be reasonably expected that in addition to drilling more wells, the applicant may decide to increase its production capacity by some or all of the following: use more effective methods of extraction than hot water flood EORM such as steam, acidization, or hydraulic fracturing; drill long horizontal wells; or directionally redrill the permitted 12 wells many times over the unspecified lifetime of the project. Such drilling operations are not considered in the EIR, but represent a piecemeal approach to oil production by Excelaron, which would add to the on-going significant Class I impacts of the project.

The EIR must be revised to seriously consider additional wells or other extraction methodologies that the applicant could reasonably be expected to employ in order to accomplish its stated objective of accessing and extracting oil reserves over 160 acres.

While Excelaron claims they do not intend to use horizontal wells, steam injection, hydraulic fracturing, or acidization - all current technologies shown to improve extraction of thick oil from the Monterey Formation in California - these claims are not credible. In an economically marginal field like Huasna, using the technologies with the highest possibility of success seems a prudent business decision.

Unless the County is prepared to strictly rule out the use of such technologies by Exceleron, the EIR must analyze the environmental impacts of employing such additional methodologies and technologies by Exceleron.

The Huasna Valley Association's argument that the EIR must consider the environmental impacts of other "enhanced" oil extraction methods is buttressed by the claims made by United Hunter Oil (Excelaron's 65% owner), which in a press release on the CNW Canadian newswire dated December 20, 2011, stated that their "independent resource evaluator", "gives expected recoveries at Huasna of 4-6% of the Discovered Petroleum Initially-In-Place for the hot water stimulation process that UHO plans to test and implement at Huasna." They go on to say, "Another upside to this project is that similar fractured shales have been shown to recover 20-40% of the Discovered Petroleum Initially-In-Place when steam injection was used. Steam flooding to the extent that is technically applicable to Huasna would require considerable investment and special permitting in compliance to environmental regulations." Accordingly, it is very likely that the sooner than later, the proposed project will require steam injection to remain (or become) economically viable. (Appendix C)

It is a commonplace practice in the oil industry to expand operations adding wells and new methods as economics allows/demands and as an oilfield ages. We need only to look at PXP's oilfield operation in Price Canyon to see the results of such expansion. Since its inception PXP has a slow but continuous expansion of its operations, most recently to add a produced water processing facility to handle excess produced water that can longer be injected into disposal wells. "Development of the proposed Project would

include construction of a water treatment facility and various associated structures (i.e., water tanks, air-stripper, heat exchangers, etc.) to process the produced water resulting from increased oil recovery activities." [emphasis added] (Wetlands Assessment for Arroyo Grande Oil Field Produced Water Reclamation Facility, Padre and Associates, July, 2007)

In Los Angeles, the Baldwin Hills oilfield has also seen expansion over the years. "As a result of the past 85 years of drilling, and driven by higher oil prices, the oil company must now use "enhanced recovery techniques," that involve injecting high pressure water into the earth to extract the oil and gas from reservoirs located generally between 1,000 and 10,000 feet beneath the surface. In late 2006, PXP pursued deeper drilling (more than 6,000 feet below the surface), leading to increased risk and noxious gas releases." (Keeping the Baldwin Hills Clean and Green for Generations to Come, Robert García, Elise Meerkatz, Seth Strongin, The City Project Policy Report, May 2010).

The County should consider that on page 8 of the United Hunter Oil presentation to prospective investors, a chart shows recovery potential for 280, 450, and 1350-acre areas, with recovery factors of 27, 30, and 45%. None of these recovery factors are possible, according to their press release, using hot water flood EORM, which only has a 2-4% recovery factor. (Appendix A)

Other evidence that steam injection or other enhanced extraction methods may be needed is contained in the EIR itself, which in section 2.2.3, states that the hot water flood EORM (Enhanced Oil Recovery Method) is only affective to a depth of 2,000 feet and any oil deposit existing beyond the depth of 2,000 feet would need to be produced with primary recovery methods. The EIR goes on to state that the Monterey Formation is approximately 500 to 3,000 feet deep and that a secondary objective of the project would be to investigate the Vaqueros Formation below the Monterey Formation at a depth of 4,500 feet. Thus, because the proposed hot water EORM method would only be affective to reach 38% of the depth of the available oil reserves, it is extremely likely that other methods of extraction will be used to access the remaining 62% of the target depth.

Contrary to the EIR's project description, it is likely that the Project contemplated by the applicant is in fact much larger than the project analyzed by the EIR.

An adequate project description must include all relevant aspects of a project, including not only those aspects put forth by the project applicant, but also reasonably foreseeable future expansions or other related activities. Laurel Heights Improvement Ass'n v. Regents of the University of California (1988) 47 Cal.3d 376 ("Laurel Heights"). The project description must include an analysis of the environmental effects of future expansion of the project if "(1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects." Id, at 396.

The project description presents inaccurate projections that appear to be intended to minimize project impacts and the apparent size of the project. A good example from page 2-41 in the project description is the statement, "…the Applicant does not expect redrills to be necessary for this project…" Significantly, despite the claim that the project will consist of "only twelve wells," the applicant has publicly stated their intention to develop a much larger project (see Appendix A – United Hunter Oil Plan, Appendix B – Australian Oil Company Plan, and Appendix C – United Hunter Oil Press Releases). What is the evidence that supports the claim that the applicant "does not expect redrills?" Without knowing the basis for this claim, it is impossible to assess whether redrilling is unlikely.

The evidence shows that the current project will likely be just the proverbial "foot in the door" to get oil production re-established in Huasna Valley. **It appears that the applicant has attempt to deceive the County into believing that the project is limited in scope and unlikely to significantly degrade the significant sensitive resource of Huasna Valley, when in fact the project is intended to morph into a giant oil extraction operation covering thousands of acres and hundreds of oil wells**. Excelaron currently holds total mineral leases in excess of 10,000 acres and they are interested in obtaining an entitlement to develop a production oilfield, the eventual size and extent of which will most likely be determined by economics and not county regulations.

On page 9 of the UHO business plan, they show a closure size potential for the Huasna field at 3,000 acres with a pattern size of 20 acres and a well spacing of 10 acres. 3,000 acres with a well spacing of 10 acres would be an oilfield of 300 wells. This is the plan they are sharing with their current and prospective investors, but have kept from San Luis Obispo County and County residents. **Obviously, their currently proposed "pilot project" is a Trojan horse to pave the way for a substantially larger master plan that would have orders of magnitude larger significant environmental impacts**. (Appendix A)

In a press release on the CNW Canadian newswire dated May 6, 2011, United Hunter Oil, Excelaron's 65% owner, announced the leasing of 9,051 acres of mineral rights on the Porter Ranch, adjacent to the proposed project site. In a previous press release, dated February 17, 2011, they stated, "2 exploration wells could be drilled as soon as approvals are granted by the County. Within the leased area there are currently 2 anticlinal structures, which have been only tested at their extremities. The forward work program includes acquiring all historical well and seismic data prior to the possible acquisition of new seismic data over the anticlines. Based on this information up to 3 exploration wells may be drilled." (Appendix C)

This information demonstrates that the project applicant intends to launch another oil exploration project on the Porter Ranch. In fact, UHO's CEO, Dr. Halleran, in an Excelaron-sponsored informational meeting on July 13, 2011, stated that UHO's Porter Ranch project was a separate project from the currently proposed project. Once again, this is a piecemeal approach to development of a substantially larger project.

Unless the EIR is revised to include all potential methods of extraction and areas of exploration, the County must impose strict conditions to make it impossible to expand the project for at least 10-20 years beyond the life of the proposed permit.

Hydraulic fracturing is a controversial and potentially dangerous technique

The practice of horizontal drilling combined with hydraulic fracturing is currently being touted by the petroleum industry as a technological breakthrough that allows economical extraction of oil tied up in the Monterey Shale formations in California. Hydraulic fracturing (colloquially referred to as "fracking") is a drilling technique that forces highly pressurized water, sand, and chemicals into subterranean rock to release the gas and oil locked inside (U.S. Envt'l. Prot. Agency, Hydraulic Fracturing Background Information, available at http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/wells_hydrowhat.cfm).

This technique gives drillers increased access to oil and gas deposits buried deeply underground (*Id).* The process involves drilling vertical well sections hundreds to thousands of feet below the land surface with lateral well sections extending 1,000 to 6,000 feet away from the well (*Id).* Fracturing fluids, comprised of water and chemical additives, are pumped through these wells (*Id).* The pressure from the fluids enlarges underground fractures, which are then propped open to prevent them from closing when the pumping pressure ceases (*Id).* Once the fractures have opened, the internal pressure of the geologic formation causes the fracturing fluids to rise to the surface for disposal, leaving the wells free for oil extraction (*Id).*

A US Congressional report released in April showed that the 14 most active hydraulic fracturing companies in the United States together used nearly 3 billion litres of fracking fluid, not including water. The products contained at least 29 chemicals that are known or possible human carcinogens (Waxman, H. A., Markey, E. J. & DeGette, D. *Chemicals used in hydraulic fracturing,* US House of Representatives Committee on Energy and Commerce, 2011).

Hydraulic fracturing is a controversial process and has been associated with various risks. Hydraulic fracturing fluids contain chemicals, including carcinogens. The release of these chemicals during the hydraulic fracturing process has allegedly contaminated drinking water sources in the past (*See* Vicki Smith, *W. Va. Study Raises Questions about Fracking Fluid*, Bloomberg Businessweek, Jul. 11, 2011 (quoting West Virginia report on hydraulic fracturing concluding "a better knowledge of the chemical makeup of the drilling and hydrofracing fluids is needed" and discussing aerial release of fracturing fluid causing health hazards); Sarah Collins, Tom Kenworthy, *Getting to the Bottom of Fracking*, Center for American Progress, Mar. 3, 2010 (addressing controversy behind hydraulic fracturing and health and environmental risks posed); Jim Moscou, *A Toxic Spew?*, Newsweek, Aug. 20, 2008 (discussing health hazards posed by toxic chemical release during hydraulic fracturing process in Durango, Colorado); Lisa Sumi,

Our Drinking Water at Risk: What EPA and the Oil And Gas Industry Don't Want Us to Know About Hydraulic Fracturing, Apr. 2005, http://www.earthworksaction.org /pubs/DrinkingWaterAtRisk.pdf)

The Environmental Protection Agency studied hydraulic fracturing and released a report in 2004 stating that the procedure does not pose a risk to drinking sources as long as the fracturing fluids do not contain diesel (U.S. Envt'l. Prot. Agency, Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs Study (2004), available at http://water.epa.gov/type/groundwater/uic /class2/hydraulicfracturing/wells_coalbedmethanestudy.cfm). Because the EPA has (at least for the moment) concluded that hydraulic fracturing does not pose substantial risks, the process remains exempt from federal oversight. Further, because hydraulic fracturing occurs so far underground, Congress exempted hydraulic fracturing fluids from the Safe Drinking Water Act in 2005. This raises concerns that any harmful effects may go unnoticed and unregulated.

The EPA has announced that it will conduct a comprehensive research study to explore potential adverse impacts posed by hydraulic fracturing on water quality and public health. As Dr. Paul T. Anastas, assistant administrator for the EPA's Office of Research and Development stated that the EPA's "research will be designed to answer questions about the potential impact of hydraulic fracturing on human health and the environment." (Press Release, U.S. Env'tl Prot. Agency, EPA Initiates Hydraulic Fracturing Study: Agency Seeks Input from Science Advisory Board, Mar. 18, 2010)

Although Excelaron has stated that hydraulic fracturing will not be used at any stage of the Project, given the controversy surrounding hydraulic fracturing and the EPA's pending analysis of the process's potential harmful effects, the CUP should nevertheless contain an explicit provision prohibiting the use of hydraulic fracturing to ensure compliance. (EIR at B-22); *see also Pacifica Homeowners' Assoc. v. Wesley Palms Retirement Cmty.*, 178 Cal. App. 3d 1147, 1150 (Ct. App. 1986) (establishing importance of including specific and explicit prohibitions in CUPs to facilitate enforcement).

The Draft EIR also fails to discuss the potential impacts of other petroleum industry extraction techniques that have proven economically successful in the extraction of heavy crude from Monterey Shale Formations, including steam stimulation and acidization of wells. These are all issues that were brought up by community members during the EIR Scoping meeting whose environmental impacts have not been addressed in the Draft EIR.

It is simply unacceptable for the EIR to state, "the project applicant does not propose hydraulic fracturing, steam stimulation, acidization, directional drilling, drilling additional wells, or even the use of Huasna Road for project traffic." At most, this statement must be understood to mean "at this time." As we have demonstrated a strong likelihood that the applicant will be forced to use other methods of recovery to extract a much larger quantity of oil than currently proposed, **the EIR must be revised to contain**

a provision expressly prohibiting hydraulic fracturing, acidization, steam stimulation, directional drilling of additional wells, directional redrilling of the proposed wells, drilling of additional wells beyond 12, and the use of Huasna Road for at least 10-20 years beyond the life of the Project, or include a thorough and adequate analysis of the potential impacts of these procedures.

The EIR mitigations should require that the applicant submit to scheduled inspections of the Project premises to ensure none of the above, prohibited activities occur. Since these prohibitions are not conducive to citizen enforcement, the EIR should impose strict inspection requirements throughout the life of the Project. These inspections should ideally be conducted at the applicant's expense by independent third-party entities specially trained to recognize oil-drilling techniques. The applicant should be required to submit to scheduled and frequent on-site inspections to confirm that the Project only utilizes the techniques, methods, and resources disclosed and analyzed in the EIR.

The EIR mitigations should set a strict revocation threshold for violation of any of the above prohibitions. Given the potential unanalyzed environmental and health impacts associated with hydraulic fracturing, acidization, steam stimulation, directional drilling of additional wells, directional redrilling of the proposed wells, drilling of additional wells beyond 12, and the use of Huasna Road, the EIR mitigations should call for automatic revocation of the permit if the applicant violates any of the prohibitions.

The evidence in the record indicates that the project applicant, Excelaron LLC, has on many occasions misrepresented the scope and technical aspects of this project to the County and associated agencies in an attempt to gain entitlements in a piecemeal fashion. These misrepresentations have significantly hampered the County and the responsible and trustee agencies' environmental review of the project and have rendered the DEIR inadequate.

Unless the EIR is revised to include all potential methods of extraction and areas of exploration, the County must impose prohibitions with strict permit revocation thresholds on the use of hydraulic fracturing, acidization, and steam stimulation, directional drilling of additional wells, directional redrilling of the proposed wells, drilling of additional wells beyond 12, and the use of Huasna Road for at least 10-20 years beyond the life of the proposed permit.

The Huasna Valley Association and its members thank the County for this opportunity to comment on the Draft EIR.

Sincerely,

Ron Skinner, Coordinator
Huasna Valley Association