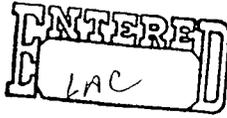


**Beaufort Sea Oil and Gas Development
Northstar EIS Project**

Public Scoping Meeting

Valdez

1996



ORIGINAL

BEAUFORT SEA OIL AND GAS DEVELOPMENT/
NORTHSTAR ENVIRONMENTAL IMPACT STATEMENT PROJECT

PUBLIC SCOPING MEETING

Tuesday, April 2, 1996, 8:00 p.m.

Valdez, Alaska

Alaska Stenotype Reporters

Serving Alaska Since 1953
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PARTICIPANTS

BP Exploration (Alaska), Inc.:
Gary Campbell
Peter Hanley

Dames & Moore EIS Preparation Team:
Gary Hayward
Kim Morris
Lori Magyar
Jon Isaacs
Steve Braund
Chris Clark

LEAD AGENCY

U.S. Army Engineer District, Alaska:
Tim Jennings
Terry Carpenter

COOPERATING AGENCIES

North Slope Borough:
Tom Lohman (not present)

U.S. Environmental Protection Agency:
Ted Rockwell

U.S. Minerals Management Service:
Paul Lowry

U.S. Fish and Wildlife Service:
Lori Quakenbush (not present)

U.S. National Marine Fisheries Service:
Jeanne Hanson (not present)

Reported by: Karen Ford
Alaska Stenotype Reporters

Public Scoping Meeting - Valdez

1 Tuesday, April 2, 1996, Valdez, Alaska, 8:00 p.m.

2

3 TIM JENNINGS: Well, good evening. I am Tim
4 Jennings with the Corps of Engineers, and I recognize
5 everybody in the audience now.

6 A great amount of thanks to Gary and to Dave for
7 coming tonight.

8 The purpose of this meeting, as others that we
9 have had in Barrow, Kaktovik and Fairbanks, is the
10 Northstar project and Beaufort Sea oil and gas development.
11 And the purpose of our scoping meetings is to involve the
12 public in helping agencies decide what are the important
13 issues for us to carry forward in the EIS process, so that
14 decisionmakers at the end of the process will hopefully
15 have this robust document that has addressed all the key
16 issues that we needed to address to make the best
17 decisions.

18 So I have talked with Gary. And I don't know,
19 Dave, how familiar you are with the process and where we
20 are with the scoping, but did you receive this newsletter?
21 I'll put you on the spot.

22 DAVE DENGEL: I may have.

23 TIM JENNINGS: Did you read it?

24 DAVE DENGEL: No, I didn't do that.

25 TIM JENNINGS: You didn't do that.

Public Scoping Meeting - Valdez

1 I would like to introduce a couple of the other
2 key agency people that are here tonight that are part of
3 the EIS team, in case either of you folks would like to
4 talk to some people later. Terry Carpenter is the Corps of
5 Engineers project manager on this project. Also we have
6 Ted Rockwell with EPA, the Environmental Protection Agency;
7 Paul Lowry, Minerals Management Service. And then we have
8 additional agencies that are cooperating agencies. The
9 North Slope Borough. Tom Lohman is our agency contact
10 there. He is not here tonight. The U.S. Fish and Wildlife
11 Service representative is in Fairbanks, Lori Quakenbush.
12 She is also not here tonight. And Jeanne Hanson from
13 National Marine Fisheries Service out of Anchorage is also
14 on the team, and she is not here tonight.

15 The format of our meeting is that Gary Campbell
16 from BP will give a brief overview of the Northstar
17 project, the conceptual design and the test case that BP
18 has envisioned so far, and then Gary Hayward here on my
19 left, from Dames & Moore, will present a brief summary of
20 the NEPA process for the EIS and public involvement. Gary
21 is the project manager from Dames & Moore, a consulting
22 company, who is the prime contractor putting together the
23 EIS for the agencies.

24 So with that, we will get started with Gary
25 Campbell from BP.

1 GARY CAMPBELL: Thank you both for turning up.
2 I have got a bunch of notes here. I'm just
3 going to go through it. I had the opportunity to speak
4 with both of you, I think, to a certain degree around the
5 poster boards, so I will hit the highlights again, but if
6 you have questions, why don't you interrupt me as we go.

7 BP is obviously very interested in being
8 successful at Northstar. One of our motivations is
9 obviously to replace some of the declining production from
10 the existing oil fields, keep TAPS full, and also obviously
11 be successful at Northstar itself.

12 Northstar is going to represent the first
13 offshore oil development in the Beaufort. Endicott is
14 offshore, but it is connected to the shore by a causeway.
15 But in terms of access, Northstar will be the first
16 offshore connected by the subsea buried pipelines, no
17 causeway. It's about six miles offshore.

18 It's in state and federal leases, so this is
19 also the first time that federal leases will be on
20 production on the North Slope, and it is also within the
21 North Slope Borough boundaries in terms of property tax
22 issues.

23 Several key issues that are a part of the design
24 criteria for Northstar -- I'll start with structures. We
25 are looking at several different versions of structures

1 from CIDS, which is a concrete island drilling structure,
2 to Molikpaq, which is a similar type man-made structure
3 that actually you can move from place to place.

4 And the test case that we are looking at is Seal
5 Island. Amerada Hess and Shell originally purchased the
6 leases from the state and from the feds. We bought the
7 leases from them about a year ago. Two islands that they
8 had drilled exploration and appraisal wells from are the
9 Seal and Northstar Islands. Both have been abandoned. One
10 of our test cases is to rebuild the Seal Island location,
11 expand it to about a 450 by 550-foot size, and put
12 production facilities on it as well as drilling equipment
13 to drill, so a single structure.

14 In terms of facility locations, another active
15 piece of engineering work that's going on, and I'll divide
16 it into two parts, an offshore and an onshore. We have
17 alternatives that look at both combinations of using
18 existing facilities within Prudhoe Bay, Lisburne, Milne,
19 Endicott, as well as new facilities. In reality, it will
20 probably be some combination of existing and new.

21 We are anticipating in the order of 50,000
22 barrels of oil per day. And I talked earlier to, at least
23 Gary here in terms of total recoverable reserves of the
24 130 million barrel range. At least that is what their
25 reservoir planning says right now.

1 In terms of pipelines, we are looking at two
2 pipelines buried, again, ten foot below subsea bed, a
3 12-inch production line and an 8 or a 10-inch gas line. We
4 haven't finalized the design and sizing on that just yet.

5 Several of the routes that I mentioned, or at
6 least the facilities I mentioned, also coincide with
7 pipeline routes. We worked -- in fact, why don't I just
8 get up for a second. We worked several different
9 alternatives, Seal Island, being here, down along the
10 barrier islands to Back Point or Beechy Point to access the
11 Milne facilities in terms of facility sharing and the using
12 of existing infrastructure. We also looked at coming
13 straight into Point Storkersen and then into Prudhoe Bay,
14 Lisburne infrastructure. Kind of an alternative to that,
15 going into West Dock, again into existing infrastructure,
16 or the possibility of all the way over to Endicott
17 facilities for tying in.

18 Construction techniques. Primarily for the
19 pipeline, islands are pretty basic construction techniques.
20 There has been a lot of islands built, I think 18 in the
21 Beaufort to date. So that is pretty well understood, as
22 well as slope protection, ice pile-up, et cetera.

23 The construction techniques for the pipeline is
24 probably the most critical issue. And this last winter, in
25 fact in just the last couple of weeks, we did a test trench

1 program along one of the routes coming from -- actually two
2 of the routes, coming from Seal Island to shore. One test
3 trench inside the barrier islands and one outside the
4 barrier islands, primarily to test the construction
5 techniques as well as to find out what the soil types were
6 at the various depths below the subsea. It was fairly
7 successful I would say. We got a lot of information in
8 terms of how best to do it, when we actually cut through the
9 ice and lay the pipeline.

10 In terms of status of engineering, we have
11 completed what we call conceptual engineering. That's
12 where we come up with all the different alternatives that
13 could be technically feasible in terms of producing
14 Northstar. We are now entering into what we call
15 preliminary engineering where we start to narrow down the
16 alternatives. And this is the point that we are actually
17 trying to work as best we can in sync with the EIS process,
18 which also looks at the various alternatives in terms of
19 impacts and mitigation. So we end up at times being a step
20 ahead or a step behind the EIS process, but we are trying
21 to work in parallel as much as possible for them to
22 synergize off each other.

23 A couple of design issues that we have already
24 incorporated into the design criteria came out of some
25 meetings last May in Nuiqsut when we visited there, and

1 that is no gravel bags as slope protection around the
2 island. The village had quite a bit of concern regarding
3 bag breakage and the fabric floating either on the surface
4 or just below the surface and tangling with their boats,
5 and so we have gone to concrete matting, which there are
6 some illustrations and pictures of in the back. Another
7 issue that they had quite a bit of concern with is noise
8 and the impact on the whales. I'm not sure it's the right
9 answer, but we have looked at all of the low-noise type
10 equipment that we can install and use on Northstar Island.
11 And, interestingly, color. They wanted to have some say in
12 what color the facilities were in terms of not being a
13 beacon out there to attract or to scare away whales or
14 mammals, and so we are working on that.

15 In terms of permitting, the EIS process
16 obviously is a major part of getting to the permitting. BP
17 has not applied for any major permits yet. After these
18 scoping meetings I expect that we will try to start
19 applying for some or at least getting drafts out there for
20 agencies to look at. Again, we are trying to parallel the
21 EIS process as best we can. I will say though that we are
22 trying to have permits ready to be approved once the EIS is
23 complete, so there will be some parallel activity going on.

24 BP entered this project and, as Ted Rockwell
25 puts it, and I say this at every other meeting, as a

1 cooperating applicant to the NEPA process and the EIS
2 process. We believe it's consistent with the way of doing
3 business, particularly in the North Slope and Alaska. So
4 we welcome the opportunity to work with the Corps and all
5 the cooperating agencies, as well as Dames & Moore, in
6 completing this process.

7 That's it. If there are any questions, I'll be
8 glad to try and answer them.

9 GREG WILLIAMS: You mentioned no major permits
10 have been applied for yet?

11 GARY CAMPBELL: Right.

12 GREG WILLIAMS: What would a major permit --

13 GARY CAMPBELL: A 404 Section 10 permit, like
14 water, like the Corps of Engineers right-of-way for the
15 pipeline. There is, what, 12 to 15 different permits that
16 we need to apply for in terms of being able to construct
17 and then operate. Air permits are another major permit.
18 We have not applied for any yet.

19 One of the things in applying for permits is we
20 would like to know what our project looks like, and part of
21 the scoping and the alternative selections helps us get
22 down to that, so that is why we are trying to work parallel
23 with the EIS so we arrive at the same conclusions,
24 hopefully close to the same time.

25 GREG WILLIAMS: Do you expect to have a more

1 definite sense of what the project will look like in terms
2 of where the pipeline would go and what the actual
3 production site would be like before the EIS process is
4 over or --

5 GARY CAMPBELL: Yes. We fully expect -- we have
6 a full engineering alliance team working with design
7 issues, I mean as we speak, and they have been in place, I
8 guess, since February working all the alternatives. They
9 are weeding down the alternatives from a practicality point
10 of view and obviously from an economic point of view. But
11 that is just our side of the ledger, that is not the
12 environmental impact or mitigation side of the ledger. So
13 we need to incorporate both in our decision-making process.

14 TIM JENNINGS: For the record and for the
15 benefit of our court reporter, Karen -- we are keeping
16 track of all the comments and all the questions, then at
17 the end of the scoping process we can sort through all the
18 issues that have been raised. So we are asking people to
19 state their names and then we'll get them on the record.

20 GREG WILLIAMS: I wish I could say my name is
21 Gary, but it's Greg. Do you need my address, too?

22 TIM JENNINGS: No. Your name is fine.

23 GREG WILLIAMS: Greg Williams.

24 GARY CAMPBELL: Greg, I apologize.

25 TIM JENNINGS: Let's go ahead and continue with

1 Gary Hayward's brief presentation and then we'll get into
2 any comments that you may have for us to consider for the
3 EIS process. And if there are any questions for us, we'll
4 address those at that time.

5 GARY HAYWARD: As Tim has said, my name is Gary
6 Hayward and I am the project manager for the EIS and I'm
7 from our Anchorage office.

8 I think one of the things to keep in mind as we
9 go through this process is that this will be the first
10 offshore oil and gas development in the Beaufort. And with
11 that comes some issues that are different than those that
12 have gone on in the past as it relates to exploratory
13 operations, and some of those issues relate to oil
14 transportation, to year-round activities, to transport,
15 helicopter and vessel transport issues, that in the past
16 have been only a seasonal concern.

17 We are also taking a look at this project in the
18 context of oil and gas development in the Beaufort Sea in
19 general and seeing what, from a cumulative standpoint what
20 process this might spark down the road in the future. That
21 might be a little bit more tricky to deal with from the
22 standpoint of the more straightforward issues related to
23 the Northstar project, but we are going to be looking at
24 that as well.

25 We are also making an attempt to make this a

1 much more user-friendly document, although it will still
2 comply with the NEPA guidelines. There has been some
3 concerns, especially from the Slope, the North Slope
4 Borough people, that documents in the past have been
5 difficult to follow and difficult to see where their
6 comments have been addressed, and so we are making an
7 effort to make it a much more straightforward document in
8 that standpoint, and also to make a very strong effort to
9 include and to incorporate, to the extent feasible, the
10 traditional knowledge and Native experience that the
11 Natives up there have to offer.

12 In addition to the scoping meetings, we are
13 going to have a series of other meetings up on the Slope
14 with the Natives in Barrow and Kaktovik and Nuiqsut as it
15 relates to, a less formal structure to help obtain and
16 glean some of this knowledge from these folks, and Steve
17 Braund from Steve Braund & Associates and Jon Isaacs and
18 Chris Clark and some others may be, will likely be a part
19 of that process.

20 Last week we had scoping meetings in Barrow and
21 in Kaktovik and in Fairbanks. We were not able to get to
22 Nuiqsut for weather concerns, but we will be going back up
23 there. We are here tonight. We have scoping meetings in
24 Anchorage tomorrow night. We had an agency meeting
25 yesterday in Anchorage. And we have the comment period

1 open until about the end of May as its relates to hopefully
2 having input from concerned citizens and groups for the EIS
3 process through that point in time.

4 There will be a series of follow-on newsletters
5 and follow-on pieces of correspondence as it relates to the
6 status of the project after scoping and prior to the
7 issuance of the draft EIS to keep people informed, and
8 there obviously will be a series of public hearings as the
9 draft EIS is issued later on this year.

10 We look forward to your comments, and you will
11 be able to see how they are going to be addressed in the
12 EIS when the draft comes out.

13 So with that, the floor is yours.

14 TIM JENNINGS: I would like to say a couple
15 remarks before we open it up.

16 If either of you have comments, we would really
17 welcome them, especially from the point of view of, as I
18 mentioned earlier, what issues do you think decisionmakers
19 in the agencies involved should have before them to help
20 make a decision regarding these permit decisions. That is
21 the very basis of these scoping meetings. And the kinds of
22 information that we are looking for is in regard to
23 alternatives for development, alternatives of construction,
24 alternatives for operation. You have heard Gary Campbell
25 mention that they are going through sort of their own

1 internal alternatives analysis, and they also look for
2 ideas. But primarily our agency scoping is for this EIS
3 process to help us make better decisions, to look at
4 alternatives, to look at what are the key environmental
5 issues that we need to address.

6 So if either of you have any of those kinds of
7 ideas that you can share with us, we would greatly
8 appreciate it. And then beyond that, if you have
9 questions, just to share information, if you would like
10 additional details about what is known, recognize that this
11 is still, Northstar project is still fairly conceptual in
12 some ways. As Gary Campbell has mentioned, they are still
13 finalizing some of the design. So we don't have all the
14 answers, as BP doesn't either, from a design point of view
15 right now.

16 If either of you would like to comment, once
17 again I would ask if you would just for the record state
18 your name and then launch in.

19 DAVE DENGEL: Well, I've got some questions;
20 they may be more comments though. Dave Dengel. And they
21 are not so much environmental as they are more economical,
22 I guess, and however it relates to Valdez in particular.

23 And Gary -- I think it was Gary told me it was
24 about 130 million barrels is what they think the reservoir
25 is right now?

1 GARY CAMPBELL: Recoverable reserves. That's
2 what we're carrying right now.

3 DAVE DENGEL: So like 50,000 barrels a days,
4 it's roughly about eight years worth of...

5 GARY CAMPBELL: That is a little bit of a
6 misnomer. Fifty thousand would be a peak production for
7 maybe two years and then would go on a decline, similar to
8 the way Prudhoe Bay has declined from, you know, 1.8 to, I
9 guess, around a million right now, or a little less than a
10 million. So over the long haul, the peak will be 50,000
11 and it will probably exponentially decline.

12 DAVE DENGEL: What is the estimated start-up
13 date?

14 GARY CAMPBELL: We are looking at the end of
15 '98, early '99, assuming that we can get the drawings
16 complete and the EIS permitting process complete.

17 DAVE DENGEL: Are there any other fields in that
18 general area that may get picked up so that in essence it's
19 going to be more than 130 million barrels, it may be a lot
20 larger than that because of these other...

21 GARY CAMPBELL: Yeah. BP does not have anything
22 else. That's one of the reasons we brought a lease map
23 with us. There are people that have leases in that area.
24 What they have or what they might be able to produce, we
25 don't know. But you would make the assumption that if

1 somebody gets the ball rolling, so to speak, there may be
2 additional potential.

3 DAVE DENGEL: So your pipeline from Northstar o.
4 Seal Island is not going to be part of TAPS, it's going to
5 be...

6 GARY CAMPBELL: It will be a separate common
7 carrier pipeline owned by --

8 DAVE DENGEL: So some of these other
9 leaseholders could tie into that if they...

10 GARY CAMPBELL: Yes. Yes, they could. And
11 that's what I -- well, there are several reasons for a
12 common carrier, but one is, you know, the DOT specs for
13 construction. We would build to that, so we would probably
14 apply and try to get certification as a common carrier but
15 it's a higher standard. But that also allows anybody else
16 to access that --

17 DAVE DENGEL: So in sizing that pipeline, are
18 you going to size it to maybe be able to carry more than
19 50,000 barrels per day or...

20 GARY CAMPBELL: Not appreciably, no. It's
21 pretty much sized for Northstar. Now, recall though I just
22 said about going off in decline. The same as TAPS may have
23 been built for X, now it's in decline, there is more
24 capacity left in it. So if additional potential was
25 realized, there would be space several years from --

1 DAVE DENGEL: And now the siting of your
2 pipeline, from the three or four scenarios you are looking
at, are you looking at locating that in such, around other
4 potential leases or not?

5 GARY CAMPBELL: No.

6 DAVE DENGEL: It's just whatever is best for
7 your project. So there could conceivably be another one of
8 these scoping meetings for another pipeline in a couple
9 more years if ARCO or somebody else...

10 GARY CAMPBELL: I would say that's entirely
11 conceivable.

12 Northstar is small by North Slope standards. So
13 in terms of making it economically viable, we are treating
14 it as just what it takes to be safe, environmentally sound.

15 DAVE DENGEL: Well, figuring a straight 50,000,
16 you'd have about eight years, but like you say, that's your
17 peak. I mean I'm wondering where the economics is on the
18 thing considering what it's going to cost to construct.

19 GARY CAMPBELL: Do you mean economics for BP or
20 economics to the state?

21 DAVE DENGEL: For BP. I mean, you know, that's
22 just -- it's not so much a question as probably a curious
23 statement. So there must be something else up there, would
24 be my guess.

25 GARY CAMPBELL: Well, I would like to comment.

1 I can't talk about pure economics but what I can talk about
2 is some of the philosophy of BP.

3 We are very interested in replacing the capacity
4 of TAPS. BP has made a commitment to the state, which I
5 think in the last two or three weeks you've seen a lot of
6 information about, particularly in the newspapers, and even
7 some of what they call blow-ins to the newspapers, fliers,
8 et cetera. So that is number one.

9 The way we work economics is an interesting
10 scenario. Myself, too, had this conversation coming back
11 from the Pipeline Club. BP looked at the amount of
12 reserves that we could produce and said how much money can
13 we afford to spend to exploit those reserves and come up
14 with production. So they kind of worked their economics
15 backwards to find out just how much capital we could spend.
16 And then we leveraged all of the brain power that we could
17 muster to be creative and innovative in coming up with ways
18 of cutting the costs to make it economical.

19 For instance, Amerada Hess and Shell, who were
20 the original leaseholders, had a design concept that was at
21 \$1.5 billion to construct. That is probably one of the key
22 reasons they turned their back and walked away. We are
23 looking in the \$250 to \$400 million range, so 20 some
24 percent of what they had originally estimated. And that
25 number didn't come from the bottom up, it kind of came fro

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1 the top down. That's all we can afford to spend and still
2 make a buck for BP's royal treasure.

3 DAVE DENGEL: Well, certainly Valdez is
4 interested in keeping TAPS full, for very obvious reasons.

5 GARY CAMPBELL: And we're not the only ones
6 exploring. ARCO, as you're aware, at Colville, is working,
7 trying to get some development off the ground there as
8 well. I think there is genuine interest in the oil
9 industry to try to keep production up and to make Alaska a
10 good oil province.

11 DAVE DENGEL: It's your turn. I'm all done.

12 GREG WILLIAMS: This is probably more for you,
13 Gary. But when you go back to your folks, let them know
14 that if any of the equipment that is going to go on-line up
15 here at the Northstar project is something that is
16 foreign-made, you know, from a foreign country or has a
17 duty or anything, that Valdez does have a foreign trade
18 bill, that that stuff can come in and sit and sit for duty
19 free. So I mean if you want to start bringing and buying
20 that stuff now, we can work some arrangement out.

21 GARY CAMPBELL: Perhaps we can cut a deal after
22 the meeting.

23 I will mention that. Thank you.

24 TIM JENNINGS: Does anybody else have anything
25 they would like to share, comment, whatever?

1 GARY CAMPBELL: Going once.

2 TIM JENNINGS: Going twice. Chris. This is
3 Chris Clark.

4 GARY HAYWARD: From the EIS team, I might add.
5 But that's okay.

6 TIM JENNINGS: Choose your words carefully and
7 don't put Gary on the spot.

8 CHRIS CLARK: Well, I am sure it hasn't gone
9 unnoticed by other members that there is this issue of
10 cumulative effect. And that means we're almost reading a
11 crystal ball in some way, and yet Gary one or Gary two, you
12 have said you don't know what else is up there on the part
13 of other oil companies. You don't know which scenario that
14 might unfold, but you are going to base your mechanical
15 pipelines and efforts on the, you know, most affordable,
16 least expensive, et cetera, which might, if you were going
17 to put in four or five different facilities, would not be
18 the optimal construction, and yet we are supposed to come
19 up with an EIS plan that addresses the cumulative effect.

20 GARY HAYWARD: That is certainly going to be one
21 of our challenges. And there are a few ways we could
22 approach that. I think we can -- and I read in the lease
23 Sale 144 document, I think there are 65 or 69 active leases
24 in the Beaufort between state and federal waters. And it's
25 kind of hard to see on that map, but you can see them up

1 there. And they go from Barrow all the way to almost the
2 Canadian border. And that map doesn't show it properly,
3 but most of those leases expire by the year 2001. And I
4 think we are going to have to deal with the people from MMS
5 and deal with people from the state, and maybe even take,
6 approach some of the other oil companies up there, the
7 operators of those leases, and ask them what has been
8 filed, what are their plans. They probably won't be able
9 to say much to us. But that's one prospect.

10 The other approach we can take -- and it even
11 gets more complicated because some of the leases have
12 different operators for different depths of formation. And
13 I'm not sure if that's the case on offshore or if it's just
14 onshore, but I know that's the case in some of those leases
15 up there.

16 But I did look at a lease map here a while back
17 that had the expiration dates of some of these leases, and
18 many of them are going to be -- the operators either have
19 to do something to maintain the leases or they're going to
20 revert back to the state or to the government. So there is
21 that to look at.

22 There is also a process of looking at, from a
23 geographic standpoint, what was best, to either come ashore
24 or go to an existing structure from both onshore
25 infrastructure as well as offshore dynamics, water depth

1 issues, technology issues, onshore constraints or
2 restraints.

3 And I think we're going to have to whittle it
4 out in that sense. But it's going to be one of our better
5 challenges for this project.

6 DAVE DENGEL: I have another question. And
7 again it has to kind of go back to economics, but it's kind
8 of tied to environmental now, and that is that it's not so
9 much a criticism as it may be a concern as an Alaskan
10 resident, that when TAPS was built it was built with a life
11 expectancy of, what, 15 or 20 years, and we're exceeding
12 that and we're having problems. Now, this Northstar
13 project is going to have similar, maybe a 10 or 15-year
14 life span as well. Maybe. I don't know. And we don't
15 know what else is up there. You know, BP may not have
16 anything in mind for additional projects, but once this
17 project goes in and they find that it's not such a bad
18 deal. And, you know, that pipeline may have been built for
19 15 years but it may in effect be around for 20 or 30 years.
20 And how are you going to deal with that if it's buried
21 under the seabed? I mean I'm hoping that you folks are
22 taking that into account.

23 I mean my concern is more from that we don't end
24 up having another Exxon Valdez type of situation where what
25 it does is it just about collapses the industry here

1 because of that. We kind of look at -- you know, I know
2 oil companies don't like to do this, but we try to look a
3 little bit further out and consider some of those issues,
4 that maybe we ought to spend, or you ought to spend a few
5 more dollars now, thinking that that pipeline, or knowing
6 that the pipeline is going to be there for a lot longer
7 than just the Northstar project. There may be something
8 else in the neighborhood that you are going to tie into in
9 five years and that just -- you know, and as a resident of
10 Valdez I hope that's the case. I mean I'd like that
11 terminal to be operating in the year 2050 or beyond, and,
12 you know, it wasn't designed to do that.

13 So I'm going to get a little concerned here if
14 we continue to look short-sighted at those types of things,
15 that maybe you need to look at this -- and I don't know how
16 you do it because there are a lot of other operators
17 involved, but this project, this pipeline is not just for
18 Northstar but it may serve for some other fields, so the
19 life of that system is going to be extended.

20 GARY CAMPBELL: Two comments that I can make on
21 it. The first, we are planning for a field life of around
22 20 years plus or minus. A lot of the design issues are
23 centered around more 30-year life. And as you quite
24 correctly stated, TAPS, originally designed for X years, we
25 are now X plus several. Whether the Northstar pipeline

1 would be in that same boat, I don't know. We are certainly
2 not planning obsolescence into the system. And that kind
3 of leads into my second point, is that technology between
4 now and 20 or 30 years, I have no idea what effect
5 technology is going to have on what is happening.

6 So we are -- you know, in terms of design, it's
7 pretty basic. A little extra wall thickness, or as TAPS --
8 well, not so much TAPS as some of the pipelines within the
9 existing infrastructure on the North Slope, that it down
10 rates them from a 900 ANSI to a 600 ANSI, or something like
11 that, and their life continues. So there is a little bit
12 of metal loss. They just down rate them in terms of
13 pressure rating and the life is extended just in that
14 simple process. Well, it's not a simple process, but you
15 know what I mean. So between now and 30 years time, I
16 don't know what's going to happen but, like I say, we are
17 planning for a minimum of 20-year field life, and really
18 the pipeline design is pretty much around a 30-year life.
19 And, again, technology, I think, will probably extend that
20 if... And that would be a wonderful problem to have to
21 work.

22 TIM JENNINGS: From an agency perspective on the
23 cumulative impacts, one of the issues that we have
24 identified that has got us into the EIS is that this is the
25 first offshore oil and gas that's far enough offshore that

1 a causeway can't be built. And although no one is coming
2 forward and saying we know for sure there will be
3 development over here that could tie in or development over
4 there that could tie in, we do know that if the project,
5 Northstar is built, that there will be breakthroughs in
6 terms of the way views are held toward other development
7 potential offshore. There could be some technological and
8 other kind of things that will lead others to use the same
9 kinds of things that BP has, if they are successful, to
10 carry on to another field, to another area. So there is
11 that kind of a cumulative impact assessment that we are
12 fully intending to carry forward in the process.

13 It is also precedent setting in the context that)
14 it involves two offshore federal leases in part with MMS,
15 and so that has triggered some additional concern. But
16 most all the other development to date has been in state
17 waters, within three miles. Right now there are no
18 facilities planned in the federal leases.

19 DAVE DENGEL: So what does that do to the
20 revenue picture? If part of the leases are federal and
21 part are state -- well, I guess the state will get 90
22 percent of the revenues off the federal -- we'll get 90
23 percent of the royalty off the federal leases, right, as
24 part of the statehood compact, or not?

25 TIM JENNINGS: I do not know.

1 DAVE DENGEL: And most of my questions were
2 going to be economical in nature.

3 GARY CAMPBELL: And I definitely have no
4 comment.

5 DAVE DENGEL: You don't know or --

6 GARY CAMPBELL: I don't know. I don't know.
7 That is way beyond me, the commercial issues around the
8 state and federal royalty issues.

9 DAVE DENGEL: That's an interesting question.
10 Again, I would assume that the field, if it partially lays
11 in state and partially lays in federal, how they will
12 decide that, I don't know.

13 GARY CAMPBELL: It will be an interesting
14 arrangement when it's all completed.

15 GREG WILLIAMS: I have another question for you.
16 I heard gas mentioned. Are there recoverable
17 gas reserves that you anticipate?

18 GARY CAMPBELL: The primary purpose of the gas
19 line will be actually to take gas from onshore to the
20 Northstar project for fuel during the initial drilling
21 phase and possibly as a gas cycling scheme for enhanced oil
22 recovery. That doesn't mean to say that late in the field
23 life we would not go into a gas tap blow-down situation
24 which all fields ultimately do, and the gas would be
25 produced back onshore for sale, assuming that there are

1 some gas sales from the North Slope at some point. But its
2 primary function is to bring fuel gas and the gas for
3 enhanced oil recovery to the Northstar project rather than
4 sales from the Northstar project.

5 GREG WILLIAMS: So it's an oil production
6 project.

7 GARY CAMPBELL: Yes, it's oil production.
8 Northstar is an oil-producing field. I mean it will
9 produce gas and water also but it will be separated and
10 injected back in on-site. At least that is the current
11 test case.

12 GREG WILLIAMS: I don't know the history enough
13 at Prudhoe Bay to know the answer to this, and obviously
14 they are looking at the potential gas production there. I
15 don't know if they considered that when it was first being
16 set for development. Would it be possible in the future
17 that this area could be a gas field for production?

18 GARY CAMPBELL: Yes. Any oil field, for that
19 matter, that has gas associated with it is a viable
20 candidate for gas production, particularly late in its life
21 when effectively the liquids have been already recovered,
22 and then it's a matter of the gas that's left. And if you
23 do have a market, most companies would want to try and sell
24 that.

25 To go back a little bit to your comment about

1 Prudhoe Bay, yes, it was contemplated, and that's one of
2 the reasons we are into a complex arrangement with two
3 operators and the way the whole Prudhoe Bay field is set
4 up, because of different gas owners and different oil
5 owners within the fields. So major gas sales was
6 originally anticipated to happen in the early '80s, but
7 obviously it has not. And I don't have a crystal ball, but
8 I will tell you I hope that gas would be for sale on the
9 North Slope.

10 GREG WILLIAMS: But there have to be specific
11 things you would do in designing Northstar that would
12 either allow it or prevent it from having a commercial gas
13 component to it?

14 GARY CAMPBELL: Not really. The gas and the oil
15 and the water, essentially all the fluids in the reservoir,
16 get produced simultaneously. You can't stop it. So from a
17 production point of view the answer is no, there is nothing
18 that we are not doing that would prevent it. From a
19 facility and a transportation point of view, we would
20 probably have to make some modifications to some of the
21 facilities. Liquid pumps changed out to gas compressors in
22 order to move gas in a gas state rather than a liquid
23 state. And there would be modifications required from the
24 transportation point of view primarily, but all of that
25 equipment is proven technology. I mean it's a matter of

1 doing it.

2 So right now I don't think BP has any estimate
3 at all of when gas sales may happen, so it is really not
4 part of our planning process, but in terms of being able to
5 accommodate it if that came along, it's pretty readily
6 available technology.

7 GREG WILLIAMS: Thanks.

8 TIM JENNINGS: Well, do you have any other
9 comments you would like to make or have you --

10 GREG WILLIAMS: I don't think so.

11 TIM JENNINGS: How about you, Dave --
12 Mr. Dengel?

13 DAVE DENGEL: No. If I do, I will call
14 somebody.

15 TIM JENNINGS: Okay. Well, let me mention that
16 if either of you have things in the future on this project,
17 there are comment cards in the back, preaddressed. For the
18 scoping, we would like to have any comments written by May
19 30th, received by May 30th to us. In the newsletter as
20 well and on the comment card there is an 800 number for the
21 Corps of Engineers in Anchorage where you can reach either
22 Terry Carpenter, our project manager, or myself, if you
23 have any further issues or questions. Also on this comment
24 card there is a spot regarding do you wish to receive any
25 future mailings. If you want to be added to our mailing

1 list, you can indicate that on the card.

2 DAVE DENGEL: We're not automatically on the
3 mailing list?

4 TIM JENNINGS: Are they going to be added by
5 signing in?

6 GARY HAYWARD: Actually everybody that's a box
7 holder in Valdez is already on our mailing list.

8 TIM JENNINGS: Okay. So I guess you're already
9 set if you read your mail.

10 GARY HAYWARD: Yes, we have a mailing list of
11 about 5500 people, and they consist of a bunch of
12 individuals as well as box holders in Valdez, Kaktovik,
13 Nuiqsut, Barrow, Deadhorse -- where else -- Tatitlek.

14 TIM JENNINGS: So with that, I would like to
15 thank you for coming. And we will be available after the
16 meeting if you want to continue any of the discussion.

17 Thanks.

18 (Proceedings concluded at 8:50 p.m.)

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REPORTER'S CERTIFICATE

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I, KAREN E. FORD, Registered Professional Reporter, hereby certify:

That I am a Registered Professional Reporter for Alaska Stenotype Reporters and Notary Public for the State of Alaska; that the foregoing proceedings were taken by me in Stenotype Shorthand and thereafter transcribed by me; that the transcript constitutes a full, true and correct record of said proceedings taken on the date and time indicated therein.

Further, that I am a disinterested person to said action.

IN WITNESS WHEREOF, I have hereunto subscribed my hand and affixed my official seal this 12th day of April, 1996.



Karen E Ford
KAREN E. FORD, RPR
NOTARY PUBLIC, State of Alaska

My Commission Expires July 13, 1999.