

Ethics In The Practice of Petroleum Engineering

**Denver Chapter of SPEE
December 12, 2012**

**Mr. Fred LeGrand
Mr. John Benton
Dr. John Wright**

Acknowledgements

Ethics for the Evaluation Engineer

by Mr. Thomas S Collier, P.E.

**Presented at the SPEE Annual
Meeting June 3, 2011**

“Ethics – “When Good People Make Hard Decisions”,

by Dr. Larry Brown, P.E.

Presented at SPEE Annual Meeting 2009

“Ethical Considerations for Today’s Engineering Professional”,

by Mr. Ron Hinn

Presented at SPE Mid-Continent Section Feb 5, 2009



What is Ethics Anyway?

Merriam-Webster Definition(s)

- The discipline dealing with what is good and bad and with moral duty and obligation
- A set of moral principles
- A theory or system of moral values
 - <the present-day materialistic *ethic*>
 - <an old-fashioned work *ethic*> —
 - <Christian *ethics*> or <Hindu *ethics*> or <Muslim *ethics*>
- The principles of conduct governing an individual or a group <professional *ethics*>
- A guiding philosophy → Strong ties to individual morality
- A consciousness of moral importance <forge a conservation *ethic*>
- A set of moral issues or aspects (as rightness) <debated the *ethics* of human cloning>

Ethics Definition

Break It Down

- Greek Roots ... (like “My Big Fat Greek Wedding?”)
 - *Ethos* .. the distinguishing character, sentiment, moral nature, or guiding beliefs of a person, group, or institution
 - *Ethos* ...originally strongly relating → Character
 - *Ethos* Conveys a sense of “permanence” (1)
 - *Ethikos* ... meaning "moral, showing moral character”
 - *Mores* ... varied societal behaviour
- Latin Roots
 - *Moralitas* ... Manner, character, proper behavior
 - Carries → “good” or “right” vs “bad” or “wrong”

Theme is Character – Permanence - Rightness

Ethics Definition

Is Ethics Essentially Morality?

- But Morals change
- From person to person ...or... time to time
- We live with “Statistical Morality”
- Sometimes from situation to situation
- Or even culture to culture Hmmm?
- Often they are based upon one’s individual beliefs
- What about Rules They don’t change
- Rules are designed as absolutes
- They are very specific to situations or conditions
- They provide a “safe” framework
- Engineers gravitate to rules (more from JW later)

Ethics Definition

Where Does Ethics Enter In?

- When Things Become Gray or Fuzzy
 - It's Not a Legal Issue
 - The Rules don't really cover this situation
- Could Someone Gain An Unfair Advantage?
 - Is it fair to all concerned parties?
 - Does this provide for common good to parties?
 - Engineers are not expected to behave like attorney's
 - Will I have an un-biased influence?
- Do I Need to Transcend Personal Beliefs/Affiliations?
 - 100% of Truth Always ... No Exceptions
 - Consider the other viewpoint
 - Take the Long View

Professional Standards

NSPE – Code of Ethics

- Expected to hold paramount the **safety, health, and welfare** of the public
- Expected to exhibit the highest standards of **honesty and integrity**
Impartiality, **fairness and equity**
- Must work only in areas of **competence** ... training/experience
- Issue public statements only in an **objective and truthful** manner
- Act for each employer or client as a “**faithful**” **agent or trustee**
- In all of the above Adherence to this code/guide will serve to enhance the honor, **reputation and usefulness of the profession.**

www.nspe.org For additional detail

One Decision Framework

- Ask yourself:
 - ✓ Would the resulting action be legal?
 - ✓ Would stakeholders see the action as responsible stewardship?
 - ✓ Would I feel good about the resulting action?
 - ✓ Would I mind having information regarding the decision publicized?
 - ✓ Have I consulted with peers/others regarding the perceived action and possible ramifications?
 - ✓ Would the public view the perceived act as a responsible professional action?

John Wright Section

Another Systematic Approach

Another Systematic Framework

Brown's Approach

- Decision Tree
- Right v. Right decisions
(It's not all black and white)
- Rule based decisions
- Systematic approach.

Categories of Ethics

- Common Ethics
 - Accepted by society at large
(example – is wrong to kill)
- Personal Ethics – Core Values
 - Based on an individual's beliefs or morality
(example – don't eat meat)
- Professional Ethics
 - Based on written code
(example – disclosure of conflicts of interest)

Right v. Right Decisions

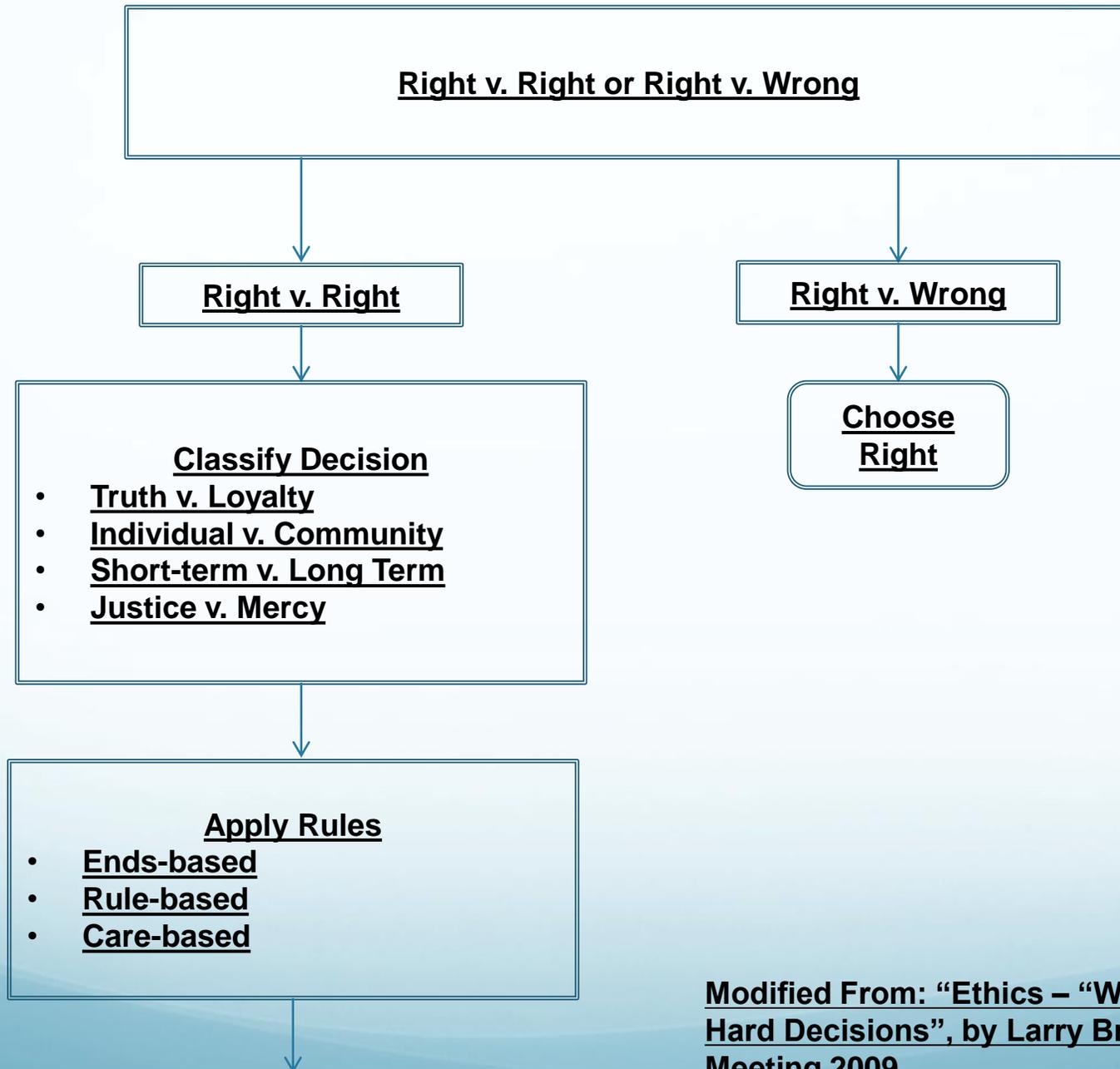
- Truth v. Loyalty
- Individual v. Community
- Short-term v. Long Term
- Justice v. Mercy

From: “Ethics – “When Good People Make Hard Decisions”, by Larry Brown, SPEE Annual Meeting 2009
Original material from “How Good People Make Tough Choices” by Rushworth M. Kidder, Fireside (1995)

Three Rules for Decision

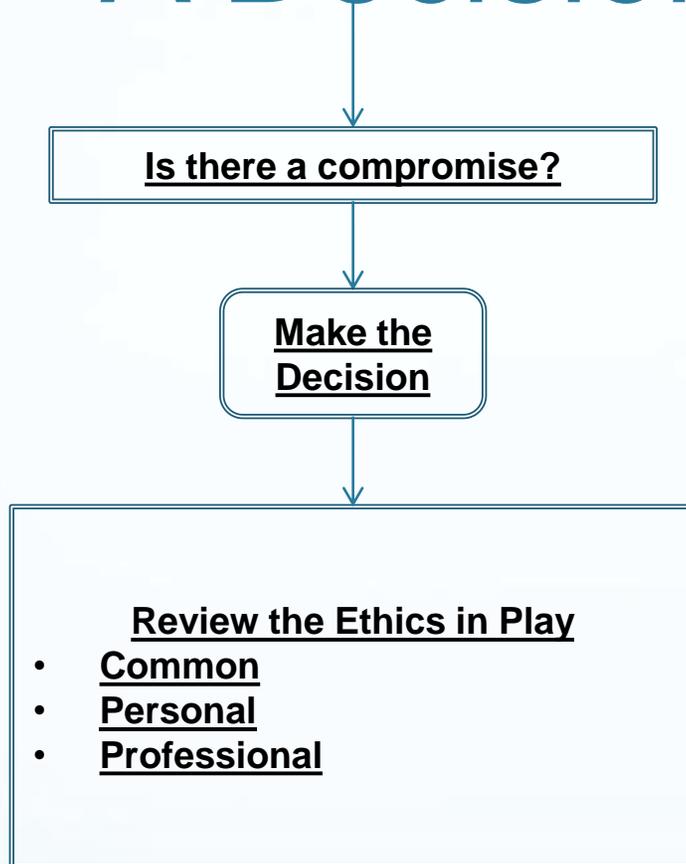
- Ends-based: What is the greatest good for the greatest number?
- Rule-based: How would I want this situation to be handled every time?
- Care-based: Put myself in the other's shoes

A Decision Tree



Modified From: "Ethics – "When Good People Make Hard Decisions", by Larry Brown, SPEE Annual Meeting 2009

A Decision Tree, con't.



By consciously and systematically going through this decision process, we can fully understand and get comfortable with our ethical decisions.

Case Examples

- Each Table Comprises a single group
- Please discuss the Example amongst yourselves
- Select a spokesperson for each example
- Give us your perspectives

Forming a Business Alliance

First Situation involves a partnership comprised of an engineer and a geologist. They specialize in evaluating oil and gas properties and prospects. They are approached by a promoter who packages producing properties for sale. The promoter makes a proposal along these lines, “let’s join forces to sell this deal. You two do the geology and engineering involved in an evaluation report, we’ll sell the deal and split the promotion.” While not verbalized, there’s a hint, (very thinly veiled) that an evaluation containing the highest possible value is expected.

What should they do?

Committee Members

L. D. Sipes, Jr.
Arlen Edgar
T. Scott Hickman
Charles Godfrey
Marshall Watson

DISCUSSION AND GUIDANCE ON ETHICS

Prepared for the

COMPLIMENTS OF THE
SOCIETY OF
SOCIETY OF PETROLEUM EVALUATION ENGINEERS

John Wright's Example

Assume you are an owner (either by yourself or with others) in a consulting firm. For years the firm has given advice to operators who have benefited greatly therefrom. You have become aware of a potential (negotiated) property sale in one of many basins where you are currently doing and have done considerable consulting (reserves, some A&D, some field optimization). No one has approached you to evaluate the sale. The partners decide that it may finally be time to work for something other than wages and are considering raising some money and purchasing the property.

Is it OK to be a consultant and an operator at the same time?

If yes, how do you handle the potential conflict of interest (if any)?

Would you structure the organization differently than it is structured now? Would that really help?

If yes, based on your consulting you know several money sources used by your clients. Do you approach them? How about ones that none of your clients are currently using?

Do you tell your clients?

Reserves And Ethics

- The SEC allows booking of Proven Undeveloped Reserves as long as the undiscounted cash flow is greater than \$0.00 using the average of the last 12 months' product prices. Your company will not fund a capital program unless the BTAX PV20 is greater than \$0.00 using the company's price forecast. In 2011, you booked PUD reserves as the company price forecast generated a positive BTAX PV20 and the SEC case was $> \$0.00$. For 2012, the company price forecast generates a negative PV20 yet the SEC case is still satisfied. Do you:
 - **A.** Leave the reserves on the books in hopes that next year's price forecast bails you out before the SEC 5-year rule kicks in?
 - **B.** Take the reserves off the books?
 - **C.** Assume that since prices are going to be lower, your costs should be lower so you adjust the DCT capital or the operating expenses to get a positive PV20?
 - **D.** Decide that sometime in the next 5 years completion techniques will generate better EUR's so you adjust the b factor to obtain a positive PV20?
 - **E.** Leave the reserves on the books for 2012 and notify senior management that if the company expects prices to remain low over the next 5 years then the reserves should be removed

Reserves And Ethics (cont.)

- Again considering SEC rules, you booked PUD reserves at the end of 2011 as the rolling average price forecast generated an undiscounted cash flow greater than \$0.00. During 2012, the rolling average price forecast resulted in undiscounted cash flows for your PUD cases to be less than \$0.00, and will remain less than \$0.00 by YE. Your company will drill the wells as long as the SEC case is satisfied. Do you:
 - **A.** Take the reserves off the books?
 - **B.** Assume that since prices are going to be lower, your costs should be lower so you adjust the DCT capital or the operating expenses to get a positive PV0?
 - **C.** Decide that your production forecast was too conservative since several new wells in the same zone in the next township have been excellent so you adjust the production forecast to obtain a positive PV0?

Who's Map is it Anyway?

- Your best friend and long-time associate has recently retired from a major oil company at age 55 and has immediately gone to work for another firm in the same basin.
- He starts his new job by recreating much of the mapping he did at his old company.
- Although he's mapped the area previously, he still relies on a few copies of old work maps that he has used before.
- These are work maps that he has developed and used throughout his career.
- He made some important enhancements at his last company.
- Is there an ethical problem?

Who's Map is it Anyway (contd)?

- Your best friend and long-time associate has recently retired from a major oil company at age 55 and has immediately gone to work for another firm in the same basin.
- He starts his new job by recreating much of the mapping he did at his old company.
- Although he's mapped the area previously, he still relies on a few copies of old work maps that he has used before.
- These are work maps that he has developed and used throughout his career.
- He made some important enhancements at his last company.
- Is there an ethical problem? ... **Looks a little shady but pretty easy to remedy Re create the maps from scratch**

- OK But his boss fired him for drilling a Dryhole based on this map and told him he would NEVER use it again!
- Now he took the map to his new company because apparently no one wants it.
- Does that make it OK?

- OK So now he is a consultant and he bill's his services hourly and....
- The new company agree's to pay him to recreate the maps from "scratch" using public data
- He knows all of the short cuts already He has learned them from the previous company
- He has all of the public data in spreadsheets he gathered while at the previous company
- He recreates the maps from scratch using this knowledge gained and public data gathered
- He can do the same job in 10% of the time it previously took and the new company is pleased.
- Is this OK?

**Adapted from Ethics for the Evaluation Engineer
by Mr. Thomas S Collier, P.E.
Presented at the SPEE Annual Meeting June 3, 2011**

Who's Spreadsheet is it Anyway?

- You join a new company and bring with you a set of spreadsheets you have developed throughout your career.
 - These tools are very useful covering topics from volumetrics to quick decline curve analysis.
 - You start out your new job by customizing these spreadsheets for your new company including company logo and several items that are part of the new company's culture.
 - Your boss really likes what you have done and incorporates these tools into the department workflow.
 - During your multi year career with the new company you add some really nice enhancements to the spreadsheets and do so during paid company time.
 - You also develop a great new tool for pressure transient analysis previews that ends up being pretty time consuming to develop. Most of this work is done at home in your free time.
-
- Can the company claim 100% ownership for all of these tools?
 - Can you retain copies of all for future use on your own or with other companies?

We NEED PUD's Are they OK?

- Your company joined in preparation of a FMV Evaluation on a significant block of acreage in 3rd Qtr in an attempt to sell 100% of a 40/60 JV position
 - Your 60% JV partner has financial problems and you cannot carry them on the drilling
 - At your JV partners suggestion, you utilized their 3rd party consulting firm (BigEasy, LLC) to prepare the evaluation and utilized their contacts within the consulting firm, no direct contact by you
 - After reviewing the acreage and offset production you prepare and submit a simple spreadsheet listing based upon volumetric analogy for 80 orthogonal PUD locations
 - When the 100% JV Combined Report is delivered to you (by your JV Partner) you are surprised that all 80 locations have been assigned Proven Undeveloped Reserves ... Viola'
 - Your CEO is very pleased but the deal does not sell and you retain your 40% interest
 - At YearEnd your CEO asks/tells you to book the PUD's included in the FMV evaluation because the company is facing a ceiling test writedown and needs some "cushion"
 - You don't think your regular reserve consultants (HardNosed Corp) will give you all 80 PUD locations
 - Should you consider using BigEasy on this property at YE to maximize value for the company? The CFO checked with your banker and he is OK with BigEasy.
-
- Should you use BigEasy to book these reserves?
 - Is there a difference between FMV Analysis and YearEnd SEC Reserves?
 - Can the "Rules" help you out here?
 - What other issues standout?

Seller Beware

- You are a 50% owner in a non-operated producing field with significant Proven upside.
 - You and the operator have agreed to sell 100% of the field, if a buyer attains a minimum threshold price.
 - The operator maintains a significant financial advantage collecting COPAS from you.
 - After several failed sale attempts over a 10 month period the sale process is abandoned.
 - You continue to market the property with reluctant consent of the operator and get a serious inquiry from a capable buyer. The buyer requests an updated FMV evaluation report using your preferred reserve consulting firm. You will pay for the report.
 - The field operator refuses to pay their share of the report but the cost is low, so you cover the costs on your tab and write it off to good will.
 - The updated report comes back indicating a FMV about 20% above the minimum asking price.
 - You are still inclined to sell at asking/offered price but are concerned about the operator's reaction if the higher FMV comes to their attention.
 - The Buyer refuses to raise the bid and will only (wisely) buy 100% of the WI.
-
- **Do you need to show the revised FMV report to the operator risking losing the deal?**

Closing Remark

Remember

“No snowflake in an avalanche ever feels responsible”

Snowflakes are for Skiing Don't be a snowflake !



What would you do if your mother asked you?