

**Chemicals Used in Natural Gas Development and Delivery
In New Mexico
1-3-07**

DEPT OF EXAMINER CATALANACH

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Chemical	Product	Purpose	CAS #
(2-BE) Ethylene glycol monobutyl ether	AQF-2, EzeFlo F103, F105, FAW-4, J564, SS0-21M. U66	Foaming agent, Surfactant, Gellant, Solvent	111-76-2
1-Propanesulfonic acid, 2-methyl-2-((1-oxo-2-propenyl)amino)-, monosodium salt, polymer with 2-propenamide	SGA-II	Gellant	38193-60-1
1-Undecanol	EzeFlo F103	Surfactant	112-42-5
2,2',2''-Nitrilotriethanol	J318	Liquid Breaker	102-71-6
Acetic acid	BA-20, Clear FRAC-EF, FE-1A, SGA-1	Buffering agent, Additive, Gellant	64-19-7
Acetic anhydride	FE-1A	Additive	108-24-7
Alcohol and Fatty Acid Blend	Bara-Defoam W300	Defoamer	
Alcohol ethoxylate c-10/16 with 6.5 EO	B-145 Friction Reducer	Friction reducer	68002-97-1
Alcohols, C11-15-secondary, ethoylated	J429	Gellant	68131-40-8
Aliphatic alcohol	F105	Surfactant	
Aliphatic alcohols, ethoxylated	A 264	Corrosion inhibitor	
Aliphatic amine derivative	J 508	Gellant	
Alkylaryl sulfonate	ClearFRAC-EF	Additive	
Aluminum Oxide	Litepoz 6 Extender, Baracarb 150, Premium Prop Plus	Extender, Lost circulation material	1344-28-1
Ammonium bisulfite	Barascav-L	Corrosion inhibitor	10192-30-0
Ammonium C6-C10 alcohol ethoxysulfate	F52	Foaming agent	
Ammonium mercaptoacetate	L63	Reducing agent	5421-46-5
Ammonium nitrate	ClearFRAC-EF	Additive	6484-52-2
Arsenic	Barite		7440-38-2
Attapulgate clay	Zeogel, Attapulgate	Gellant	12174-11-7
Barite (BaSO4)	Barite, Baroid	Weighting material	7727-43-7
Bentonite	Bentonite, Aquagel, Aquagel Gold Seal	Viscosifier	1302-78-9
Blend of sythetic oils & surfactants	Ez Glide	Lubricant	2526-77-4
Boric acid	BC-140	Crosslinker	10043-35-3
Butan-1-OL	F105	Surfactant	71-36-3
Cadmium	Barite		7440-43-9
Calcium carbonate (sized)	Calcium carbonate. Baracarb 150	Lost circulation material	471-34-1

- Exhibits -

Calcium Chloride	Calcium Chloride hi test pellets	Shale control inhibitor	10043-52-4
Calcium hydroxide	Lime	pH control	1305-62-0
Carboxymethyl hydroxypropyl guar gum	LGC-IV	Oxidizer	
Cationic polymer	L55	Clay stabilizer	
Cedar fiber - processed	Plug-Git	Lost circulation material	
Cellulose	Hy-Seal	Lost circulation material	9004-34-6
Complex Carbohydrate	Dextrid LT	Fluid loss additive	
Continuous filament glass fibers	Magma Fiber Fine	Lost circulation material	65997-17-3
Copper	Barite	Weighting agent	7440-50-8
Cottonseed flour	Cottonseed Hulls	Fluid loss additive	68308-87-2
Crystalline Silica, cristobalite	Aquagel	Viscosifier	14464-46-1
Crystalline Silica, quartz	Aquagel, Aquagel Gold Seal, Litepoz 6 Extender, Pozmix A, Acfrac CR-4000D	Viscosifier, gellant, extender, cement additive, proppant	14808-60-7
Crystalline Silica, tridymite	Aquagel	Viscosifier	15468-32-3
Diesel 2	B142 Slurry Gel, BC-200, LGC-IV, LGC-IV with diesel, LGC-35	Gellant, oxidizer, viscosifier	68476-34-6
Diethylene glycol	AQF-2	Foaming agent	111-46-6
Dipropylene glycol monomethyl ether	SandWedge-NT	Proppant	34590-94-8
Disodium metasilicate	D79 Chemical extender	Chemical extender	6834-92-0
Ester Salt	F104	Foaming agent	
Ethanol	F52, F104	Foaming agent	64-17-5
Ethoxylated alcohol	FRW-14	Friction reducer	68439-50-9
Ethoxylated Nonylphenol	Losurf-300, SS0-21M, W53	Surfactant, non emulsifier	9016-45-9
Ethylene glycol	Protex-All Inhibitor, BC-140	Scale inhibitor, crosslinker	107-21-1
Fatty acids, C18-unsat, dimers, compds. With diethylenetriamine-tall-oil fatty acid reaction products	SandWedge	Proppant	68647-57-4
Fly ash	Pozmix A	Cement additive	
Galactomannan	GW-3LD	Gellant	11078-30-1
Gilsonite	Baro-Trol Plus	Shale stabilizer	
Glutaraldehyde	Aldacide G	Biocide	111-30-8
Graphite	Stop-Frac	Fluid loss additive	7782-42-5
Guar gum	WG-22, WG-35, GW-3LD, LGC-35 CBM	Gellant, viscosifier	9000-30-0
Heavy aromatic naphtha	W-53	Non-emulsifier	64742-94-5
Hematite	Litepoz 6 Extender	Extender	1309-37-1
Hydrocarbon Black Solid	Gilsonite resin	Shale control inhibitor	12002-43-5
Hydrochloric Acid (HCl)	Gyban L47, Hydrochloric acid, SGA-I, SGA-II, SGA-III	Scale inhibitor, pH control, gellant	7647-01-0

Hydrotreated heavy petroleum naphtha	GW-3LD	Gellant	64742-48-9
Hydroxyethylcellulose	Pheno Seal	Lost circulation material	9004-62-0
Inert material	BaroSeal	Lost circulation material	
Iron	Barite	Weighting material	7439-89-6
Lead	Barite	Weighting material	7439-92-1
Light aromatic solvent (Aromatic naphtha, Type I)	Losurf-300	Surfactant	64742-95-6
Lignite	Baro-Trol Plus	Shale stabilizer	129521-66-0
Limestone	BDF-302		1317-65-3
Mercury	Barite	Weighting material	7439-97-6
Methanol	HAI-OS, L55, Methanol, SS0-21M, W54, A 264	pH balance, clay stabilizer, surfactant, non-emulsifier, corrosion inhibitor	67-56-1
Methyl-4-isothiazolin	Dextrid LT	Fluid loss additive	2682-20-4
Methylene phosphonic acid	Gyban L47	Scale inhibitor	15827-60-8
Mica	Mica, MicaTex, Barite	Lost circulation material, weighting material	12001-26-2
Monoethanolamine	BC-140	Crosslinker	141-43-5
NaHCO ₃	Bicarbonate of soda	pH control	144-55-8
Naphthalene	W53	Non-emulsifier	91-20-3
Nickel	Barite	Weighting material	7440-02-0
Nitrogen-N ₂	Nitrogen	Drilling fluid	7727-37-9
Oxyalkalated alcohols	W54	Non-emulsifier	
Oxyalkylated alkylalcohol	EzeFlo F103	Surfactant	
Oxyalkylated fatty alcohol salt	FAW-4	Foaming agent	
Paraffinic solvent	LGC-35 CBM	Viscosifier	
Petroleum distillate hydrotreated light	FRW-14, SGA-III, Bara-Defoam W300, B145, EZ-Mud	Friction reducer, gellant, defoamer, shale inhibitor	64742-47-8
Polyacrylamide	FRW-14	Friction reducer	9003-05-8
Polyacrylamide/polyacrylate copolymer	EZ-Mud	Shale inhibitor	25085-02-3
Polyanionic cellulose	PAC-R	Lost circulation material	9004-32-4
Polyethoxylated alkanol	F105	Surfactant	
Polyglycol Ether	F104	Foaming agent	
Polymers	Clay Treat 3C	Clay control	
Polypropylene glycol	F52	Foaming agent	25322-69-4
Polysaccharide	LGC-35 CBM	Viscosifier	
Potassium carbonate	BF-7L	pH control	584-08-7
Potassium chloride	HMP CON, Potassium chloride	pH balance, reagent	7447-40-7
Prop-2-YN-1-OL	A 264	Corrosion inhibitor	107-19-7
Propan-2-OL (Isopropanol)	ClearFRAC-LT, EzeFlo F103, J508W, VDA J557, W54	Additive, surfactant, gellant, non-emulsifier	67-63-0
Propane-1,2-Diol	ClearFRAC-LT, J508W	Additive, gellant	57-55-6

Proprietary	A 264, ClearFRAC-LT, Ezeflo F103, F105, J508W, U106	Corrosion inhibitor, additive, surfactant, gellant, chelating agent	
Quaternary ammonium compound	ClearFRAC-LT	Additive	
Resin	Pheno Seal	Lost circulation material	
Silicon dioxide	Silicalite-Additive, Silicalite-Compact	Cement additive	7631-86-9
Sodium carbonate	Soda Ash. K-35	Calcium treatment	497-19-8
Sodium chloride	B-145 Friction Reducer, Rock Salt	Friction reducer	7647-14-5
Sodium hydroxide	Sodium hydroxide, U28, U-106	Gellant, chelating agent	1310-73-2
Sodium salt of aliphatic amine acid	U-106	Chelating agent	
Sodium Silicate	Flo-Check Chemical A, Injectrol Component A	Flow control	1344-09-8
Sodium Tetraborate Decahydrate (Borax)	J532	Crosslinker	1303-94-6
Starch	Drill Starch, Filter Check	Lost circulation material	9005-25-8
Tetramethyl ammonium chloride	Econolite Additive, L064, Clayfix-II, Clay Treat 3C	Clay stabilizer	75-57-0
Trisodium Nitrilotriacetate	U 106	Chelating agent	5064-31-3
Walnut hulls	Wall-Nut	Lost circulation material	977069-77-4
Water	Con Det, F104, Gypban L47, J 318, J508W, L55 L064, U28	Surfactant, Foamer, Scale inhibitor, Liquid breaker, gellant, clay stabilizer	7732-18-5
Xanthan Gum	Barazan D Plus	Corrosion inhibitor	11138-66-2
Xylene	W54, Xylene Bottoms	Non-emulsifier	1330-20-7
Zinc	Barite	Weighting material	7440-66-6